

Suspended Value

Using Coins as Pendants in Viking-Age Scandinavia (c. AD 800–1140)

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Academic dissertation for the Degree of Doctor of Philosophy in Archaeology at Stockholm University to be publicly defended on Friday 25 May 2018 at 10.00 in rum 321, Gamla Botan, Lilla Frescativägen 5.

Abstract

The use of coins as pendants is a common practice in the Scandinavian Viking Age (c. AD 800–1140). About three per cent of the coins circulating in Scandinavia show signs of having been adapted for suspension, either with a small hole or a loop. Modifying coins in this way changes the nature of the object. The pierced and looped coins move from having an economic function to having a display and symbolic function, at least temporarily.

After being long neglected by both archaeologists and numismatists, the reuse of coins as pendants has started to receive attention in recent years. This arises mainly from a desire to approach coins from perspectives other than purely economic ones. Coins, like any other archaeological object, are part of material culture. It is therefore also relevant and necessary to investigate their social and cultural significance.

The aim of this thesis is to understand why coins were adapted for suspension and worn as personal ornaments in Viking-Age Scandinavia. Unlike most ornaments of the time, the production of which necessarily involved craft specialists, the Viking-Age coin-pendants could be produced directly by their owners. Their study can thus provide unique insights into how the coins of which they are made, and the messages they carry, were perceived by those using them. What made coins so meaningful that they were often turned into pendants?

The point of departure adopted here is the object, the ‘coin-pendant’ itself, but this object does not exist in a vacuum. Particular attention is paid to the different contexts that the coin-pendants have navigated throughout their lives, such as minting, use as currency or use as ornament. This contextual approach is combined with a semiotic one, so as to better understand how the meaning of the object was constructed.

The relationship between coin-pendants and owners of coin-pendants can be explored by investigating several processes that reflect the owners’ intentions, such as coin selection, modification for suspension, orientation of the motives and combination with other ornaments. These processes allow us to understand how the coin-pendants were valued by those using them. However, it is not possible to fully understand this relationship without putting it into perspective. This means studying: (1) the wider social, economic, cultural and religious framework in which the practice of reusing coins as pendants is situated; (2) the objects with which the coin-pendants are metaphorically associated.

The material forming the basis for this study is both archaeological and numismatic. It consists of two main components: 134 Scandinavian graves containing coin-pendants and a random sample of 80 Scandinavian hoards. The hoard material is primarily intended for quantitative purposes while the grave catalogue is primarily intended for qualitative purposes. The importance of studying the Viking-Age coin-pendants both in graves and in hoards cannot be overemphasised. None of these contexts directly reflects the reality of the practice.

The study shows that the practice of using coins as pendants was very diverse and could be adapted to individual tastes. Within this diversity, however, a common denominator emerges: the object ‘coin’. It is clear that there was something special about coins in Viking-Age Scandinavia and that the meaning of the coin-pendants was largely derived from the ideas with which coins were associated.

Keywords: *coin-pendants, archaeology, numismatics, Viking-Age Scandinavia, material culture, economy, religion, craftsmanship, Birka.*

Stockholm 2018

<http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-154996>

ISBN 978-91-7797-228-0

ISBN 978-91-7797-229-7

ISSN 0349-4128

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ISBN print 978-91-7797-228-0

ISBN PDF 978-91-7797-229-7

ISSN 0349-4128

Graphic design: Alexander Svedberg

Printed in Sweden by Universitetservice US-AB, Stockholm 2018

Distributor: Department of Archaeology and Classical Studies, Stockholm University

Front cover: Reconstruction of the necklace from grave 94 at Folkeslunda, Öland

Photograph: Gabriel Hildebrand, SHM

A Pauline, Eva et Liv

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Acknowledgements

My first thanks go to Nanouschka Myrberg Burström, my supervisor, who has been a daily source of intellectual stimulation and challenge during these years. Her high standards of scholarship and professionalism helped me accomplish things I had no idea I could accomplish. I also want to thank her for guiding me all along the way. There was much to do: I had to learn a new job and a new role, but also a new language, a new scientific culture and a new academic system. Nanouschka's involvement made my task much easier.

My next thanks go to Anders Andrén, my second supervisor, for providing me with intellectual inspiration throughout this work. Whatever the topic, Anders always came up with insightful suggestions that helped me sharpen my arguments and develop new ideas. I have benefitted greatly from his calm erudition, his open-mindedness and his ability to remember (almost) every page from his library.

Ingmar Jansson did a great job as opponent for my final seminar. His thorough reading of the first draft of my manuscript and expert knowledge of the archaeological material improved the general quality of my work. I am also indebted to Lena Holmquist for her helpful comments at different stages of my research, especially on the Birka material. Gustaf Trotzig provided invaluable advice on the technical aspects of jewellery production. Following his instructions, I even managed to make my own coin-pendant with riveted loop!

During these years, I spent much time in museums and archives collecting material. This was definitely one of the best parts of my work! Three institutions deserve particular recognition: the Kungliga Myntkabinettet and the Statens Historiska Museum in Stockholm as well as the Nationalmuseet in Copenhagen. This thesis would have been much poorer if I had not been able to study their collections on multiple occasions. Of those who helped me at the Kungliga Myntkabinettet, I would like to single out Cecilia von Heijne for arranging almost all my visits there, Monica Golabiewski Lannby for assisting in locating some coin-pendants and Caroline Gonelius for handling the loan of fifteen coins for microscopic analysis. At the Statens Historiska Museum, I am particularly grateful to Gunnar Andersson for his patience in dealing with all my imprecise requests. At the Nationalmuseet, I would like to thank Jens-Christian Moesgaard for generously sharing unpublished material and for making my stay there so pleasant, as well as Helle Horsnæs for facilitating my work in many different ways.

I extend my gratitude to the employees of the Antikvarisk-topografiska arkivet in Stockholm and those of the various Swedish museums I visited and/or contacted. Special thanks are due to: Eva Carlsson (Dalarnas museum), Susanne Cassé (Västmanlands läns museum), Roy Cassé (Köpings museum), Ola George (Länsmuseet i Västernorrland), Susanne Granlund (Eskilstuna stadsmuseum), Mikael Johansson (Stadsmuseet i Stockholm), Emma Karlsson (Östergötlands museum), Birgit Körge (Kalmar läns museum), Bo Sandberg (Länsmuseet Gävleborg), Anders Söderberg (Sigtuna museum), John Worley (Uppsala universitetsmuseum) and Birgitta Zerpe

(Gotlands museum). To my great regret, I never managed to visit the Myntkabinettet in Lund, but Gitte Ingvardson was kind enough to send the many pictures I needed.

I owe much to the numismatists working next door at the Stockholm Numismatic Institute. First among them is Kenneth Jonsson, for sharing with me parts of his database, so many pictures and his deep knowledge of the Viking-Age coin material. Moreover, his incisive criticism pushed me to improve my arguments. Eeva Jonsson, Viacheslav Kuleshov and Bosse Gunnarsson have all provided very useful information, each within their area of competence. Their enthusiasm and support was greatly appreciated.

I have benefitted from the help of many other scholars, both numismatists and archaeologists. Gert Rispling was kind enough to grant access to his monumental database and to share with me his expertise in Islamic numismatics. Frédéric Elfver has provided me with many pictures and some attributions. Lennart Lind took the time to discuss the use of Roman coins in Viking-Age Scandinavia. Jhonny Therus has drawn my attention to the find from Sunnersta and was a great help in arranging a research visit at the Gamla Uppsala museum. I am also grateful to the scholars from Sweden and beyond who have answered my questions and sent books or pictures: Fedir Androschuk, Florence Codine-Trécourt, Simon Coupland, Magnus Källström, Ivar Leimus, Cécile Morrisson, Jon Anders Risvaag, Martin Rundkvist, Elina Screen, Håkan Svensson, Luke Treadwell, Andrew Woods and Inger Zachrisson.

My colleagues at the Department of Archaeology and Classical Studies have made these years an unforgettable experience. Thanks to all of them for creating such a stimulating and friendly environment. I am particularly indebted to Anders Carlsson for his advice on several attributions, to Daniel Sahlén and Maria Wojnar-Johansson for helping with the microscopic analysis of the fifteen coins I borrowed from the Kungliga Myntkabinettet and to Sven Kalmring for sharing his extensive knowledge of Birka. Thanks to my fellow PhD students (past and present) for their feedback, support and cheerfulness: Magnus, Ingrid, Jenny, Anna S., Anna R., Marte, Elin, Elisabeth, Cecilia, Per, Linda, Anna A., Mirja, Helena, Anna J. and Moa. Special thanks to Markus and Romain for our many lunches together (a breath of French air), to Kerstin for the many tips on the material, to Linn for her morale-boosting talks and to Hans for the good laughs.

The editing process was made much simpler by the collaboration of Alexander Svedberg, who gave the book its layout, and Kristin Bornholdt Collins, who revised the language and proofread the manuscript. I wish to acknowledge the help I received from Romain Mougenot with some of the drawings and from Markus Fjellström with the Swedish summary. I am also indebted to Linn Eikje for doing such an amazing job with the maps (all the GIS work) and for staying calm despite my obsessive attention to detail.

This work would not have been possible without the financial support received from: Sven Svensson stiftelse, Gunnar Ekström stiftelse, International Numismatic Council, Greta Arvidssons fond, Helge A:xon Jonson stiftelse and Siljeströms stiftelse. I also want to thank Sveriges Numismatiska Förening for awarding me the Nils Ludvig Rasmussons medal.

Moving so far away from France has been tough. I have missed so many important events, happy and sad ones. I love our new home in Stockholm and the people we met here, but I wish there were a direct flight to Poitiers! One good thing about living in a connected world is that it was easy to keep in touch with friends and family. Thank you Big Brother! I am also grateful for all who came to visit these past years: my parents, my siblings, Pauline's family, Matthieu,

Valérie, Antoine, Antonin, Cathy, Romain, Jill, Mehdi, Sylvain, Larissa, Matthieu, etc. It was a lot of fun to have you here and a good excuse to take time off from work. One of the most exciting projects I have ever been involved with was to acquire and renovate with my dearest friends our dream house. Thanks to Alban, Guillaume, Lucile, Noé, Pauline, Baptiste, Ludo, Pilou and all the others for making this idealistic place flower again.

Finally, I owe more than I can possibly express to my wife Pauline and to my daughters Eva and Liv. You have been my biggest support and my greatest motivation all these years, giving me the strength to see this book through to the end. Thank you Pauline for embarking with me on this crazy journey, for putting your career on hold and for being so patient with me. I could never have accomplished this without your love. Thank you also for sharing your amazing talent as a photographer. I still do not know how I can repay you for the time spent trying to teach me how to take good pictures and retouching my ‘petites pièces’. Thank you Eva and Liv for making my life funnier and richer than I could ever imagine!

Introduction

The coin illustrated to the right (Fig.1) is a *First Hand* penny of Æthelred II, king of England from 978 to 1013 and from 1014 to 1016. It was struck in Derby by the moneyer Wulfstan at the beginning of Æthelred's reign, probably between 979 and 985. The obverse of the coin depicts a draped bust with diadem. This depiction of the king is surrounded by the following inscription: +EDELRED REX ANGLOX. The reverse of the coin bears a Hand of God flanked by the Greek letters alpha and omega, a symbol of Christ. Around this is the inscription +PVLSTAN M—O DEORA—.

On Anglo-Saxon coins issued after the monetary reform of Edgar in c.973, the religious message is normally conveyed by the depiction of a cross in the centre field of the reverse (see Naismith 2017:260–77). By choosing the Hand of God instead, Æthelred II made a political statement. His intention was probably to assert divine approval and support in the early years of his reign (Keynes 2016:40). The obverse of the coin, with the draped and diademed bust, is also politically charged. It refers both to Roman prototypes and to the coinage of Æthelred's predecessor, thus emphasising continuity and time-depth. The presence of the king's name and title symbolises royal control over the coinage (cf. Naismith 2014:42–6).

Whereas numismatists and historians are usually able to decipher the messages intended by those issuing coins, we know much less about how these messages were received. There are good reasons to believe



Fig.1. Pierced *First Hand* penny of Æthelred II (c.979–85) from grave 49 at Bjurhovda (Cat.I:114, photograph by the author). Above: oriented as a coin. Below: oriented as a pendant. Scale: 1.5:1.

that understanding depended on many factors, like the milieu of circulation or the background of the user, but the precise meaning ascribed to the object is more difficult to access, especially in the absence of written sources. The challenge is even greater when we deal with coins circulating outside their original cultural framework, where the users are more likely to lack an understanding of the intended message.

This coin of Æthelred II was found in a Viking-Age cremation grave at Bjurhovda, in the Swedish Mälaren area (Cat.I:114). From the presence of a small hole on its outer circumference, we can deduce that it had a certain significance for its owner (Fig.1). Indeed, the hole indicates that the penny had been reused as a pendant – a widespread practice in Viking-Age Scandinavia. To

understand what this penny meant to its owner, we cannot content ourselves with the political and religious messages described above. It is necessary to re-evaluate those in the light of the context in which the coin occurred. What can a *First Hand* penny signify to someone who is unlikely to have received Christian teaching, may never have heard of King Æthelred II and is not familiar with the concept of a monetised economy? What motivated its reuse as a personal ornament?

The main purpose of this thesis is *to better understand how the coins – predominantly foreign – circulating in Viking-Age Scandinavia were perceived by their users and how the messages they conveyed were reactivated when worn as pendants*. Only in this way can we hope to answer the question that is the primary concern here: why were coins adapted for suspension and worn as personal ornaments in the Viking period?

The material forming the foundation of this study will be both archaeological and numismatic. It consists of two main components: 134 Scandinavian graves containing coin-pendants and a representative sample of 80 Scandinavian hoards. The grave material will play a central role in the analysis.

Not only can the graves be used for discussing the coin-pendants in and of themselves, but they can also provide qualitative information on how these ornaments were worn, displayed and valued by their owners. The hoard material will mainly serve to eliminate the biases potentially introduced by the burial practices and to provide a better basis for quantitative analysis.

The reuse of coins as pendants is a unique source of insight into perception and meaning in the Viking Age. Unlike most ornaments of the time, the production of which necessarily involved craft specialists (see e.g. Duczko 1992; Gustafsson 2013), the Viking-Age coin-pendants could be produced directly by their owners, or at least under their supervision. For instance, specialised skills were not required to pierce the *First Hand* penny from Bjurhovda (Fig.1). A hammer and a punch would have sufficed. This implies a very personal connection between the coin-pendants and their owners, from which we can infer intentions and motives. By focusing on processes like selection, transformation, orientation and combination, we shall investigate what made coins special in Viking-Age Scandinavia, to the point of being often reused as pendants.

Part I

A background to the study of Viking-Age coin-pendants

Chapter 1. The reuse of coins as pendants: old and new perspectives

All academic works owe their existence to that which preceded them. The present work is no exception. It draws on a wide range of influences, some of which have contributed more than others to structuring and orienting its development. For this thesis, two lines of enquiry must be highlighted in particular: that which has already been written on Viking-Age coin-pendants and anything related that is suitable for supporting the analysis and interpretation.

1.1. Coins and jewellery: research history

In 1957, in an article entitled *Notes and questions on coin ornaments*, the art historian and numismatist Anne Nicolette Zadoks-Josephus Jitta wrote: ‘Mostly despised by numismatists as damaged coins and mere ornaments and disdained by archaeologists as mere coins, [coin-ornaments] are too little known. Hardly ever [do] they enter into numismatic literature’ (Zadoks-Josephus Jitta 1957:453).

More than 60 years later, nothing has really changed. The reuse of coins as ornaments remains largely overlooked today, despite a growing interest in the subject. The reason for this was clearly identified by Zadoks-Josephus Jitta. The reused coins are hybrid objects that lie at the interface between archaeology and numismatics. They fall into a grey area where it is difficult to navigate. Under such circumstances, it is easier just to leave them where they are.

Paradoxically, the fact that coins can be reused as ornaments has long been recognised within numismatics. In 1627, for instance, the antiquarian Louis Savot devoted a couple of pages to the practice, arguing that certain groups of so-called Roman medals were in fact coins subsequently transformed into pendants (Savot 1627:36–7). The problem is that, since then, few researchers have taken the matter much further.

1.1.1. The ‘annoying’ suspension

It would be no exaggeration to call the reused coins a ‘phantom object’. They are everywhere in archaeology and numismatics, but they almost always remain invisible. Many of the studies in which coin-ornaments appear ignore the fact that they have been transformed into something new. In catalogues and excavation reports, they are frequently listed alongside non-transformed coins, without any mention of their hybrid nature (see e.g. SML 4 Up:4). The ‘coin-ornament’ category tends to be absorbed into the ‘coin’ category, especially when simple methods have been used for the transformation.

In the mind of many researchers, reused coins are still coins in every way. They treat them as if their quality had not changed through their conversion into jewellery. Thus, what is expected from coin-pendants is often no different from what is traditionally expected from coins: to provide a date and to shed light on economic matters. A case in point is the Hoen hoard, discovered in the south-east of Norway in 1834. This hoard, which

contained, among other things, twenty golden or gilded coins with loops attached, has been studied by many scholars (e.g. Holmboe 1854; Holst 1951; Skaare 1966, 1988). All have noted the loops, but these additions were never considered as a source of information. What mattered were the coins themselves – their attribution, their dating, their import, and their collection. It was not until recently that the loops were first examined thoroughly by Mark Blackburn (2006). By undertaking a technical analysis of the loops, Blackburn was able to provide an insight into how and when the coins from Hoen were acquired.

The suspension remains invisible – or almost invisible – as long as it does not stand in the way of the researcher. When it does, the suspension is likely to regain a visible presence. It is then perceived as a troublemaker, as is illustrated by an episode occurring after the discovery of a looped imitation of a Roman coin in a grave at Heilbronn, Germany. This episode is described by Jean Lafaurie in two notes, one published in 1964 and one published in 1966. In the first note, Lafaurie wrote: ‘The loop unfortunately covers the exergue mark, but it is most likely that, as suggested by myself to Mrs Alföldi, we would find under the loop a mark of the Trier mint if it was removed’.¹ In the second note, Lafaurie continued: ‘I had suggested to Mrs Alföldi to get the loop removed from the hybrid coin F7, as this loop covered the mint mark appearing in the exergue of the reverse of the official die. My suggestion was followed, Mrs Nau publishing under n.4 the picture of this coin without the loop. Contrary to what I expected, the mint mark was not from Trier’.²

1 ‘La bélière cache malheureusement la marque d’exergue, mais il est fortement probable que, ainsi que je l’ai demandé à Mme Alföldi, si on enlevait cette bélière, se trouverait dessous une marque de l’atelier de Trèves’ (Lafaurie 1964:328; my translation).

2 ‘J’avais suggéré à Mme Alföldi de faire enlever la

For Lafaurie, the loop is an embarrassment. It prevents him from seeing what he wants to see, from seeing what he considers important. He considers it legitimate, therefore, to remove the loop from the coin, just as it would be legitimate to remove dirt or corrosion.³ Without being so radical as to reshape the reused coins, many numismatists seem to share this same feeling of hostility towards holes and loops.

This idea of the annoying coin-ornament is present, to some extent, in archaeology as well, but with other implications. For archaeologists, the main issue when dealing with reused coins is to determine the age of the context in which the ornament was found. Patrick Périn (1980) examined the question in his monograph focusing on the dating of Merovingian graves. ‘When these [ornaments] are Merovingian coins, the possibilities offered by the date of minting to situate the inhumations in time are limited [...]. The coins may be contemporary with the burial as well as much older, given that the decorative objects are often worn for a long time and even sometimes transmitted’.⁴ What is implied here is that the reused coins provide distorted chronological information. They can no longer be used for ‘normal’ purposes, such as understanding an economic reality

bélière de la pièce hybride F7, car cette bélière cachait la marque de l’atelier inscrit à l’exergue du revers frappé avec un coin officiel. Ma suggestion a été suivie, Mlle Nau publie sous le no4 la photographie de la même pièce, mais sans la bélière et, contrairement à ce que je pensais, la marque d’atelier n’est pas celle de Trèves [...]’ (Lafaurie 1966:28; my translation).

3 The fact that Lafaurie did not find what he was expecting under the loop adds some comic relief to the story!

4 ‘Lorsqu’il s’agit de pièces de l’époque mérovingienne, les possibilités d’utilisation des dates de frappe pour situer les inhumations demeurent limitées [...]. Les monnaies peuvent en effet être aussi bien contemporaines de l’époque d’inhumation que beaucoup antérieures, dans la mesure où les objets de parure sont souvent longtemps portés et parfois même transmis’ (Périn 1980:180; my translation).

or dating a context. For this reason, the transformation into an ornament is often considered as decreasing or even destroying the scientific value of the coin (see also Skaare 1960:73).

The general impression conveyed by these texts is that the ideal coin is a coin without a life, or a coin with as short a life as possible. For the numismatist, a coin with no life is a guarantee of good preservation. The coin can be attributed with certainty and find its way into a numismatic collection. For the archaeologist, a coin with no life – or more exactly a very short life – is a guarantee of accuracy. The coin has been involved in a limited number of events, most of which can be precisely known, such as the place and date of minting or the place and date of deposition. On the contrary, it is hard to deal with a coin whose life was long and eventful, as is the case with coin-ornaments. Many things may have happened without leaving a trace of any kind. This gap between the minting of a coin and its deposition as ornament is usually seen more as a source of trouble than as a source of inspiration.

To sum up, the reused coins do not fit into the traditional numismatic and archaeological boundaries, but transgress them. This idea of transgression is more than a metaphor. Very concretely, the coin-pendants tend to extend beyond the picture frame when they are printed as plates and thus to have their suspension erased. Figure 1.1 is a typical example of such an editing. It shows two pictures of the same looped coin, one taken from the first *SCBI* volume on the Ashmolean collection (SCBI 9:513) and one conforming to the



Fig.1.1.1. Looped coin of Æthelred II from the Ashmolean collection. The picture on the left (SCBI 9.513; with permission from the British Academy) is from the museum's first *SCBI* volume while the picture on the right (photograph: Julian Baker, Oxford) conforms to the standard of the present thesis. Scale: 1.5:1.

standards used in the present thesis.⁵ What can be seen is that the ring has disappeared in the *SCBI* volume. It was not regarded as important enough to have some precious space allocated. Another thing to note is that, in the *SCBI* volume, the coin is oriented to show the designs of the coin the right way up. It does not matter that the coin was displayed differently when used as a pendant. Obviously, it is the coin that is important, not the pendant.

1.1.2. The reuse of coins as pendants: a Scandinavian perspective

Although appearing here and there in the literature (see e.g. Schetelig 1908; Arne 1946), there was little interest in the coin-pendants from the Viking Age until the last third of the twentieth century. These objects were almost completely neglected. Only two groups of Viking-Age coin-ornaments seem to have attracted some attention for a sustained time: the golden looped coins from the Hoen hoard

⁵ The picture was subsequently rotated by the author.

(e.g. Holmboe 1854; Holst 1954) and the coin-necklaces from the eastern Baltic (e.g. Hackman & Hjelt 1984; Appelgren 1905). Both were considered to have special artistic and/or numismatic value.

The same can be seen outside Scandinavia, where research has long focused on high-value numismatic jewellery. Thus, the overwhelming majority of the catalogues dealing with the Roman material are only concerned with the golden coins set in decorated mounts (see e.g. Vermeule 1975; Brenot & Metzger 1992; Facsády 1999). They tend to overlook the silver and bronze coins that were merely pierced or converted into pendants through the addition of a simple loop. These latter forms of attachment and the coins on which they appear were implicitly regarded as belonging to separate – and inferior – categories, even though they could be worn in the same way as the more elaborate coin-ornaments. The catalogue *Coins and Costume in Late Antiquity* (Bruhn 1993), for instance, despite a very generic title, focuses exclusively on ‘numismatic gold jewellery’, with special attention given to mounting techniques. There is nothing about the lower value categories of coin-ornaments. This lack of interest in the less valuable categories of coin-pendants can explain why the Scandinavian material, which consists mainly of pierced and looped silver coins, has received so little attention for so long.

In the 1960s, a major change in the way coins were approached took place in Scandinavia, with the development of new methodological tools and of new lines of investigation. This new approach is exemplified by Brita Malmer’s thesis on the first coins minted in the North (Malmer, B. 1966). Malmer’s work, which focuses on chronological and chorological issues, makes a strong case for applying strict methodological rules. Malmer particularly emphasises the importance of using logical-

ly correct verbal definitions and objective typological criteria. By doing so, she conforms to the aims and methods professed by Mats P. Malmer (1963) and by the processual school of archaeology (cf. Shanks & Hodder 1995:3–4; Stig Sørensen 2002:167–70). The 1960s also saw an increasing awareness of the need to consider all available information on coins, including secondary treatment. This principle was at the heart of the project *Corpus nummorum saeculorum IX-XI qui in Suecia reperti sunt*, better known as the CNS project, whose aim was to publish the entire Viking-Age coin material from Sweden. The first catalogue of the series was issued in 1975.

This is the context in which research on the Viking-Age coin-pendants began to emerge. For the most part, this early research was concerned with methodological and chronological issues (see e.g. Skaare 1960:73; Jansson 1969:28). Should the coin-pendants be used for dating purposes? Should they be used to study coin circulation? Two studies deserve special consideration, as they took this research one step further by investigating the practice itself. These two studies very much complement each other. One has a very ‘archaeological’ approach – focusing on context and function – and one has a very ‘numismatic’ approach – focusing on coin types and suspension techniques.

In 1973 Ola Kyhlberg published an article dealing with problems of stratigraphy and coin dating in the trading centre of Birka. In order to solve these problems, the author proposed dividing the coins from the site into three main groups according to their function (Kyhlberg 1973:29): coins whose primary or only function seems to have been that of means of payment; coins with means of suspension found in non-burial contexts; coins with or without means of suspension found in burial contexts. From this followed a thor-

ough discussion of the ‘coin-pendant’ phenomenon and of some depositional practices. This discussion offers several observations on the composition of the ‘coin-pendant’ group in Birka and an ethnographic parallel. Kyhlberg reaches two important conclusions (Kyhlberg 1973:33–4): first, that the pierced and looped coins should not be used for dating purposes; second, that the pierced and looped coins were probably endowed with magical properties.

Gert Hatz’ book on the German coins from the tenth- and eleventh centuries found in Sweden contains a section dedicated to their reuse as pendants (Hatz, G. 1974:137–41). In this section, Hatz provides a detailed description of the ‘coin-pendant’ material: coin types reused, means of suspension, context of discovery, graffiti and orientation of the designs. All the characteristics of the objects are taken into account. The German coin-pendants are then discussed with reference to a few written sources and to comparative examples. Hatz is very cautious when interpreting the material. He often prefers to use the expression ‘*Schmuck oder Amulett*’ rather than taking a stand.

In the years following the publication of Kyhlberg’s article and Hatz’s book, several studies discussing the reuse of coins in the Viking Age have appeared. Most were conducted by numismatists. In 1978 Tuukka Talvio published an article dealing with the production of coin imitations in Finland and their reuse as ornaments. Special attention was given to a group of Byzantine imitations dated to the eleventh century. The author concluded that these ‘imitations were principally made to satisfy a demand for coin jewelry’ (Taltio 1978:35). In the proceedings of a symposium on Viking-Age coinage held in Sigtuna, Alexander Belyakov presented the coin-pendants found in barrows near Pleshkovo, in Russia. The catalogue of reused coins is preceded by

some general comments on the practice, with an emphasis on their social function (Belyakov 1990:36). The first comprehensive overview on the Viking-Age coin-pendants was published by Talvio in 2000. The aim of this overview was to present the main features of the phenomenon in Finland, by including all the groups of coins reused as ornaments in this area. Although no real conclusion was reached by Talvio, many of his observations are essential for understanding the practice in general, like the fact that most of the coin-pendants have a long life history or that some of the loops were removed before their deposition (Taltio 2000:983–4).

All these studies provide interesting insights into the reuse of coins as ornaments in the Viking Age, especially from chronological and geographical points of view. They leave many questions unanswered, though, mostly because of a lack of archaeological contextualisation. It is also important to note that they tend to investigate the phenomenon outside Scandinavia. Most of the coin-pendants described by Talvio and Belyakov were in fact worn by members of Finnish tribes. The Pleshkovo cemetery, for instance, has been attributed to Finns living in the basin of the Volga (Belyakov 1990:35).

In the last ten years, new research on the reuse of coins as ornaments has appeared, with a focus on the lower categories of material. This research deals with many time periods and geographic settings, including the Roman world (Perassi 2011; Doyen 2013), Medieval England (Kelleher 2013), Merovingian Francia (Codine-Trécourt 2011) and modern-day Europe (Carr 2012).

In this emerging research field, the theoretical background is not always clearly presented by the authors. However, there are frequent references to material culture studies through the concept of object biography (see e.g. Codine-Trécourt 2011; Carr 2012). The

concept often serves as a basis for discussing the many stages in the life of the reused coins and the different changes of meaning. Such a biographical approach was applied, for instance, to studies dealing with the reuse of Roman coins in later contexts (Eckardt & Williams, H. 2003; Ciric 2013).

The hybrid nature of the reused coins, which has long repelled researchers, has recently become an asset. This is especially obvious in the case of a series of studies dealing with the Viking phenomenon of reuse in a general sense (e.g. Kleingärtner 2014; Aannestad 2015). In these studies, which include all kinds of foreign artefacts converted into ornaments, the reused coins are discussed as part of a larger phenomenon of hybridisation and appropriation. They are just a small piece of the puzzle. The most important contribution to this field is the thesis by Hanne Lovise Aannestad (2015) on the transformation and use of foreign imports in Viking-Age Norway. By adopting concepts like appropriation,⁶ object biography or association, the author aims to understand how these imports were integrated into the local society and how they functioned as meaningful objects (Aannestad 2015:15). Aannestad's thesis devotes an entire chapter to the reuse of coins.⁷ This chapter covers important aspects of the practice, from chronological distribution to coin orientation, thus reflecting a systematic and methodical approach. Another strength of the study is that it gives equal weight to all types of coins, while there is a tendency in other literature to focus on special categories (see e.g. Garipzanov 2008; Audy 2016). In this sense, Aannestad's thesis is the first attempt

to provide a holistic explanation of the phenomenon. When concluding that the reused imports functioned as cultural markers for the upper strata of society with international connections (Aannestad 2015:274), the conclusion is meant to be valid for all the pierced and looped coins found in Norway. Still, it is difficult to apply the different results obtained by Aannestad to a larger area, mainly because of the small size of the Norwegian sample (cf. Ch.2.3).

The same material was recently examined by Elina Screen (2014) in an article dealing exclusively with the reuse of coins as pendants. In this article, Screen compiled a corpus of all the coins-pendants found in Norway. The approach adopted in her study is primarily chronological. The author divides the Viking Age into several economic periods and determines which types of coin-pendants were used during each of them. The Anglo-Saxon coins from the period 980–1050 are assessed more closely, especially with regard to their orientation. It is argued that the cross could have been intended, at least in some cases, as a Christian statement (Screen 2014:375). The results obtained by Screen (2014) and by Aannestad (2015) are complementary. Screen is mostly interested in the economic and religious dimensions of the phenomenon whereas Aannestad is mostly interested in the social and cultural dimensions. Screen's idea that the Viking-Age coin-pendants could be used as religious markers or amulets is a common one (e.g. Gräslund 2005:383–4; Audy 2012:421–2). Jens-Christian Moesgaard (2004), for instance, has tentatively interpreted the Carolingian coins and coin-pendants found in Denmark as being linked to Carolingian missionary activity.

Several other studies have appeared in the last ten years that discuss the reuse of coins as ornaments in the Viking Age. All of them tend to focus on a special find, site or coin-

6 It is interesting to note that Aannestad turns away from the concept of hybridity, which she regards as confusing rather than illuminating in the context of her thesis (Aannestad 2015:50).

7 The coins reused as pendants are the second largest category of imports examined in the thesis after the semi-precious beads (Aannestad 2015:17).

type, such as the Birka cemeteries (Audy 2011, 2012), the Hoen hoard (Blackburn 2006) or the Carolingian coins (Garipzanov 2005, 2008). Despite the variety of purposes, methods and theoretical backgrounds characterising this growing body of research, it is possible to identify certain trends in the way the material is approached:

1- Interdisciplinarity. There is a desire to combine components of numismatics, archaeology, history and art history.

2- Contextual analysis. Particular importance is often attached to the contexts in which the reused coins have been discovered.

3- Coins as jewellery. The aim is to explain the phenomenon *per se* and to answer questions of meaning.

These three approaches, which are absolutely essential to the study of the 'coin-pendant' phenomenon, will be at the core of the present thesis and serve as methodological background.

In the last ten years, there has been a clear increase in the research on reused coins. This being said, the Viking-Age practice of reusing coins remains very little known today. The empirical evidence is still very fragmented and the different interpretations are hardly connected. At the same time, a few coin-groups have been enhanced at the expense of others. We have, for instance, several studies discussing the reused Carolingian coins (e.g. Moesgaard 2004; Garipzanov 2005, 2008) and Byzantine coins (e.g. Audy 2016), while the reuse of Islamic dirhams, though numerically dominant, is merely mentioned in passing. The eleventh-century Scandinavian coins reused as pendants are also frequently excluded from the analysis. Lastly, it should be emphasised that the geographical coverage of the literature on the subject is extremely patchy. The only regions that have been thoroughly studied – i.e. Finland and Norway – only account for a small proportion of the total material.

In the present thesis, I will try to evaluate the current interpretations and to explore new or overlooked aspects of the practice. All types of coin-pendants used in Viking-Age Scandinavia will be included. They will be examined from different perspectives – social, religious and economic. This holistic approach will allow us to advance from the fragmented picture available at the moment to a deeper understanding of the Viking-Age 'coin-pendant' phenomenon. It will also provide a solid basis for discussing questions of meaning.

1.1.3. Coin-pendants and the Viking-Age economy

The works listed above, although being the main ones dedicated to the study of the Viking-Age coin-pendants, are not the only ones in which those pendants occur. The practice is also mentioned in works dealing with other subjects, such as religious practices (e.g. Malmer, B. 1996:92–5; Gräslund 2013:115–6) or long-distance connections (e.g. Androschchuk 2013:95–6, 114; Hraundal 2013:155). Particularly striking is the presence of the Viking-Age coin-pendants in the literature on economy, where they are discussed relatively frequently, as will be shown below. It should not be forgotten that the objects from which the coin-pendants are made are economic objects.

In Viking-Age Scandinavia, three main types of economy may be distinguished: a status economy, a bullion economy and a coin economy (see e.g. Williams, G. 2007:178–85; Blackburn 2009:43–6). They correspond to three different ways of using silver. In the status economy, precious metals function as a means to enhance the status of their owners. This can be done through either the display of prestige items or the exchange of gifts. The bullion economy is where all kinds of silver objects – coins, ornaments and ingots – are

used as means of payment. These objects, which are valued for their weight and fineness, can be cut into smaller pieces to make up the exact amount of silver required. In the monetary economy, coins circulate by tale, not by weight. Their value is normally guaranteed by an issuing authority.

Several attempts have been made to fit the three-sided economy of the Viking Age into chronological sequences. The purpose of these chronologies is usually to understand economic development at the local level. One of the most influential models is that proposed by Heiko Steuer for Hedeby (Steuer et al. 2002; cf. Hilberg 2011:208–10). It comprises four distinct phases. The first phase, which stretches from the eighth century to c.880, is dominated by a barter economy in which silver functioned mostly as a prestige commodity. This phase also saw a limited attempt to introduce coinage in the town. During the second phase, from c.880 to 970, silver circulated in the form of bullion, as evidenced by the large number of surviving weights and the presence of silver fragments. Some locally minted coins were still used in parts of the town. The third phase, dating between c.970 and 1050/70, is a continuation of phase two, but with Islamic silver being replaced by Western silver. The first national coinages began to be minted in the Scandinavian kingdoms at this time. Beginning in 1050/70, the last phase is characterised by the establishment of a fully-developed monetary economy.

Chronological models of this kind are useful for gaining a sense of the general economic trajectory but like all models, they tend to oversimplify the situation. In reality, the three economies of the Viking Age co-existed during much of the period. The status economy, for instance, did not disappear in c.880 with the emergence of the bullion economy, nor even in 1050/70 with the emergence of

the coin economy. Gifts continued to be exchanged within the upper class (cf. Gustin 2004:248–9), silver to be used as a prestige commodity (cf. Williams, G. 2007:206) and commodity-money to be prevalent at some levels of society (cf. Skre 2011:75–80). Moreover, it is important to emphasise the fluidity existing between the different types of economies in the Viking Age, and especially between the status economy and the bullion economy. This fluidity can be illustrated by an account in *Heimskringla* of how the skald Eyvind is rewarded for a poem of his own (cf. Graham–Campbell 2007a:216; Williams, G. 2007:182–3). In the episode, coins valued for their bullion content are collected by Icelandic farmers to put the reward together. The coins are then melted down to be worked into a large brooch, a brooch later sent to Eyvind. Eventually, Eyvind prefers to cut up the brooch into hack-silver to buy cattle. The same silver is thus changed from bullion to prestige item, and from prestige item to bullion again (*Saga of King Harald Greycloak*, §18).

Coin-pendants are traditionally associated with the status economy. They are considered to be a means to enhance the prestige of their owners. In most cases, this association between coin-pendants and status economy is only implicitly expressed, but there are exceptions. Regarding the reuse of coins and other foreign objects as ornaments, Sunhild Kleingärtner (2014:75) says that it is ‘an example of wealth worn for show and a demonstration of the increasing complexity of society during the Viking Age’. Similarly, Richard Kelleher (2013:228) argues that the use of coins as ornaments ‘reinforces the power of wealth and the status of the wearer because it demonstrates their ability to change money into jewellery’.

The association between coin-pendants and status economy is based on two obser-

uations. Firstly, the fact that the coins have become ornaments. They have moved from having a monetary function to having a display function (see e.g. Hårdh 1996:16; Williams, G. 2007:183). Secondly, the frequent presence of these coin-pendants in hoards with markedly social character (see e.g. Kilger 2008a:326). The Hoen hoard, for instance, which is considered the classic representative of the status economy, contained twenty looped coins (Graham-Campbell 2011:32; see also Fuglesang & Wilson 2006).

A study by Lars Jørgensen (2006) on the Viking-Age manor and market at Lake Tissø provides additional evidence of the relationship between coin-pendants and status economy. In this study, several maps present the distribution of the coins on the site. The coins investigated can be divided into two main groups. One consists of nine Western coins of various origins, eight of which are pierced or looped. The other consists of 108 Islamic coins, among which we find many fragments and few ornaments. Interestingly, the former group is clearly concentrated within the manor area and the cult area, while the latter is scattered all over the site (Jørgensen 2006:197–203). The reuse of coins as pendants is here linked to the aristocratic way of life.

Although not conceptually associated with the bullion economy, the Viking-Age coin-pendants are sometimes mentioned in works dealing with this type of economy (see e.g. Gaimster 1991:117; Hårdh 1996:89–91). This can be explained by the way the bullion economy and the status economy relate to each other. On the one hand, they can be set in direct opposition, especially when it comes to the treatment of coins. Birgitta Hårdh (1996:91) thus contrasts the degree of fragmentation of coins, which indicates an increased significance as a means of payment, to the use of coins as ornaments, which indi-

cates a decreased significance as a means of payment. On the other hand, there are many bridges between the two economies. Pierced and looped coins can easily move from one to the other (Williams, G. 2007:183). Even after being transformed, coins hold their bullion value and can still be exchanged by weight.

By contrast, the transformation of coins into pendants seems to be at odds with a regulated coin economy. Where coins are used as a means of payment and exchanged at face value, there are good reasons to try to preserve their integrity. A damaged coin may not be accepted in the market. Following this principle, the absence of coin-pendants can be regarded as evidence of a developed coin economy (e.g. Skaare 1976:93–4). A good example of this approach is provided by Malmer's study of the beginning of the Nordic coinage (Malmer, B. 1966). In order to determine where these coins were minted, Malmer investigates the spatial distribution of the material. She focuses on two key areas, one around Birka and one around Hedeby, between which significant differences emerge. In the Birka area, almost all the early Nordic coins derive from graves and have been reused as ornaments. In the Hedeby area, very few early Nordic coins derive from graves and only one has been reused as an ornament. Based on this, Malmer concludes that the early Nordic coins were not used as a means of exchange at Birka. She also concludes that they were minted in the Hedeby area (Malmer, B. 1966:183–6).

The Viking-Age coin-pendants are often regarded by archaeologists and numismatists as diagnostic artefacts. Their use, presence or absence is thought to reflect different degrees of economic development. They are expected to be used in the status economy, present in the bullion economy and absent in the coin economy. In other words, an economy with coin-pendants tends to be seen as less ad-

vanced than an economy without coin-pendants (see e.g. Hårdh 1996:91). This is a dubious assumption. As emphasised by Gareth Williams (2007:183), ‘the reuse of coins as jewellery can also be observed in this period even in well-established coin-based economies, such as late Anglo-Saxon England’. Thus, determining whether the coin-pendants functioned as economic objects, and if so how, is an important question to be addressed.

1.2. Towards a theoretical model for studying coin-pendants

The previous literature on the reuse of coins as pendants has drawn on a number of theories and concepts to explain the practice, such as ‘material culture’, ‘object biography’ or ‘hybridity’ (see below). Some of these theoretical approaches will be embraced and integrated in this work, but it also appears necessary to develop tools specifically adapted to address issues raised by the present material.

1.2.1. *Between archaeology and numismatics*

In museums, coins are generally set apart from other archaeological objects. They are placed in different collections, they are given special accession numbers, they are stored in dedicated areas, and they are displayed in separate rooms. Most often, they even have their own specialised museums within museums, called coin cabinets. In Sweden, for instance, the KMK and the SHM are two distinct entities, each with its own mission.⁸ The collections of the former are devoted to coins, banknotes, medals and other objects relating to financial history. The collections of the latter are devoted to all kinds of archaeological objects found in Sweden and to

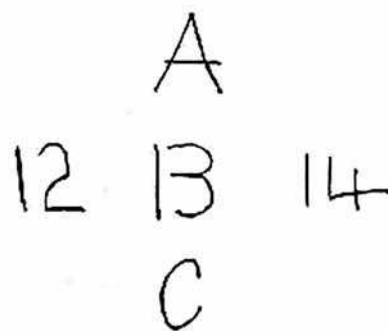


Fig.1.2. An ambiguous image: B or 13? (Bruner & Minturn 1955).

Swedish ecclesiastical art (SFS 2014:1079). In theory there is no overlap between these two collections.

Such a physical division between coins and other archaeological objects raises a dilemma, though. What to do with coin-pendants? Should they enter the numismatic collections or the archaeological collections? Are they more coins or more pendants? The answers to these questions change depending on the time period and the person in charge. Today, in Sweden, all the coin-pendants are likely to be sent to the KMK. This has not always been the case, the reason why some coin-pendants still belong to the collections of the SHM (Cat.I:24). The tacit rule has long been that a looped coin was an archaeological object while a pierced coin was a numismatic one, but this rule was almost impossible to apply in practice. What to do when a grave contained both a pierced coin and a looped coin? What to do when a loop was broken off? The absence of consistent guidelines for dealing with the Viking-Age coin-pendants has contributed to their dispersion among a range of numismatic and archaeological institutions.

From an ontological perspective, there is no point in arguing about whether coin-pendants are more coins or more pendants. Like ambiguous images (Fig.1.2), they are both things at the same time in their present state of existence. Seeing one thing or the other is

⁸ Although they both belong to the same agency called *Statens historiska museer*.

just a matter of perspective and is contextually determined. The central sign in Figure 1.2 is either perceived as the number 13 or as the letter B according to the sequence in which it is read. In the same way, a coin-pendant can be viewed more as a coin in one context and more as a pendant in another. Preconceived notions and aspirations influence the way in which the coin-pendant is perceived by the researcher.

Moreover, the coin-pendants are experienced differently depending on how the coins of which they are made have been transformed. The more radical the transformation, the more likely the reused coin is to be experienced as an ornament. The famous ‘Wilton Cross’, for example, a cross-shaped gold and garnet cloisonné pendant incorporating an early Byzantine coin, is first and foremost described as a pendant in the literature (see e.g. Kendrick 1937; Bruce-Mitford 1974). It would never occur to anyone to change the orientation of the pendant so as to show the Byzantine coin the right way up (Fig.1.3), as is very often the case for pierced coins. Because most of the Viking-Age coin-pendants have been mounted in very simple ways, they tend to be perceived more as coins than pendants.

That almost all the Viking-Age coin-pendants have been deposited in numismatic collections is not only due to them being perceived as coins. Another, more pragmatic, explanation is that the coin-pendants are being sent where they can be taken care of. Attributing coins requires expertise, skills and experience. Experts of this kind are usually employed by coin cabinets. From this point of view, it may seem natural to place coin-pendants in coin cabinets.

These institutional and perceptual issues are important. They often determine how the objects are approached by researchers. Depositing the coin-pendants in coin cabinets implies that they are detached from their ar-



Fig.1.3. The Wilton Cross with its upside down Byzantine gold coin (BM 1859,0512.1; with permission from the British Museum). Scale: 1.5:1.

chaeological contexts and from the objects with which they were originally associated. In publications, rotating the coin-pendants so as to orientate the coins the right way up implies that these objects are primarily defined as coins. Preferring ‘well preserved’ coins over pierced or looped ones in a numismatic exhibition implies that the latter are perceived as damaged coins.⁹ All these preconceived ideas influence the way the object ‘coin-pendant’ is perceived and interpreted (see Ch.1.1).

Broadly speaking, the problem identified here lies in the fact that coins are considered a special category of objects. They have their own specialists, museums, institutions and journals. They are also the collector’s item *par excellence*. In such conditions, the study of an object transcending the boundaries of the numismatic discipline becomes a delicate task. This tendency to isolate coins has been increasingly questioned in recent years (e.g. Kemmers & Myrberg 2011). Coins, like any

⁹ The coins that are selected to present the history of coinage in coin cabinets are normally the best-preserved specimens available in the collections. Pierced and looped coins are usually exhibited only when there is no alternative.

other archaeological object, are part of material culture and should be approached as such.

1.2.2. Coins, graves and hoards after the cultural turn

Material culture studies is an interdisciplinary field that investigates the relationship between people and things (Miller & Tilley 1996:5). This field of research emerged in the 1980s from a desire to bring structural and semiotic approaches together (Hicks 2010:45). The initial aim was to show that material culture was meaningfully constituted (Hodder 1982) and meaningfully categorised (Miller 1985). Since then, the material culture approach has developed in many directions with ramifications in many disciplines, such as human geography, history, social anthropology and folklife studies (Hicks & Beaudry 2010:5). Principal themes within this disparate field include: the productive nature of consumption, object agency, the social life of things, phenomenological experience, and identity (e.g. Gell 1998; Gosden & Marshall 1999; Tilley 2004; Olsen 2010; Woodward 2015). As pointed out by Daniel Miller (2010:1), 'material culture thrives as a rather undisciplined substitute for a discipline: inclusive, embracing, original, sometimes quirky researches and observations.' The common denominator is a strong interest in things and an object-centred approach, which can be related to a broader 'material turn' or 'return to things' in the social sciences.

Applied to coins, the material-culture approach allows a shift of focus away from the traditional concerns of numismatics. The economic and political dimensions of money disappear in favour of themes like coin consumption and coin agency (see Kemmers & Myrberg 2011). Particular emphasis is placed on the relationships between the object 'coins' and the individuals with which this

object interacts. The purpose is to show how the materiality of coins contributes to their function and their meaning.

A good example of this approach is the study by Gilly Carr (2012) on the role of coinage in the trench art of the Channel Islands during the Second World War. In this work it is shown how local coins – from Guernsey, Jersey or Britain – were transformed into lighters and badges as an act of resistance. The fact that coins were used for this purpose is to be explained primarily by the symbols of identity and patriotism that such objects carry. The reused coins can be viewed, in this particular context, as small 'items of resistant material culture' (Carr 2012:342). Interestingly, Carr argues that the same coins and the same images were also used by the occupier to express very different things. For German soldiers, an object made from a local coin was both a souvenir and, through the act of appropriation, a manifestation of German supremacy. This highlights the importance of considering the context of ownership and the object biography when trying to understand the meaning of these reused coins (Carr 2012:329).

The cultural turn has not only changed our understanding of things, but also our understanding of the archaeological record. An example that is particularly relevant to the present discussion is that of graves. As demonstrated in various studies (e.g. Hodder 1980; Parker Pearson 1982; Härke 1994), graves *cannot* be regarded as direct reflections of the deceased's identity. They are images created by the living, which may or may not coincide with the reality. Concretely, this means that a grave containing weighing equipment for trade is not necessarily the grave of a merchant and that a grave containing weapons is not necessarily the grave of a warrior. The presence of these particular grave-goods may also be ritually or ideologically motivated.

Similarly, the hoard evidence has been increasingly questioned in recent years by archaeologists and numismatists (e.g. Blackburn 2003; Kelleher 2013:25–6). Hoards, just like graves, can provide a distorted image of the reality. They are the result of a selection process, which may have been undertaken differently depending on the individual involved in it and on the reasons leading up to hoarding (see e.g. Bradley 1990; Myrberg 2009; Odebäck 2009). Concretely, this means that a hoard deposited as safe-keeping is likely to have a different content than one deposited as a votive gift and that none of them is likely to reflect perfectly the coin stock in circulation.

This critical approach to the archaeological record is necessary for interpreting the practice of reusing coins as pendants in Viking-Age Scandinavia. It is not possible to understand the relationships between coin-pendants and owners of coin-pendants without understanding the contexts in which these objects occur.

1.2.3. *Contextual archaeology*

The search for meaning has become a major concern with the rise of material culture studies. As Ian Hodder argues (1982), material culture is organised by ideas and concepts that provide it with meaning. It is actively and meaningfully constituted. This definition of material culture as ‘meaningfully constituted’ lies at the core of contextual archaeology.

The concept of ‘contextual archaeology’, which later came to be known as ‘post-processual archaeology’, is aimed at providing methods for identifying and studying contexts in order to interpret meaning (Hodder 1991:153). In this tradition, meaning and context are seen as inseparable and as mutually constitutive of each other. They form what Hodder terms ‘contextual meanings’. According to Hodder,

there are two types of contextual meaning.

The first type of contextual meaning refers to the broader framework in which an object is situated. In other words, ‘understanding of an object comes about through placing it in relation to the larger functioning whole’ (Hodder 1991:153). As noted by Hodder (1991:122), this large-scale approach is not specific to contextual archaeology. It was also advocated by Marxist and processual archaeology, though for different purposes. The importance of studying coins in a wider context has been reaffirmed by Fleur Kemmers and Nanouschka Myrberg in a recent article (2011). As they observe, coins do not exist in a vacuum. The various stages in their lives must be situated in a larger temporal, geographical, functional, ideological and social framework. Kemmers and Myrberg identify four main stages that cannot be fully understood without this contextualisation: minting, use, deposition and retrieval of the coin. These four stages all take place in different contexts (Kemmerys & Myrberg 2011:89–91).

The second type refers to the network of relationships in which the objects are involved. In other words, understanding of an object comes about through placing it in relation to other archaeological objects, as if objects were words in text. This idea was further developed by Andrew Jones (2007), who introduced the concept of *citation* in archaeology. The concept of citation posits that all ideas and objects reiterate components of previous ideas and objects (see Jones 2007; Lucas 2012:201–2; Williams, H. 2016:406–8), thus forming citational networks (Jones 2007:80–4). Within these networks, the same reference can be expressed in various ways, an obvious example being that of skeuomorphs, where the form of an object is imitated in a different medium (Lucas 2012:201). Even though the references to other ideas or objects are not necessarily intentional (Williams, H.

2016:401), it is through them that meaning is made and mediated. A concrete example of this is provided by the Viking-Age hogback monuments (Fig.1.4), which make reference to a wide range of buildings, containers, artefacts and structures.

In summary, contextual archaeology provides the means to interpret the meaning of coins by situating them within several levels of contexts. One difficulty, though, is that objects frequently change contexts. An object cannot be properly understood at only one point in its existence.

1.2.4. *The social biography of things*

Objects, like humans, go through several phases of existence. They are created, age and disintegrate, just as people are born, grow and die. Objects also have a life in the sense that they are involved in a set of social relationships. They interact with people and with their environment. By weaving these two aspects of life together, the purpose of the biographical approach is to understand the changing relationships between objects and people (Gosden & Marshall 1999:172; Joy 2009:540; Gilchrist 2012:11). In this spirit, object biographies are primarily concerned with showing how objects move between social contexts and accumulate meaning through recontextualisation and transformation.

The idea that objects can have their biographies written has been around for some time. An early example is provided by the eighteenth-century 'it-narratives', a literary genre in which the lives of non-human protagonists are narrated (see Blackwell 2007, 2012). The translation of this idea into an archaeological and anthropological method is more recent, though. The turning point came with the publication of Arjun Appadurai's edited volume *The Social Life of Things* (1986). In his contribution to this volume, Igor Kopytoff (1986)

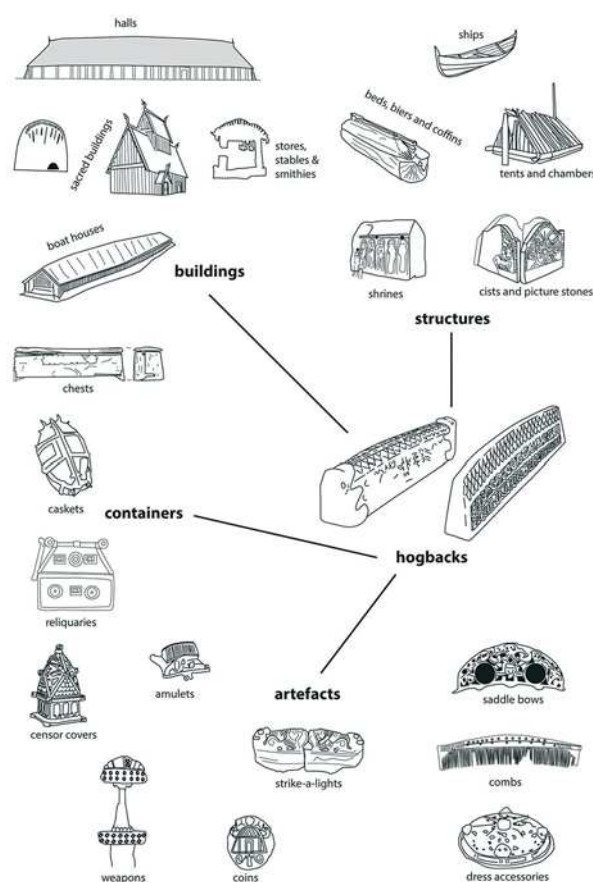


Fig.1.4. Example of citational network (Williams, H. 2016). A series of references link the hogback monuments to a wide range of artefacts from throughout the Viking world.

outlines the principles of the object biographical approach, using it as a framework for looking at the process of commoditisation. As emphasised by Kopytoff, the commodity status of an object is not static. Cars, for instance, lose value as they age, but this trend is reversed when they enter the category of vintage cars (Kopytoff 1986:80). Moreover, objects have the capacity to move in and out of the commodity status. The same object can be seen as a commodity at one time in its life and not at another (Kopytoff 1986:64). By highlighting these movements, Kopytoff says, 'biographies of things can make salient what might otherwise remain obscure' (Kopytoff 1986:67). They allow us to explore the shifting value and meaning of objects.

Although the anthropological approach

introduced by Kopytoff and Appadurai has been the most important source of inspiration for archaeologists working with object biography, it is not the only one. Another notable influence is the work of Michael B. Schiffer on formation processes. In a series of publications, Schiffer (e.g. 1972, 1975, 1983) has shown how objects pass through different cultural contexts throughout their lives – procurement, manufacture, use, discard and eventual recycling – and how they can be disposed of at any of these stages.

This model of ‘life history’ is intended to shed light on the processes responsible for the formation of the archaeological record. Clearly, Schiffer is more interested in morphological changes than in changing values or changing meanings. His approach is thus complementary to the anthropological one (see also Moberg 1969:65).

The biographical approach has been applied to a wide range of objects, including personal ornaments (e.g. Arwill-Nordbladh 2013), megaliths (e.g. Gillings & Pollard 1999; Holtorf 2008), houses (e.g. Gerritsen 1999; Herva 2010) and vessel pieces (e.g. Shanks 1998; Holtorf 2002). In most cases, we find the same mechanisms of biographical change at work. Biographical change happens primarily as objects travel, as they circulate and/or as they age (cf. Joy 2009:541). Distance – spatial or temporal – is not necessarily a decisive factor and can be very short (see e.g. Hoskins 1998). What matters is the movement from one context to another and the transformation this implies for the object. Biographical change can even happen in the absence of any movement. Objects associated with ceremonial performance (Gosden & Marshall 1999:174–6) or specific events (Hoskins 1998) also tend to acquire special meanings. It should be noted that all these mechanisms rely on the capacity of objects to accumulate histories. As pointed out by Chris

Gosden and Yvonne Marshall (1999:177), ‘renewals are never fully complete. They bring with them fragments of old lives, threads of earlier meanings’.

Biographical change is usually accompanied by physical change. Objects wear in their use and in their consumption. They become different. They are marked by the traces of time (Shanks 1998:17). Valuable information can be obtained from examining this process of decay and renewal. Biographical evidence ‘resides in the artefact, in the patina of age, wear and repair it acquires through its life’ (Joy 2009:545). However, physical change is not merely an effect of biographical change. It is one of its main causes as well. The traces of time participate in the creation of new meanings by making the object materially singular (cf. Kopytoff 1986). They endow them with *aura* (Shanks 1998:17–9). This mechanism of biographical change tends to be neglected in biographical studies (but see Gerritsen 1999), thus supporting the idea that the ‘material turn’ is often a turn away from things.

The human-life analogy – or metaphor – is helpful for understanding the reasoning behind the biographical approach, but can be misleading. It is simplistic, in particular, to refer to the time of deposition or to the time of loss by using the concept of death. Objects – at least those that we can study – survive these dramatic events. This is precisely what allows them to become archaeological objects. Most importantly, the life histories of objects continue until the present day (see e.g. Holtorf 2002:55; Hahn & Weiss 2013:3). What happens to objects after their archaeological discovery is no less important. This continuity, grounded in the materiality of the object, is at the heart of the biographical approach (Shanks 1998:16).

An object-biography is not only about reconstructing the life of an object; it is also

about shaping a narrative. Archaeologists have given little consideration to this latter aspect, despite the difficulties involved by the narration itself. As noted by Nanouschka Myrberg Burström (2014:71), an endless number of events or contexts can be addressed when telling the story of an object. It is always possible to add levels of data and sets of relations. All of these events and contexts, though, are not equally relevant for providing answers to the research questions posed. Some deserve particular scrutiny while others should be left aside (cf. Kopytoff 1986:67–8). In this sense, writing a biography is an exercise in selection and organisation. To avoid writing a descriptive and cumulative hagiography, the scope of the biographical analysis needs to be adapted to the purpose of the study (Burström 2014:79).

At the same time, archaeological evidence is fragmentary by nature. Most of the events preceding the deposition of an object and its subsequent discovery leave no trace whatsoever, which means that they cannot be reconstructed by the archaeologist. The only two events for which we usually have comprehensive information are production and deposition (Joy 2009:543). What happens at other times is harder to grasp, and the possibilities for doing so very much depend on the nature of the object. In this sense, writing a biography is also an exercise in gap filling. One way to fill the gaps is to pay very meticulous attention to detail, for instance by examining what is ‘written’ into the object (Joy 2009:545). Another way to deal with the gaps is not to fill them, but to work around them. This can be done by writing object-biographies in a non-linear fashion, by writing fragmented biographies. Instead of proposing a neat rectilinear narrative, the idea is to make connected jumps between the events that have left legible traces and to produce multi-vocal stories (Joy 2009: 544; Burström 2014:69).

Under such circumstances, the narrative produced is a compromise between the relevant and the available, between what the archaeologist wants to do and what the archaeologist is able to do. It could be argued, of course, that the same is true of any archaeological or historical work (cf. Veyne 1979:22). However, it is particularly important to emphasise this here, the biographical approach being an approach that is rooted in gaps and details.

Almost without exception, all the recent studies dealing with reused coins have adopted a biographical approach (e.g. Codine-Trécourt 2011; Carr 2012; Ciric 2013; Aannestad 2015). Because these coins pass through many different contexts over the course of their lives, they benefit particularly from being examined within such a framework. They cannot be properly understood at only one point in their existence.

These recent biographies of coin-pendants have been conceptualised in two different ways. Some authors, like Florence Codine-Trécourt (2011) or Gilly Carr (2012), have written what can be called ‘typical biographies’ or ‘ideal biographies’ (cf. Tilley 1996:248). Biographies of this kind are interested in what is generic in the life of the coin-pendants, by identifying a series of intrinsic events and stages. They make it possible to study the ordinary, but have the disadvantage of normalising the extraordinary. Others, like Richard Kelleher (2013) or Marion Archibald (2013), have written what can be called ‘individual biographies’ (cf. Tilley 1996:248). Biographies of this kind are interested in specific coin-pendants whose trajectories usually deviate from those of the majority. They open up avenues for a better understanding of the phenomenon by accentuating certain of its features.

The present thesis will combine the two biographical approaches identified here. In a first phase (Ch. 3–7), the focus will be on the

common stages punctuating the life course of all the Viking-Age coin-pendants. In a second phase (Ch. 8–10), the focus will be on a small number of particular cases revealing special information. Doing so will allow us to discuss both the ordinary and the extraordinary and to see how these two conditions relate to each other.

1.2.5. The meaning of things

Semiotics can be defined as the study of signs and sign systems (Chandler 2002:1). This definition, of course, immediately raises the question of what exactly is meant by ‘sign’. A sign is everything that is interpreted as significantly ‘standing for’ something else (Eco 1978:7; Chandler 2002:241). Signs can take many different forms, including words, images, gestures and objects. Even silence or absence can have a semiotic function (cf. Nöth 1990:81). When combined together, signs constitute ‘systems of signification’. The purpose of semiotics is to understand these ‘systems of signification’ and the signs of which they are composed (Barthes 1964:9).

From a semiotic point of view, coins are very complex objects. They were used to convey a wide range of messages, especially political and religious ones (see Introduction). Moreover, they contain different types of signs through the combination of texts, images and material features. Adopting a semiotic approach will help us to understand the interplay between these different levels of signification.

Texts on objects can be approached in two different ways, depending on how their receivers engage with them. One way to approach texts is to focus on their semantic content. From this perspective, texts are to be understood as composite signs, which contain a number of messages. What matters is the amount of information obtainable by reading them. This approach requires that the receiver

of the text has the ability – both mentally and physically – to decipher it. The content of a text too small to be legible on the nave of a cathedral is no more accessible to its receiver than that of a text written in a foreign language on a coin. Another way to approach texts is to focus on their materiality. From this perspective, texts are to be understood as expression units, which transmit a certain integral meaning. What matters is how the texts are perceived visually, not their semantic content. The link between Christianity and written culture is perceived by the visitor of a cathedral even if the text on the nave is too small to be read. Texts have meanings beyond their contents.

Images are not duplicates of what they represent. Even when they may appear as ‘natural’, like a painting by Johannes Vermeer, their interpretation involves certain knowledge of the cultural codes (see Mitchell 1986:64–5; Chandler 2002:40). Images just range from purely conventional to very unconventional.

On ancient coins, images tend to be highly conventionalised. Some of the representations appearing on them, such as portraits or buildings, are rather naturalistic, but the possibility for accurate rendering is limited by technical constraints, the effects of which are amplified by a tendency for stylisation and reduced complexity over time (e.g. Myrberg 2008:93–123). In these conditions, being able to recognise what we see on a coin often requires placing it within long iconographic sequences. This means that a design interpreted as a church by the numismatist was not necessarily interpreted as such by the user of the coin. It is thus very important to situate the images within a broader iconographic and material context when trying to understand how they were perceived. What were the visual references available at that time to make sense of these designs?

Unlike texts and images, objects are primarily meant to function, not to signify. There are exceptions, of course. The cross placed on the altar in a church or the star given by a teacher for good work are signs before anything else. They function by signifying. However, most of the objects surrounding us are originally made to serve a practical purpose, to act upon the world (Barthes 1985:251). A pen is used for writing or drawing and a knife is used for cutting. It is by their function that we tend to define and categorise them.

Despite this overwhelming functionality, objects also have a signification (Barthes 1985:252). A knife, for instance, is more than just an instrument for cutting. From the outset, it is endowed with meaning. An Opinel – a French folding knife – is not a Swiss Army knife. The former can be described as the typical knife of the *bricoleur* while the latter as the typical knife of the engineer. Using one or the other is thus a way to express one's individual and collective identity (see Floch 1995).

As emphasised by Roland Barthes (1985:253), there is no object without meaning. The difficulty is that this meaning often goes unnoticed in our everyday routines. Objects are too obvious. A way to work around this is to focus on special practices, practices in which the objects are presented in a spectacular, rhetorical or intentional fashion (Barthes 1985:254). The reuse of coins as pendants is one such practice. By being turned into pendants, the symbolic value of coins becomes their *raison d'être* and therefore accessible. This said, it is important to remember that re-contextualisations of this kind also create new meanings when they happen (see Ch. 1.2.4).

One objective of the semiotic analysis undertaken here will be to understand the interplay between these different signs. To do so, it will be important to describe the dynamic processes of meaning construction at play. Firstly, all the signs identifiable on the

coin-pendants are not necessarily meaningful at the same time. Some can take precedence – permanently or temporarily – over others. Secondly, all the signs can be combined to form an overall meaning, which is the meaning of the object *per se*. They can keep, at the same time, an independent value. Finally, the meaning of a coin-pendant depends on who is looking at it. The signs can be interpreted differently by different receivers. Also important here is the fact that many coin-pendants seem to have had several successive owners.

All the concepts introduced above revolve around the same themes: context and meaning. It is argued here that the meaning of the Viking-Age coin pendants cannot be understood without a thorough contextual analysis. This analysis will focus on the two types of contexts as defined by Hodder's 'contextual archaeology', while using a biographical approach to understand how the coin-pendants can change meaning throughout their lives.

1.3. Research questions

The purpose of the present thesis is to understand the reuse of coins as pendants in Viking-Age Scandinavia. Why were coins, and especially foreign coins, worn as ornaments at that time? The point of departure adopted here is the object, the 'coin-pendant' itself, but this object does not exist in a vacuum. Particular attention will also be paid to the different contexts in which the coin-pendants have navigated throughout their lives.

A prerequisite for this investigation is to resolve some of the most basic questions with which archaeologists and numismatists are typically concerned: when, where and who. The Viking-Age coin-pendants remain very much under-researched (Ch. 1.1). We know very little about their chronology, about their area of distribution or about those using

them. Yet, no interpretation of the Viking-Age coin-pendants is possible without a detailed overview of the phenomenon. It is necessary to begin by situating these objects temporally, geographically and socially. This overview, undertaken in Chapter 2.3, will provide the foundation for the subsequent analysis.

Several other questions lurk behind the question of why coins were worn as pendants in the Viking Age. Why choose coins for being displayed as ornaments? Why privilege certain coin types? Why turn them almost exclusively into pendants and almost never into brooches or rings? Why wear them the way they were worn? Why prefer certain contexts of deposition over others? Why abandon – or almost abandon – the practice at the end of the Viking Age? The answer to these questions lies chiefly in the meaning attached to the object ‘coin-pendant’. In this spirit, much of the discussion will revolve around the qualities inherent to coins and coin-pendants at that time, as well as around the perception of these qualities. The present approach contrasts sharply with the widely accepted idea, stemming from the focus on a weight economy, that coins used in Viking-Age Scandinavia have no – or very little – value beyond their metal content.

The meaning attached to the object ‘coin-pendant’ cannot be detached from the cultural framework in which this meaning was created. Meaning never stands alone. Thus, we need to explore how the coin-pendants relate to other signs, objects or practices from the Viking Age. Of particular importance are the objects with which these ornaments are physically combined, as well as those to which they metaphorically refer. At the same time, there are many aspects of Viking-Age society to consider when trying to understand

how the coin-pendants became signifying objects. From the outset, it is clear that the reuse of coins as pendants is a multifaceted phenomenon. The coins of which the pendants are made are themselves multifaceted objects, being at once identity-reflective, economic, religious and aesthetic (cf. Kemmers & Myrberg 2011). The main challenge of this thesis is to understand how the meaning attached to the object ‘coin-pendant’ was shaped at the intersection of these different facets.

Another challenge is to shift the semiotic discussion from the collective to the individual level. How was this particular coin-pendant perceived by its owner in this particular context? The Viking-Age coin-pendants, by being ‘composite’ and ‘homemade’ objects, offer unique possibilities to enter into the minds of their owners. They allow us to recognise intentions – with varying degrees of free will – through processes like selection, transformation, combination or deposition. They also allow us to investigate various perceptual questions, such as: what was viewed as beautiful and what was not; what was viewed as valuable and what was not; what was viewed as significant and what was not.

To sum up, this thesis will address four main issues:

- 1- Where, when and by whom were the coin-pendants made and worn?
- 2- What was the function of the Viking-Age coin-pendants and how was this function shaped by wider society?
- 3- What made coins so meaningful in Viking-Age Scandinavia that they were often turned into pendants?
- 4- What does the practice of reusing coins as pendants say about the Scandinavian mind in the Viking Age?

Chapter 2. Presentation of the material

The material at the heart of this thesis consists of two parts: grave finds and hoard finds. It is the result of an extensive data collection effort, involving visits and documentation in libraries, museums and coin cabinets. However, as demanding as data collection can be, the real challenge lies in designing what to collect. It is one thing to collect a large amount of material; it is another to choose this material methodically and logically. The choices made with regard to the material have been driven by the research questions presented above. What material should be included in the present thesis if we want to understand the Viking-Age practice of reusing coins as pendants in all its aspects?

2.1. Definitions

It is not possible to choose the material methodically and logically without having a clear idea of the scope of the thesis. Definitions must precede the data. By defining the key terms ‘coin-pendants’, ‘Scandinavia’ and ‘Viking Age’, we will be able to delineate the temporal and spatial boundaries of the work, as well as to circumscribe its object of study. These definitions are the starting point of the investigation.

2.1.1. Coins, coin-pendants and coin-like pendants

The present study will focus on what is commonly called ‘coin-pendants’, i.e. coins turned into pendants. Some other terms have been used to designate them, like ‘monetary

pendants’ (e.g. Belyakov 1990; Shepherd 1999) or ‘numismatic pendants’ (e.g. Bruhn 1993), but their use is not widespread in the literature.

Few of the scholars who have given attention to the Viking-Age coin-pendants have felt the need to define them properly. At best, they observe that the coin-pendants are made from coins taken out of circulation, so as to stress their non-economic function (e.g. Kyhlberg 1973:29–30), or they describe in a few words the way in which they were adapted (e.g. Screen 2014:350). Few attempts have been made to determine with accuracy their basic properties, probably because the definition of this object is considered obvious. Yet it is essential, prior to any discussion, to explain exactly what is meant by the term ‘coin-pendant’ and to draw a boundary against other categories of objects.

A coin-pendant is defined here as follows: a demonetised coin physically adapted for suspension in order to be worn as a dress accessory. This definition may seem excessively simplistic, but it introduces the four main qualities of the object examined: monetary, transformational, suspended and ornamental. Each of these qualities will be discussed in more detail below.

In this study, the term ‘coin-pendant’ has been employed to designate only the pendants made from coins originally intended to circulate in currency. These coins, though worn as pendants at some point in their lives, were not manufactured for this purpose. They were transformed in a second phase. There

is, in addition, a certain number of monetary objects worn as pendants in the Viking Age whose original function remains unclear, such as a group of Kufic bracteates (see Cat. II.40) or some Finnish imitations of Byzantine coins (Talvio 1978). They have been classified among the coin-pendants as long as untransformed specimens of these objects exist alongside transformed ones.

The coin-pendants thus defined can be clearly distinguished from several other categories of coin-like pendants used in the Viking Age. These coin-like pendants will be referred to where relevant, but they have been left out of the main analysis. Examples of these include: a few sets of local pendants made using dirhams as dies¹⁰ (e.g. Nylén & Schönback 1994a:60–2; Fig.2.1), a series of pendants manufactured in eleventh-century Denmark (e.g. Galster 1950; Jensen, J.S. 1995a:102) and a disparate group of pendants made outside Scandinavia (e.g. Berga 2007:172). Pendants of this kind, despite being modelled on coins, were not intended to serve as currency. They were manufactured to be worn as dress accessories. This is evidenced by some of their technical features, and more particularly by the fact that many of them have been mounted as pendants from the outset. Under these circumstances, the nature of the coin-like pendants is as different from that of the coin-pendants, even though both categories appeal, at least to some extent, to the same realm of ideas. It is important to note that, in Viking-Age Scandinavia, the number of coin-like pendants was very limited compared to the number of coin-pendants, thus suggesting a preference for the latter.¹¹

10 Johan Callmer (1977), who provides an interesting insight into this group of pendants, adopts a very broad definition of what they are. As a result, many of the pendants which he includes do not show any trace of numismatic design.

11 It is difficult to give accurate figures here, but the Gotlandic case is highly illustrative. Very few coin-

These reused coins, which were originally designed to serve as currency, were not fitted for suspension from the beginning. To be suspendable, they had to be physically modified. This was done by providing them with a simple

means of suspension – a hole, a loop, a ring or a combination of any of these. That such modifications were intended to suspend the coins on which they appear is obvious in the case of loops and rings,¹² but is not always the case for holes. Coins can be pierced for many different reasons, including demonetisation, testing and utilitarian adaptation (e.g. Perassi 2011:275–98; Kelleher 2013:237–42). In the Viking Age, it seems that almost all the pierced coins were pierced to be suspended, but there are exceptions. For instance, a Carolingian coin found in Aggersborg was, for an unclear reason, pierced many times all over its surface (Moesgaard 2004:17; Garipzanov 2008:74). The best way to determine which holes were intended for suspension is to look at their positioning. As argued by Richard Kelleher (2013:237), a hole positioned somewhere on the outer circumference of the coin is strongly indicative of a conversion into an object for suspension. The positioning of the



Fig.2.1. Example of coin-like pendant from grave 75 at Tuna (Nylén & Schönback 1994a; drawing: Janis Cirulis). Scale: 1.5:1.

like pendants from the Viking Age are attested from across the whole island (see e.g. Thunmark-Nylén 2000:323), while a single Gotlandic hoard can contain more than 150 coin-pendants (e.g. Cat.II:49). The other types of numismatic pendants do not seem to be better represented, with the exception of a group of about ten German coin-like brooches (Stenberger 1958:53–64).

12 The fundamental function of loops and rings is to attach or suspend.



Fig.2.2. Folded coin with hole found at Old Lejre, Denmark (photograph: Tobias Bondesson). Not to scale.

hole has thus been used in the present thesis as a criterion to identify the Viking-Age coin-pendants among the pierced coins.

In some rare cases, the transformation into a pendant in the Viking Age involves additional modifications beyond those necessary for suspending the coin. The most common of these is gilding, but several other techniques have also been employed at times, especially bending, cutting and framing. On a general level, these modifications can be divided into two main groups: those whose main effect is to enhance the coin by adding one or more decorative elements and those whose main effect is to deform the coin by damaging parts of it. In the former case, the coin retains its main visual characteristics despite the transformation. In the latter case, the coin is often so mutilated that it is almost unrecognisable. What is important in the end is the extent to which the coin was modified. To be considered a coin-pendant, an adapted coin has to retain its coin-shape and its coin-appearance. Pendants such as the triangularly folded coin from the Grisebjerggård hoard (Kleingärtner 2014:75; see also Fig.2.2) or the cruciformly cut coin found in Øster Vandet (Price 2014:189) fall outside the category ‘coin-pendants’.

Adapting a coin for suspension does not necessarily imply that the coin was intended to function as an ornament. Very practical reasons can also be advanced to explain

this type of transformation. Cécile Morrisson (1980:242) argues that some very light *mini* circulating in sixth-century North Africa were pierced by their owners to string a definite number of coins together, thus facilitating their use in transactions. The square hole in the centre of the Chinese cash coins, though made already at the time of minting, had a similar function. In such cases, the piercing of coins was clearly a matter of convenience.

In the Viking Age, on the other hand, it seems that most of the coins adapted for suspension were adapted to serve an ornamental purpose. Two facts support this claim. Firstly, there is no positive archaeological evidence to suggest otherwise. The Viking-Age reused coins are never found in contexts where the means of suspension seem to have been added merely for reasons of convenience. Secondly, almost none of the blank coins recorded in Viking-Age Scandinavia are adapted for suspension,¹³ despite the fact that those coins seem to have been used in exactly the same way as minted coins in any other circumstances.¹⁴ This clearly indicates that the transformation had no practical or economical motivation of the kind described above. Based on these observations, it is speculated that, in the Viking Age, the overwhelming majority of the coins provided with a means of suspension were worn, at least for some time, as ornamental pendants, even when this is not reflected in the depositional context. It should be observed, however, that a number of Islamic coins seem to have been pierced before leaving the Caliphate (see Lowick 1975:118–9).

In the Roman or the Byzantine world, there

13 One of the few exceptions, out of hundreds of blank coins found in Viking-Age contexts (see Table 2.3), is from the hoard from Mannegårde, Gotland (SHM 11300). This unstruck flan of Islamic origin has been incised with a graffito.

14 Many blank coins show secondary treatment, including test marking and fragmentation.

Table 2.1. Comparison of different types of numismatic objects related to coin-pendants.

	Currency (originally)	Conversion	Coin shape	Coin appearance	Suspension	Ornament
Bracteates	-	-	+	+/-	+	+
Centrally-pierced coins	+	+	+	+	+/-	-
Coin-brooches	+	+	+	+	-	+
Coin-pendants	+	+	+	+	+	+
Coin-like brooches	-	-	+	+	-	+
Coin-like pendants	-	-	+	+	+	+
Folded/cut coins (pendants)	+	+	-	+/-	+	+

exists a wide range of coin-ornaments (see e.g. Vermeule 1975; Bruhn 1993). Coins can be mounted on finger-rings, on bracelets, on brooches, on armours or on belts, to name just a few. By contrast, coin-ornaments which are not pendants are the exception in Viking-Age Scandinavia. The few examples that appear to have been found are coin-brooches,¹⁵ such as one from a disturbed grave in Hedeby, or one stray find from Skåne (Audy 2016:150). Brooches, which would require their own typological analysis, are beyond the scope of the present thesis.

The main focus of the present work is placed on coin-pendants. These ornaments can be viewed as a coherent group, both from a typological and a functional point of view. On the other hand, it is important to keep in mind that the Viking-Age coin-pendants share several features with other categories of Viking-Age ornaments, such as coin-like pendants and coin-brooches (Table 2.1). Investigating similarities and differences between these groups is key to understanding how the coin-pendants were categorised and perceived.

2.1.2. *Historical and geographical framework*

Coin-pendants of the kind defined above have been found all over the Viking world. Their area of distribution extends from Iceland to Rus', encompassing Britain, Ireland, Scandinavia and the Baltic region. Without denying the existence of significant variation,¹⁶ the reuse of coins as pendants seems to have formed an integral part of the Viking-Age material culture. Some coin-pendants have even served as diagnostic artefacts to identify the Viking diaspora (e.g. Coupland 2007).

Ideally, a study of the Viking-Age coin-pendants should cover their entire area of distribution. The larger the geographic coverage, the more comprehensive the understanding of the phenomenon. It would be interesting, in particular, to see how the reuse of coins was dependent on local conditions in the Viking colonies. In practice, however, this is made impossible by the large scale of the phenomenon and the poor documentation available for many regions. To keep the present thesis within manageable limits, its scope has been restricted to the centre of gravity of the Viking world, i.e. Scandinavia.

¹⁵ A small number of coin-like brooches have also been recorded (Baastrup 2009:522–3).

¹⁶ For example, the coin-pendants seem to have been particularly popular along the Varangian route (cf. Ravdina 1988), while they were not really the norm in Anglo-Scandinavian England (Screen 2014:350–2).

Data has been systematically collected for the following countries: Denmark, Iceland, Norway and Sweden (Fig.2.3). The German province of Schleswig has also been included. Although not geographically Scandinavian, Iceland can be considered as a direct extension of the Scandinavian world. After its settlement by Norwegians in the ninth century, it became completely Scandinavian in culture and language. Schleswig, with the trading centre of Hedeby, was an integral part of the Danish realm in the Viking Age. It held a strategic position at the border between the Viking world and the Carolingian world. Taken together, all these areas will provide us with a coherent, though not uniform, geographical framework for the discussion.

During the Viking period, the Scandinavian Peninsula was inhabited by Sámi populations in the north and by Scandinavian populations in the south, but some areas seem to have supported both groups. There were no sharp cultural boundaries (see Zachrisson, I. 1997:219; Price 2002:235–9; Ramqvist 2007:154–66). Because of this, it can be difficult to distinguish between Sámi coin-pendants and Scandinavian coin-pendants. The distinction is context-dependent. In border zones, only the finds of coin-pendants that could be ascribed to the Viking culture based on context have been included. The only exception is grave 10 at Långön (Cat.I:125), which lies at the interface between the Sámi practice and the Scandinavian practice.

The focus on the Scandinavian homeland does not mean that no attention will be paid to the rest of the Viking world. The material found outside Scandinavia cannot be ignored. It may be of special importance for illuminating certain aspects of the phenomenon, especially when it comes to determining the places of transformation of the coins. Several key areas, which do not fall within the scope of the catalogues, will play a significant role

in the present work, but it must be noted that the material found outside Scandinavia has not been systematically documented and researched. Such examples will only be used for descriptive or comparative purposes.

The present work is largely restricted to the period between c.800 and 1140, which is the period of the Viking Age when coins were available for being reused as pendants. This numismatically-defined Viking Age (von Heijne 2004:21) differs significantly from the historically defined one, conventionally beginning in 793 with the attack on the monastery at Lindisfarne and ending in 1066 with the Battle of Stamford Bridge (Brink 2008:5). A similar gap between historical and archaeological definitions can often be observed in studies concerned with the Viking-Age material culture (e.g. Carlsson, A. 1983:73).

Before c.800, there were almost no coins in circulation in Scandinavia, with the exception of some old Roman coins (Lind 2006) and some sceattas (Feveile & Jensen, S. 2000:13). Islamic coins are first attested in the Viking world at the end of the eighth century, when they begin to appear sporadically in a handful of trading centres (Blackburn 2008:52; Kilger 2008b:213). The earliest Scandinavian hoards, very few in number, appear in this same context. This can be illustrated by the Posthus hoard, in Ribe, with its four to seven forged dirhams. The hoard was found in a layer that is dendrochronologically dated to the 780s (Feveile & Jensen, S. 2000:24).

The latest hoard ascribed to the numismatic Viking Age is the Burge hoard (SHM 28830), found on Gotland in 1967, whose deposition can be dated to c.1143. It contained a mixture of foreign coins, silver ornaments and hack-silver, as well as the earliest coin ever minted on Gotland (Myrberg 2008:142). The Burge hoard, however, is an exceptionally late example of a Viking-Age hoard. The



Fig.2.3. Map of Scandinavia showing the main places mentioned in the text in relation to modern political borders.

final disappearance of mixed hoards of this kind was already well under way in the first two decades of the twelfth century, which can be seen as the last major phase of Viking-Age hoarding. Two important hoards in this process are Johannishus (SHM 3491) and Ganarve (SHM 17747). Both have a *terminus post quem*¹⁷ of c.1120.

It is important to emphasise that the numismatic Viking Age ends at different times in different areas. In the province of Skåne, for instance, the latest hoard with a typical Viking-Age content has a *tpq* of 1074 (von Heijne 2004:21). All the hoards deposited afterwards, such as the Kyrkogatan hoard from Lund, buried after 1095 (SHM 2585), are typically medieval. They exclusively comprise locally minted coins showing no secondary treatment. These early medieval hoards, which often occur concurrently with late Viking-Age hoards, provide interesting comparative material. Therefore, those deposited before c.1140 have been taken into account as well.

The material under investigation here extends beyond this chronological framework in two ways. Firstly, there are a significant number of reused coins occurring in Viking-Age contexts that were minted before the beginning of the period. Most of them, such as the Sasanian or the Umayyad coins, were imported during the Viking Age as part of the large influx of Islamic coins, but some others, such as the Roman ones, belong to an earlier phase of coin use in Scandinavia. Secondly, there are a small number of coin-pendants made during the Viking-Age that were buried in later medieval contexts. One example is the Södvik hoard, on Öland (SHM 900), with its thirteen Viking Age coin-pendants, the deposition of which can be dated to c.1200. In both cases, there is little doubt that these coins, despite transcend-

ing its chronological boundaries, were used as pendants during the Viking Age. It is therefore essential to examine them in connection with the Viking-Age practice.

2.2. Structuring the data

Grave finds and hoard finds were sampled in two different ways. For grave finds, the goal was to obtain a complete sample, i.e. a sample including all the objects known. As for hoard finds, the goal was to obtain a representative sample, i.e. a subset chosen to represent the entire set of objects. The two strategies used here expose us to various biases that need to be addressed.

2.2.1. The grave sample

The grave material will form the backbone of the present study. Not only can the graves be used as a basis to discuss the coin-pendants themselves, but they can also provide information on how these objects were worn, displayed and valued by their owners. Therefore, the grave material will be repeatedly referred to in the different chapters that compose the main body of the book.

The grave sample provided here aims at being exhaustive. Included are all the graves with coin-pendants known in the area under investigation (Fig.2.4). Of course, the capacity to identify these graves depends on the amount of information available. It was not possible, for instance, to determine whether the German coin found in grave 2 at Sundby (SML 4 Up:622) was adapted as a pendant, since the coin is not precisely described in the excavation report and could not be located in the SSM in time for this study's completion. Another problem is that the number of archaeological and numismatic publications presenting survey results varies largely from one Scandinavian region to another.

¹⁷ The *terminus post quem* (abbreviated to *tpq*) of a hoard is the earliest possible date of its deposition. It is determined by the date of its latest coin.

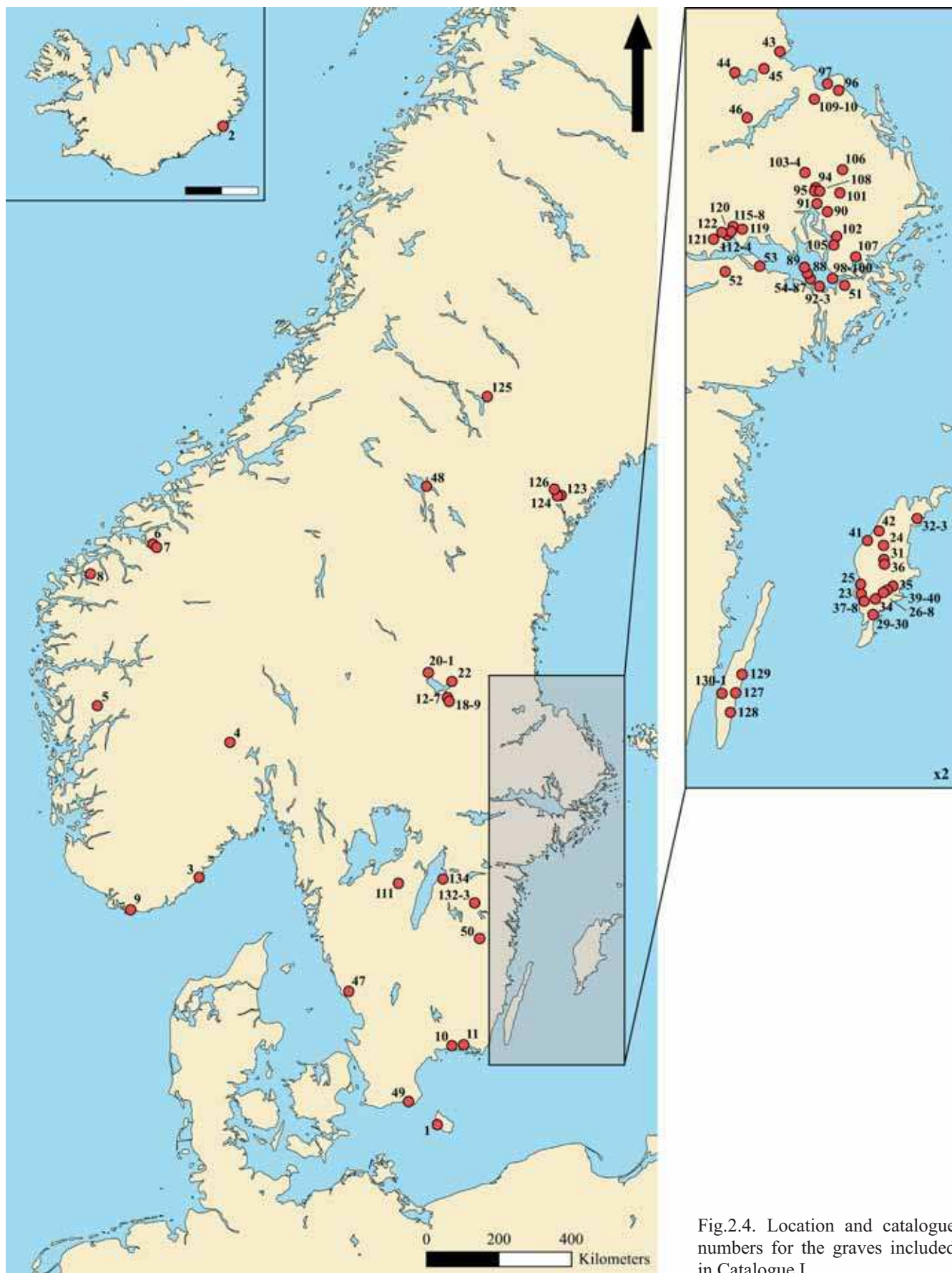


Fig.2.4. Location and catalogue numbers for the graves included in Catalogue I.

Some regions, especially those covered by the CNS project (1975–2011) or by Fredrik Svanberg's thesis (2003), have been extensively published. Some other regions, like Västergötland or Södermanland, are very poorly known. Most of their material remains unpublished. Despite the museum fieldwork and archive research made for the present study, some graves with coin-pendants may have been missed here.

Even among the graves positively identified as containing coin-pendants, there is great variation in the amount and quality of information available. The finds range from professionally excavated and fully documented graves to non-archaeologically recovered ones. Most often, the coin-pendants are among the best-known grave goods, but this is not always true. In some cases they were lost before they could be properly described or photographed (e.g. Cat.I:45). As a result, the Viking-Age graves with coin-pendants have very different evidential value. Those discovered or excavated in the nineteenth century, for example, usually provide little contextual evidence, with the notable exception of Birka. The evidential value of the graves sampled here is also different depending on the burial type. While inhumations offer the possibility of studying many aspects of the coin-pendant phenomenon, cremations are more limited in their potential. Firstly, they cannot be used to understand how the coin-pendants were worn, displayed and combined, since the grave goods are often scattered in the cremation layer. Secondly, the coin-pendants found in cremations tend to be relatively poorly preserved. Loops, which are fragile additions, have often been damaged by fire, making them difficult to classify (e.g. Cat.I:99, 115). For these reasons, the inhumations are easier to describe and to use for analyses.

It is important to emphasise the preeminent place occupied by Birka in the present

study. Because the site is exceptionally rich, relatively well documented¹⁸ and comprises many inhumations, it has much evidential value. Almost half of the graves for which it is possible to see how the coin-pendants were originally worn derive from here. Such a 'Birka dependence' is shared by many studies concerned with Viking-Age jewellery (see e.g. Callmer 1977; Jansson 1985), but can hardly be avoided. The best way to deal with it is to systematically put the results based on evidence from Birka into perspective.

2.2.2. *The hoard sample*

The problem with the grave material is that it only covers a small proportion of the coin-pendants used in the Viking Age, and that this proportion is not representative of the entire group. Burials are not a 'mirror of life' (see Ch.1.2.2). They are the products of intentional actions and they tend to provide a distorted picture of reality. Accordingly, the results of a study of the coin-pendants deposited in Viking-Age graves cannot be automatically extended to all the coin-pendants used in Viking-Age Scandinavia.

For this reason, it appeared necessary to include the evidence from hoards as well, with the purpose of providing a point of comparison and a better basis for quantitative analysis. This comparative material will help us to capture the phenomenon beyond its funerary aspect.

As already pointed out (Ch.1.2.2), hoards are problematic when it comes to the discussion of coin use. Instead, numismatists often prefer to rely on single-finds, which are assumed to provide a more accurate picture of reality. Single-finds are seen as acciden-

18 Even though Hjalmar Stolpe, who excavated the site in the last decades of the nineteenth century, was a pioneer in archaeological fieldwork, there is a marked difference in quality of documentation between the inhumation burials and the cremation burials, the latter lacking scale plans (see Gräslund 1980).

tal losses and thus as a random sample of the coins used at a given time and place (see e.g. Blackburn 2003:23–4, 2008:34–6; Kelleher 2013:28–9).

Single-finds of coin-pendants are not unknown in Scandinavia. They occur at a variety of sites, ranging from international trading centres to small settlements. In Denmark, an ever-increasing number of them are recorded every year through metal-detecting. The problem is that these single-finds of coin-pendants are too few and too dispersed to be used for statistical purposes. The various excavations and surveys at Kaupang, for instance, have yielded no more than two pierced coins (Blackburn 2008:66). Moreover, the interpretation of these coin-pendants is problematic, because there is no way to tell whether they were lost while being used as jewellery or while being reused as currency.

The hoards from Viking-Age Scandinavia are too numerous to allow a complete study within the framework of the present thesis. Instead, a smaller sample is required. There are many different ways of sampling archaeological data (Orton 2000), but it was deemed essential, in the present case, to retain the wide spatial and thematic coverage offered by the catalogue of grave-finds. The solution proposed here is to limit the sample to a pre-determined period of discoveries. Included are only the hoards discovered in Scandinavia since 1919. By adopting this strategy, it has been possible to obtain a random sample of hoards covering the entire period and the entire area of interest (Fig.2.5).

The selection of the starting year was made based on the following considerations. Firstly, very few of the Scandinavian hoards discovered in the nineteenth century are preserved in their entirety. Even when acquired immediately after their discovery by the coin cabinets, these early hoards have very often been dispersed. Some of the coins were

exchanged with other museums, some were melted down, while some others were transferred to the cabinets' systematic collections. It was not until the last decades of the nineteenth century that the curation practices started to change, gradually leading to better preservation of the new finds. This process, however, followed different chronologies over the area. In Denmark, for instance, there is a clear improvement of the curation practices in 1892, when the Royal Coin Cabinet was incorporated into the National Museum (Jensen, J.S. 1992:114). In Norway, the end of this process can be dated to 1905, with the enactment of a new law on treasure trove (Skaare 1976:12–3). At a general level, it is thus hard to deal systematically with the content of hoards discovered in Scandinavia before c.1910.

Secondly, but related to the first factor, is the publication effort. One of the first Scandinavian numismatists to regularly publish entire hoards was Georg Galster, head of the Royal Coin Cabinet in Copenhagen between 1920 and 1959 (von Heijne 2004:35). From 1921 onwards, he produced a large number of catalogues describing in detail the numismatic content of newly-discovered hoards (e.g. Galster 1921, 1929, 1944a). This publication effort was intensified and expanded in 1936, with the creation of the *Nordisk Numismatisk Årsskrift* – a pan-Scandinavian numismatic journal – to culminate in the 1970s with the *CNS* project, which aimed to compile a total inventory of all Swedish Viking-Age coin finds. Of course, many old discoveries were also published as part of these different initiatives, but the hoards discovered after c.1920 tend to be better covered, though not exhaustively.

Between c.1880 and c.1930, the way in which the Scandinavian hoards were treated and perceived clearly evolved. They became, during this period, a focus of attention in

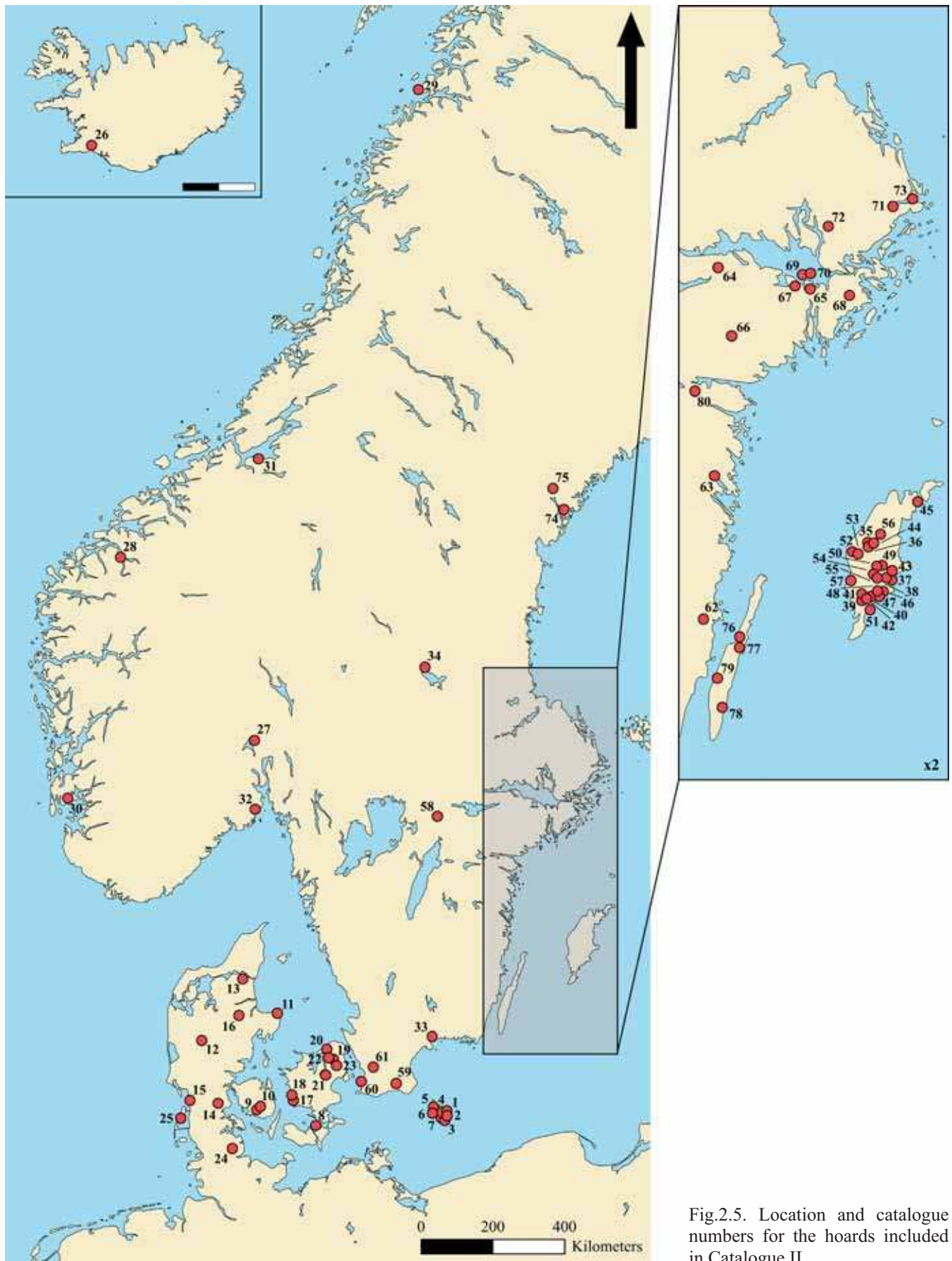


Fig.2.5. Location and catalogue numbers for the hoards included in Catalogue II.

Table 2.2. Sampling strategy used to select the 80 hoards included in Catalogue II.

Primary criterion	Hoards discovered in Scandinavia since 1919
Limiting criteria	Hoards containing more than twenty coins Parishes A–F for Gotland and A–N for Bornholm
Limiting factor	Hoards whose study has not been possible

their own right (von Heijne 2004:34–5; see also Arne 1924:130). This was a long and uneven process, occurring at different paces in each Scandinavian country. In the absence of a joint event that could be used as the starting point, the year 1919 was chosen because it saw the discovery of two hoards in regions otherwise underrepresented (Cat.II:29, 75).

To keep the sample within manageable proportions, it has been necessary, in addition, to introduce two limiting criteria (Table 2.2):

- 1- Focus on the hoards containing more than twenty coins. Including smaller hoards would have increased significantly the amount of data to collect and it was anticipated that they would contribute less to statistical analysis.
- 2- Include only parts of Gotland and Bornholm, both of which see extraordinary concentrations of hoards. Only a random third of these islands have been surveyed here – parishes A–F for Gotland and parishes A–N for Bornholm. There is no particular reason to think that the omitted parishes would contain material radically different from those starting with letters A–F/A–N.

Unfortunately, some hoards meeting these criteria had to be withdrawn from the study. These hoards, which are all unpublished or insufficiently published, could not be accessed in time for the completion of the present thesis. Several reasons can be put forward: on exhibit (e.g. GAM 48047), institution not visited (e.g. KM 71839:2167-8) or unavailable for study (e.g. KLM 23964). Moreover, the hoard found at Sigtuna in 2000

was too damaged to provide any information on reuse.

The sampling strategy adopted here was designed to reduce bias, but cannot completely eliminate it. As a matter of fact, the ratio between pre-1919 discoveries and post-1919 discoveries varies geographically. Each region has its own retrieval chronology, even if there are major trends (Fig.2.6). The observed differences, especially those before c.1820 and after c.1960, can be attributed to several factors related to modern history, including land exploitation, urbanisation, legal framework and archaeological strategies. The most important of these factors is probably the legislation governing the usage of detection devices, which is more permissive in Denmark than in the rest of Scandinavia.

Because of these historical and legal differences, some provinces are underrepresented in the present sample while others are overrepresented. This can be problematic when trying to assess the distribution pattern of the coin-pendants. To work around this bias, ratios will be preferred to absolute numbers when comparing areas.

Another problem with the present sampling strategy is that it excludes *de facto* certain categories of hoards, such as those consisting exclusively of jewellery. These ‘jewellery hoards’, sometimes referred to as ‘theme hoards’ (e.g. Kilger 2008a) or ‘female hoards’ (e.g. Myrberg 2009), often contain a small collection of coin-pendants, usually less than twenty. None of them fall within the range of the present sample. The jewellery

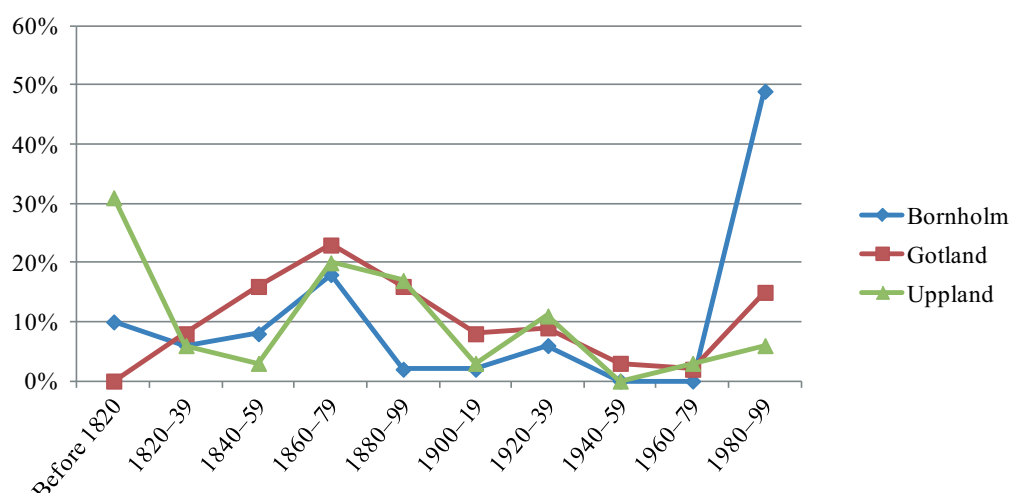


Fig.2.6. Retrieval chronology in three key Scandinavian provinces (source: CNS 1.1-4; SML 4; von Heijne 2004).

hoards, however, are particularly helpful in understanding how the coin-pendants were used and worn. Their content is very similar to that of graves (see Kilger 2008a; Myrberg 2009), thus suggesting that they represent one or more sets of personal belongings. A list of the jewellery hoards with coin-pendants can be found in Appendix I.

Also largely falling outside of the present sample is a small group of coin-chains known from several late hoards (see Thunmark-Nylén 1986). These coin-chains, formed by a series of double-looped coins and intermediate rings, represent an interesting development within the practice of coin reuse. A list of the Scandinavian examples can be found in Appendix II.

2.3. Overview of the material

In the following, the material on which the present thesis is based will be described. Special attention will be paid to its composition, as well as to its chronological and geographical distribution. The presentation of the grave material will include a longer description of the archaeological context than that of the

hoard material. Because of the central role played by chronology, the overview of the material will be preceded by a section dealing with general dating issues.

2.3.1. Dating issues

Coins, which are often inherently datable, have been much exploited for their dating potential, but the limitations of this evidence need to be understood. What a coin provides is a *tpq* for the context in which it occurs. It does *not* tell us when this context was formed, only that it was formed after a certain date, i.e. the minting date of the coin (see e.g. Blackburn 2011:590; Lockyear 2012:196). The problem is that there is no inherent way to determine how much time has passed between minting date and deposition date. Even in regulated economies, coins can remain in circulation for considerable lengths of time.

Hoard material. Hoards are a special case. Because of the quantity of coins they contain, their final deposition is statistically likely to have happened shortly after the *tpq* provided by the latest coin. Indeed, there are good reasons to believe that newer issues would have been added if coins had continued to be collected

for some time. The statistical nature of this law implies that the larger the hoard, the more we can rely on the *tpq* dating (cf. Lockyear 2012:203–7). Of course, the way the hoard was assembled may involve a chronological distortion, but this can be overcome by investigating its composition and its age-structure (Blackburn 2008:38).

This is not to say that the *tpq* of large hoards provides an exact deposition date. Even in large hoards, a gap can be expected between the date at which the latest coin was added and the date at which the hoard was deposited. One reason for this is that coin-age production and supply is not steady (cf. Lockyear 2012:203–7). If a common issue is followed by a rare one, there is a chance that the latter will not be represented in a randomly assembled hoard. Another important factor in the context of the Viking-Age economy is that coins travelled long distances before arriving in Scandinavia. It took time for them to reach their final destination. One should also remember that the *tpq* is often based on coins that can only be dated within a range of varying length and that it always indicates the earliest possible minting year. Thus, a hoard whose latest coin is a *Long Cross* penny of Æthelred II will be presented as dating to after c.997, even if this coin type was produced between c.997 and c.1003. Unfortunately, it is impossible to estimate how much time has passed between the minting date of the latest coin and the deposition date of the Viking-Age hoard, but this gap is not expected to have major consequences on the general chronology.

The *tpq* provided by coins in graves is more difficult to use. Within an economy like the Viking-Age one, with a coin stock comprising many old issues, coins found in isolation or in small numbers have a very limited dating potential. Just how problematic this can be is illustrated by Ulla S. Linder Welin's

article (1974) on the inception of the Viking Age. In this article, Linder Welin thought that she had identified an early, though modest, influx of Oriental coins in eastern Sweden, a discovery that would, according to her, push back the beginning of the Viking Age to c.700. However, as shown by Johan Callmer (1976) in his reply to Linder Welin, the graves on which the demonstration was based can all be dated, according to their content, to the ninth or even the tenth century. There are reasons to think that the pre-750 coins discussed by Linder Welin were in fact randomly collected among the coins arriving in Scandinavia at the turn of the ninth century or later.

The coin-pendants under investigation here have been little used for dating the graves in which they appear, unless the *tpq* they provide could be combined with a reasonably close *terminus ante quem*. In that case, the graves are chronologically bracketed at both ends. Birka grave 835, for instance, in which a Samanid dirham issued in 911/2 was buried (Cat.I:75), is attributable to the period between 911/2 and c.975, because we know that Birka was abandoned in the 970s (Jansson 1985:182–5; see also Ambrosiani 2008:98). Most of the time, though, the dating of graves requires a typo-chronological analysis of the grave goods.

All the Viking-Age artefacts do not have the same dating potential, with some being more likely to be precisely dated than others. How datable an artefact is depends on many factors, like the degree of standardisation of its production, the datability of the contexts in which it appears or the scholarly attention it has attracted. In the present study, two categories of artefacts have been regarded as particularly valuable for dating purposes: brooches and beads. Brooches and beads, which both show great chronological variation, are the most frequently occurring grave goods in graves with coin-pendants.

Many brooch types have been chronologically sequenced, including equal-armed brooches (Aagård 1984; Callmer 1999) and trefoil brooches (Hårdh 1984; Maixner 2005), but they provide limited dating evidence compared to the commonest brooch type in Scandinavia, i.e. oval brooches. The reference work for the study of oval brooches is that by Ingmar Jansson (1985), which focuses on the Birka finds. In this work, Jansson distinguishes between the oval brooches belonging to the *Early Birka Period* and those belonging to the *Late Birka Period*. Jansson is very careful about absolute dating. He notes that the transition between the two periods occurs during the latter half of the ninth century, but abstains from providing a precise date.

A detailed bead chronology has been proposed by Callmer (1977). This chronology, based on the evidence of 296 graves, has been developed by investigating how the different types of beads were combined. According to Callmer, the period c.800–1000 can be divided into nine *Bead Periods* of ten to thirty years. This minute division is convenient to use, but raises issues of reliability and validity. As emphasised by Callmer (1977:180), his chronological classification must be regarded as hypothetical. Some of his attributions, for instance, are surprisingly late, such as the bead sets from Birka dated to the period c.990–1000 (Jansson 1985:183).

Because of the decreasing number of grave goods in the eleventh century, it is more difficult to deal with the later part of the Viking Age. The early graves with coin-pendants tend to be more precisely dated than the late ones. Moreover, it should be noted that the Gotlandic material culture differs significantly from that of mainland Scandinavia. It is not possible to use the works mentioned above to date the graves with coin-pendants on Gotland. The Gotlandic brooches have been

thoroughly investigated by Anders Carlsson (1983, 1988) and Lena Thunmark-Nylén (1983, 2006). The bead chronology, on the other hand, is very little known.

Several other objects have been used to date the graves containing coin-pendants, such as ceramics (e.g. Cat.I:61) and Scandinavian-style pendants (e.g. Cat.I:103). The larger the number of chronologically-sequenced artefacts in a grave, the more accurate its dating. In some cases, especially when few grave goods were discovered, stratigraphy and cemetery topography have also been helpful (e.g. Cat.I:37). Radiocarbon dating, though available for a number of graves, is too broad to be of any value in the present study.

There is a marked difference, in this work, in the degree of precision between the hoard chronology and the grave chronology. Hoards can be dated almost to the year while graves are often only loosely dated. One of the challenges here will be to correlate these two chronologies and to place them within the same framework.

2.3.2. Overview of the hoard material

The vast majority of the 80 hoards under discussion in this work – almost 80 per cent of them – are so-called ‘mixed’ hoards, i.e. hoards comprising both coins and non-numismatic material. This non-numismatic material consists, to a very large extent, of silver fragments of various kinds, but complete ornaments, primarily rings and pendants, also occur in many of them. The proportion of coins to non-numismatic material varies significantly from hoard to hoard, spanning from about 5:95 (e.g. Cat.II:29) to about 99:1 (e.g. Cat.II:61). The highest percentages of non-numismatic material are encountered in the tenth century, when the Viking-Age bullion economy was at its height. The hoards that contain complete ornaments usually contain a small number of

them, between two and three on average. The presence of these complete ornaments is particularly important for understanding the ornamental reuse of the coins with which they are combined.

Only eighteen of the catalogued hoards consist exclusively of coins. Almost half of them derive from southern Scandinavia and can be dated to the eleventh century. These coin hoards, which are predominantly local in their composition, can be associated with the development of a monetary economy in the region (see von Heijne 2004:151–2). Several hoards consisting of coins only are also known from Gotland and mid-Sweden. Four were deposited in the ninth century, before the development of the Viking-Age bullion economy.

The hoards under investigation comprise between 21 (Cat.II:69) and 2,685 coins (Cat. II:49), a wide range that is illustrated in Figure 2.7. The hoards containing between 21 and 100 coins are the most common of all. They account for more than a quarter of the sample. Then, the number of hoards decreases rapidly as the hoard size increases until reaching an average level of about two

hoards per size range. The last interval to follow this pattern is that of 1,401–1,500 coins. After that, there is a sharp drop to near zero, with only two hoards containing more than 1,500 coins: the Igelösa hoard (Cat.II:61) and the Stora Velinge hoard (Cat.II:49). On average, the hoards catalogued here contain 440 coins. Most of these hoards, however, are smaller in size. The median size is 194 coins. It should be noted that the number of coins varies from one place to another and from one period to another. The Gotlandic hoards, for instance, comprise 629 coins on average when the hoards found elsewhere in Scandinavia comprise 363 coins. It is also important to remember that the hoards deposited in Scandinavia at the beginning of the ninth century were very small in size. The earliest hoards with more than 100 coins date to the 830s (see Kilger 2008b:247–8). The number of coins is an important feature when dealing statistically with the hoards. The evidence of small hoards, in particular, can be completely overshadowed by that of large hoards if we are not careful.

The total number of coins in the hoards under discussion amounts to 35,170 (Table

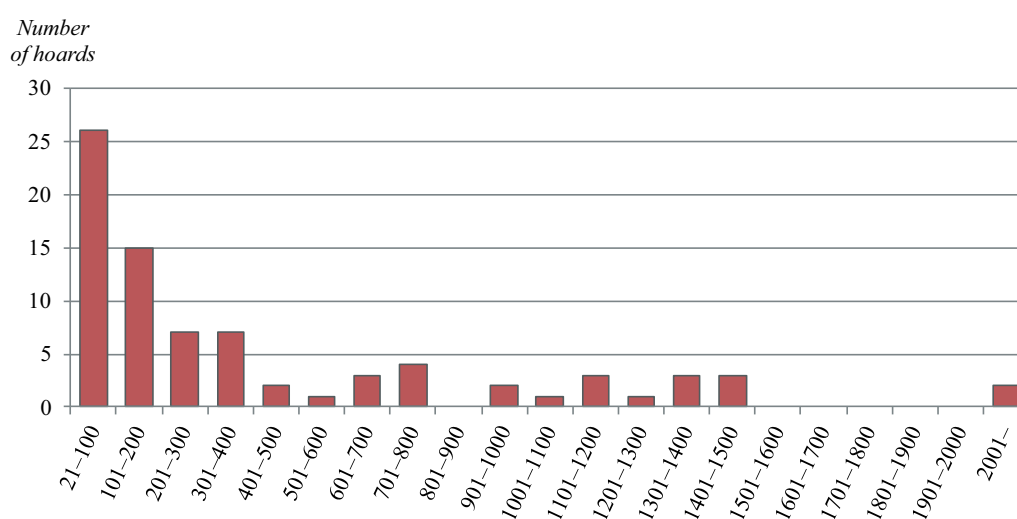


Fig.2.7. Frequency of hoards from Catalogue II according to the number of coins they contain.

Table 2.3. List of the coins and coin-pendants included in Catalogue II, classified by origin and sorted by size.

Origin	Coins	Fragments	Unknown	Reused coins	Reused fragments	Proportion of reuse
German	11,903	1,057	14	165	1	1.3%
Islamic	6,677	5,470	14	567	175	6%
English	6,937	679	9	112	12	2%
Danish	715	147	22	1	1	0%
Scandinavian	377	36	5	10	1	3%
Nordic	266	77	4	2	0	0%
Blank	97	58	0	0	0	0%
Swedish	109	13	1	7	0	6%
Continental	33	49	0	0	0	0%
Norwegian	52	25	0	0	0	0%
Sasanian	9	68	0	3	2	7%
Irish	76	10	0	1	0	2%
Bohemian	34	12	0	3	1	9%
Hungarian	19	1	0	0	0	0%
Byzantine	9	10	0	4	2	21%
Italian	12	2	0	0	0	0%
Carolingian	1	6	0	0	1	14.3%
French	5	0	0	0	0	0%
Swiss	1	0	0	0	0	0%
Roman	1	0	0	0	0	0%
Polish	1	0	0	0	0	0%
Indian	1	0	0	1	0	100%
Burgundian	1	0	0	0	0	0%
Unknown	5	40	0	0	0	0%
Total		35,170			1,073	3.1%

2.3). All, without exception, are made of silver. On the basis of their origins, four main coin groups can be distinguished. They are as follows: 12,974 German coins, 12,161 Islamic coins, 7,625 English coins and 1,849 Scandinavian coins. Taken together, these four groups account for almost 99 per cent of the coins included here. The rest of the numismatic material comprises 364 coins of diverse origins – Bohemian, Byzantine, French, Hungarian, Irish and Polish among others. The largest of the groups, the Irish one, comprises 86 coins. Several others, such as the Indian and the Polish ones, are only represented by a single example. These smaller groups are accompanied by a significant number of blank coins – 155 in total.

Finally, there are 45 coins of unknown origin. They are generally in a very poor state of preservation. About one-fifth of the 35,170 coins catalogued here are fragments. The proportion of fragments varies widely between coin groups, ranging from 5 per cent to 89 per cent.

The earliest hoard included has a *tpq* of 835 (Cat.II:56) while the latest has a *tpq* of 1131 (Cat.II:53). Thus, most of the numismatic Viking Age, which has been defined as the period between c.800 and c.1140 (see Ch.2.1.2), is covered here. The fact that the first decades of the numismatic Viking Age are not represented can be explained by the small number of hoards deposited in Scandinavia at that time (e.g. Kilger 2008b:217).

None of these rare hoards meet the criteria adopted to obtain the present sample.

Figure 2.8 shows the chronological distribution of the hoards under consideration here. Using their *tpq*, it is possible to establish a precise chronology by decade. Obviously, all the hoards are not evenly distributed over the period. There is a series of significant troughs, most notably in the last quarter of the ninth century and in the third quarter of the tenth century. There is also a clear fall in the number of hoards after c.1060.

These fluctuations can be related to a series of well-known changes in the Viking-Age currency (see e.g. Steuer et al. 2002:135–43). The first change occurred in the period 880–900, when the inflows of Abbasid coins came to an end and were replaced by inflows of Samanid coins. The second occurred in the 970s, when the massive inflows of Islamic coins virtually ceased. The third occurred in the second half of the eleventh century, when the import of West European coins began to decrease significantly.

Based on this, it seems appropriate to divide the numismatic Viking Age into two dif-

ferent phases, which in turn can be subdivided into two (Table 2.4). This division into clear-cut phases necessarily involves some degree of oversimplification and approximation. Phase I (c.800 to c.980) corresponds to the period during which Islamic coins dominate. Phase I consists of two sub-phases: Phase IA (until c.890) and Phase IB (between c.890 and c.980). Phase II (from c.980 to c.1140) corresponds to the period during which West European coins dominate. Phase II consists of two phases: Phase IIA (until c.1060) and Phase IIB (between c.1060 and 1140). The vast majority of the hoards included here belong to Phases IB and IIA, 29 and 34 respectively. Only ten belong to Phase IIB and seven to Phase IA.

Although they come from all over Scandinavia, the hoards under investigation here are not evenly distributed (Fig.2.9). There is a major concentration on the island of Gotland, from where almost a third of the hoards originate. These are also among the largest hoards, and so Gotland accounts for more than 40 per cent of the coins recorded in the present thesis. Most of the other hoards can

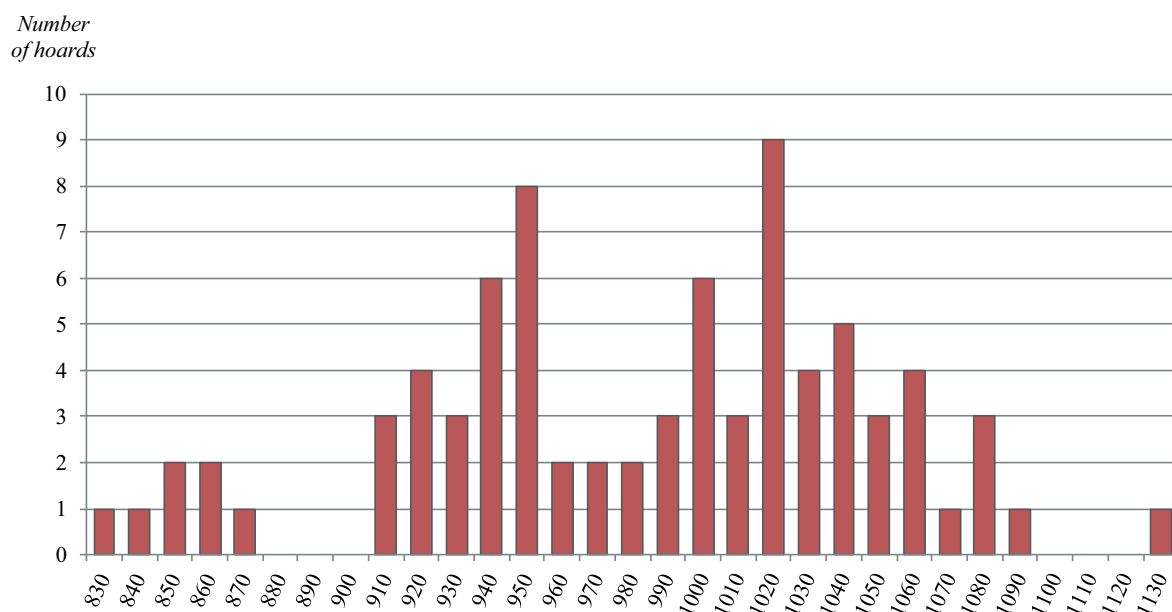


Fig.2.8. Frequency of hoards from Catalogue II by decade (based on *tpq*).

Table 2.4. Chronological division of the numismatic Viking Age into phases and sub-phases.

Phases	Sub-phases
Phase I - c.800–980: Islamic silver dominates	Phase IA - c.800–890: inflow of Abbasid coins Phase IB - c.890–980: inflow of Samanid coins
Phase II - c.980–1140: West European silver dominates	Phase IIA - c.980–1060: larger coin inflow Phase IIB - c.1060–1140: smaller coin inflow

be connected to two large areas. The first stretches from the Danevirke in southern Denmark to the province of Skåne, where 27 per cent of the hoards were found. The second encompasses the provinces of Uppland, Södermanland, Östergötland and Närke in mid-Sweden, which accounts for fifteen per cent of the hoards. Two smaller concentrations, with seven and six hoards respectively, can also be discerned: one on the island of Bornholm and one comprising both Öland and the nearby coast. Western and northern Scandinavia, on the other hand, shows a very diffuse distribution. Only twelve per cent of the hoards are located in this extensive area, which covers the island of Iceland, the whole of Norway and larger parts of Sweden. It is important to note that different areas often have different chronological horizons. We can see, for instance, that the Danish area includes a significant proportion of hoards from Phase IIB, while western and northern Scandinavia is dominated by hoards from Phase IIA (Fig.2.9). Because of this chronological gap, comparing the reuse of coins in hoards from the two areas without taking into account the temporal dimension amounts to comparing two different things.

In total, 1,073 of the 35,170 coins catalogued in the sample show signs of having been reused as pendants, which is equivalent to 3.1 per cent of the material (Table 2.3). These pierced and looped coins are distributed as follows: 742 Islamic, 166 German, 124 English, eleven Scandinavian, seven

Swedish, six Byzantine, five Sasanian, four Bohemian, two Danish, two Nordic, one late Carolingian, one Indian and one Irish. None of the 146 blank coins show signs of having been pierced or looped. The fact that almost 70 per cent of the reused coins available for study are of Islamic origin means that we have to be very careful when interpreting the statistical data. These coins will always tend to dominate numerically.

Of the 1,073 coins showing signs of having been reused as pendants, only 196 are fragments, meaning that the ‘coin-pendants’ material is largely dominated by whole coins (Table 2.3). The reused fragments consist primarily – in almost 90 per cent of the cases – of Islamic coins. This is not surprising given that fragmentation and reuse are phenomena primarily affecting dirhams. For most coin-groups, the transformation rate is higher among whole coins than among fragments.

The distribution between pierced coins and looped coins is very uneven, with pierced coins accounting for more than 90 per cent of all the coin-pendants. The only hoard containing a large number of loops is that from Stora Vellinge (Cat.II:49), with eleven looped coins. Even here, though, the proportion of loops is relatively low, not exceeding fourteen per cent. It should be noted that all the looped coins included in the present catalogue are, with a limited number of exceptions, Islamic coins.

Proportions of reuse vary from hoard to hoard. The highest proportion is found in the

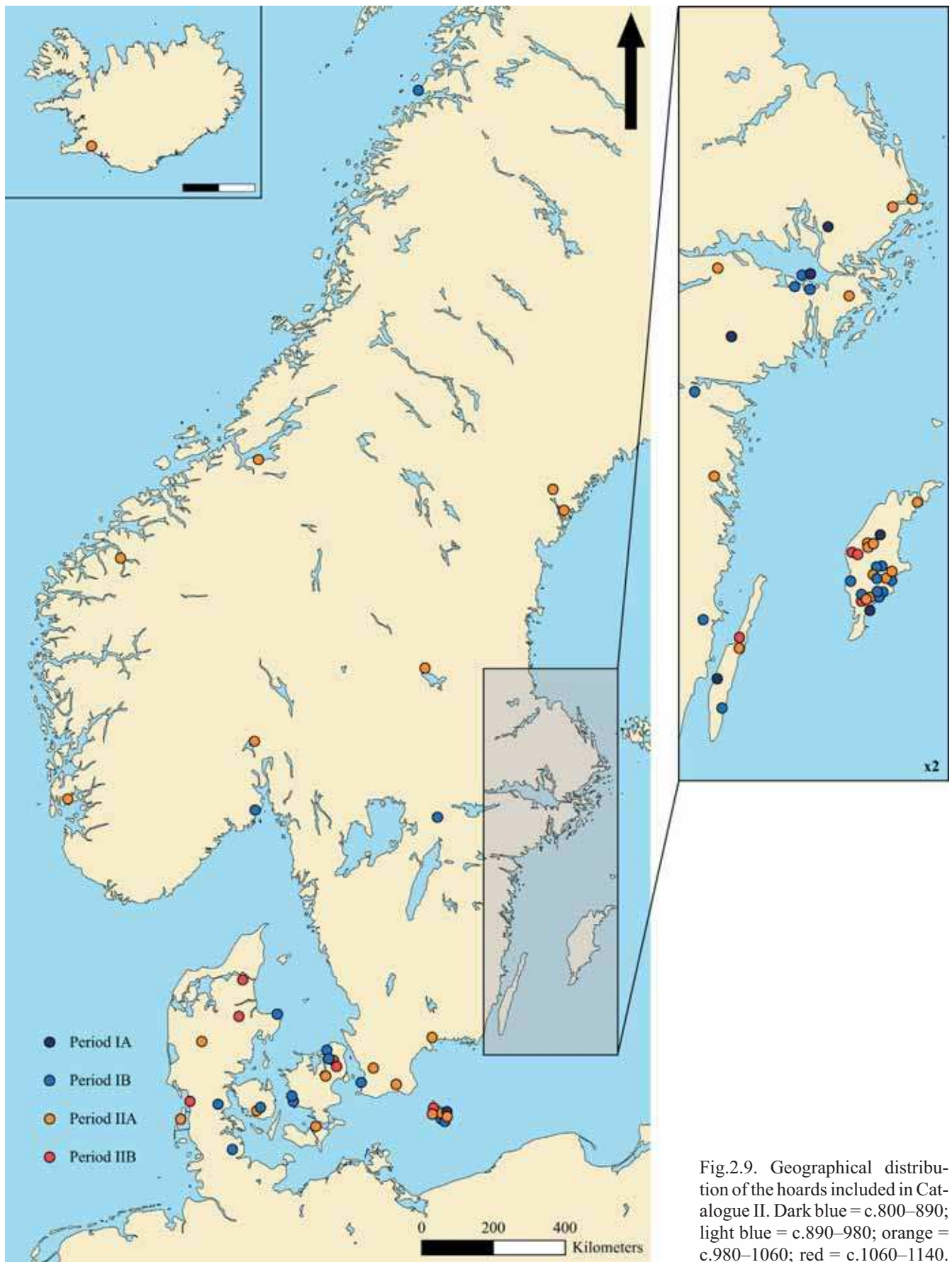


Fig.2.9. Geographical distribution of the hoards included in Catalogue II. Dark blue = c.800–890; light blue = c.890–980; orange = c.980–1060; red = c.1060–1140.

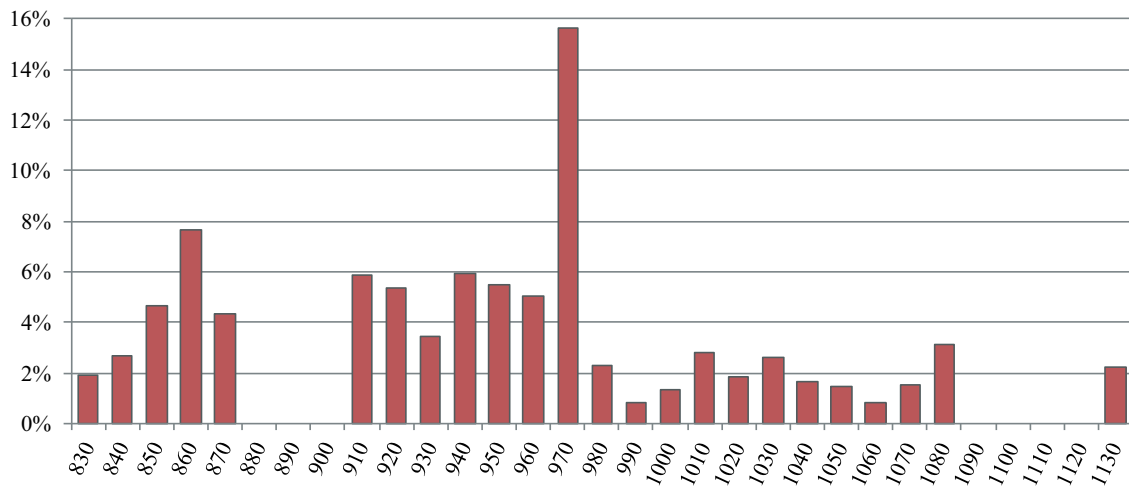


Fig.2.10. Proportion of coins in Catalogue II showing signs of reuse by decade.

Kannikegærðet hoard (Cat.II:3), where more than 80 per cent of the 49 coins are provided with a means of suspension. However, almost all the hoards under consideration here are characterised by a low level of reuse. In addition to that from Kannikegærðet, only six hoards comprise more than ten per cent of pierced and looped coins. The proportion of reuse is, in most cases, below six per cent, thus implying a certain degree of homogeneity. A limited number of hoards (e.g. Cat.II:6, 79) contain no coin-pendants at all. Although relatively small in size, these hoards are interesting for the light they cast on the practice and its limits.

Figure 2.10 shows the proportion of reuse by decade in the hoards included in the sample. Obviously, there is a contrast between Phase I and Phase II, with higher values during the former. There is also a contrast between Phase IA and Phase IB, which reflects a slow beginning. Within each of these phases, no clear chronological pattern emerges. The values are rather homogeneous, with only a few peaks. The peak observed in the 970s is due to two small hoards with an unusually high reuse rate (Cat.II:65, 67). The null values are not, with one exception, due to the absence of coin-pendants in hoards, but

to the absence of hoards in the intervals in question.

The practice of turning coins into pendants is not equally present in all parts of Scandinavia. There is variation from region to region (Fig.2.11). Southern Scandinavia is characterised by a very low level of reuse. Only two of the 22 hoards from the area stretching from the Danevirke to Skåne contains more than three per cent of coin-pendants. The practice seems to be particularly uncommon in the Jutland peninsula, with four hoards out of six completely devoid of coin-pendants. The mid-Swedish area, by contrast, is an area where the reuse of coins is prevalent, especially in its southern part. Eight of the twelve hoards have a transformation rate exceeding three per cent. In two of them, the transformation rate even exceeds ten per cent. Gotland shows a more mixed picture, with approximately the same number of hoards belonging to the 0–3 per cent and to the 3.1–6 per cent category. Interestingly, none of the 23 Gotlandic hoards catalogued in the sample is completely devoid of coin-pendants. On Bornholm, many of the hoards belong to the most extreme categories. Two contain no coin-pendants at all and two contain more than ten per cent of them. The reuse of coins

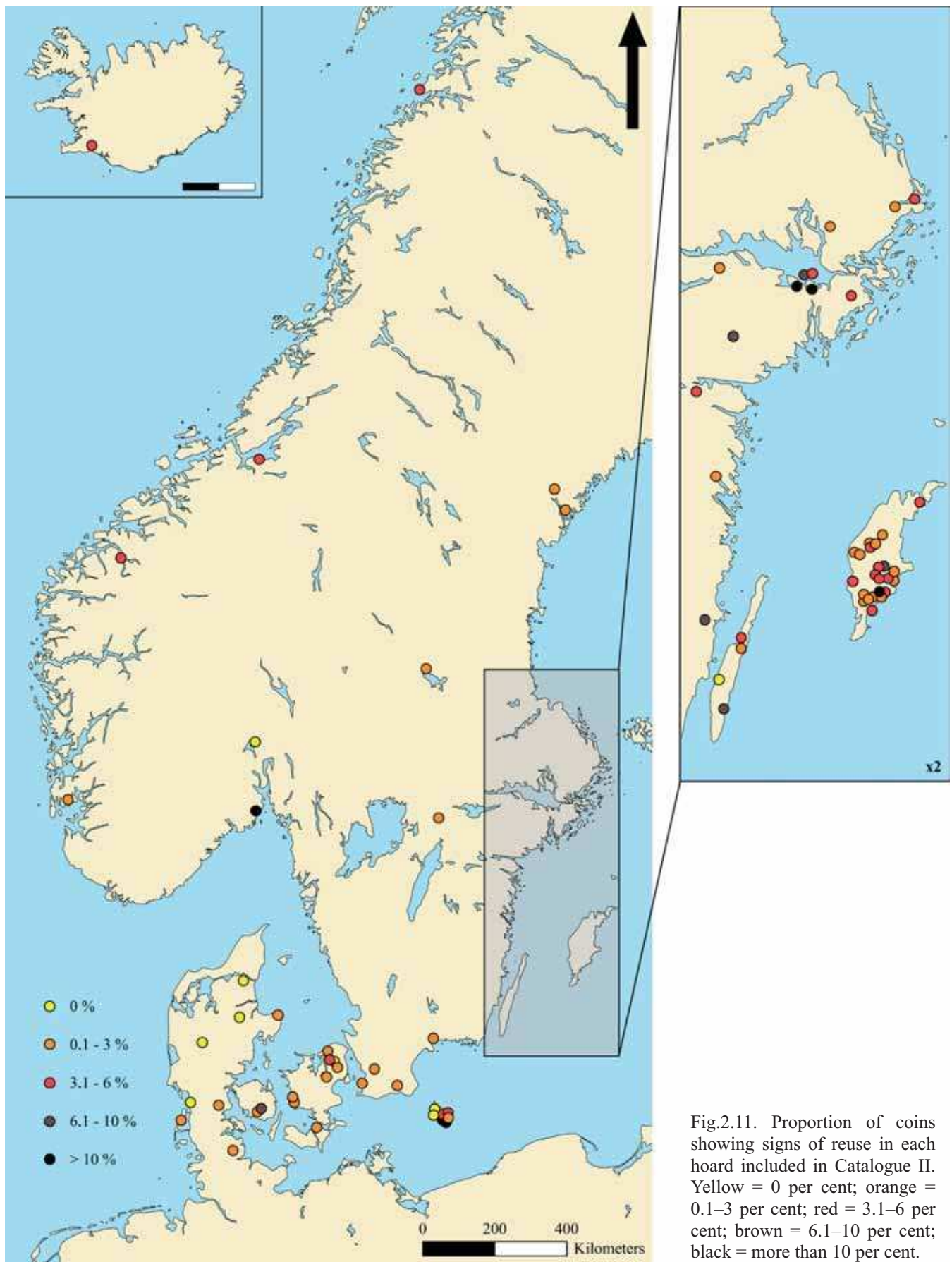


Fig.2.11. Proportion of coins showing signs of reuse in each hoard included in Catalogue II. Yellow = 0 per cent; orange = 0.1–3 per cent; red = 3.1–6 per cent; brown = 6.1–10 per cent; black = more than 10 per cent.

Table 2.5. Chronological distribution of the graves included in Catalogue I.

	Secure dating	Possible dating
Pre Viking-Age	33	
Phase IA (c.800–890)	9, 53, 55, 61–3, 66–7, 89–90, 95, 99, 124	47, 92–3, 98, 100, 133
Phase IB (c.890–980)	1–2, 4–6, 41, 43–5, 56–8, 60, 64–5, 68–72, 74–88, 103, 123, 127, 129–30, 134	42, 91, 104
Phase IIA (c.980–1060)	34, 46, 48, 50, 111, 115–7, 128, 131	7, 106, 108, 126
Phase IIB (c.1060–1140)	12–21, 25–8, 39–40, 109, 125	22, 29
Post Viking-Age	37–8	
Phase I (c.800–980)	8, 54, 59, 73, 101, 119, 132	51, 121
Phase II (c.980–1140)	30–2, 35–6, 94, 96–7, 105, 110, 112, 114, 120, 122	24, 52
Viking-Age	3, 10–1, 23, 49, 102, 107, 113, 118	

on this island seems to have varied in popularity over time. Finally, western Scandinavia and Öland are characterised by more ambivalent patterns, with hoards distributed widely between the different categories.

The material presented here shows a great diversity in terms of composition, structure, geography and chronology. It provides a solid basis for understanding the reuse of coins as pendants in a multifaceted way. It should be underlined, though, that the original prevalence of Gotland and, to a lesser extent, of Bornholm, has been toned down here by the sampling strategy.

2.3.3. Overview of the grave material

The grave catalogue contains 134 entries, which represent at least 134 graves. There is some uncertainty regarding the number of graves due to the fact that two groups of coin-pendants are recorded as coming from grave sites without their particular distribution being known (Cat.I:40; 90). In such cases, it is impossible to determine whether

the coin-pendants derive from one or several graves.

Among the 134 Scandinavian graves containing coin-pendants, 96 can be fitted into the four-phase framework established above (Table 2.5). Their distribution is as follows: nineteen assigned to sub-Phase IA, 44 to sub-Phase IB, fourteen to sub-Phase IIA and twenty to sub-Phase IIB. It should be noted that none of the graves from Phase IA can be dated to the earlier part of the period. The earliest graves with coin-pendants (e.g. Cat.I:90) seem to appear in the second third of the ninth century.

A significant number of graves could only be dated more generally as being either Phase I or Phase II. Phase I comprises nine graves while Phase II comprises sixteen of them. The remaining nine graves could not be classified at all. The only datable elements they contain merely suggest that they belong to the Viking Age.

Three graves fall outside of the chronological framework used above. One predates the

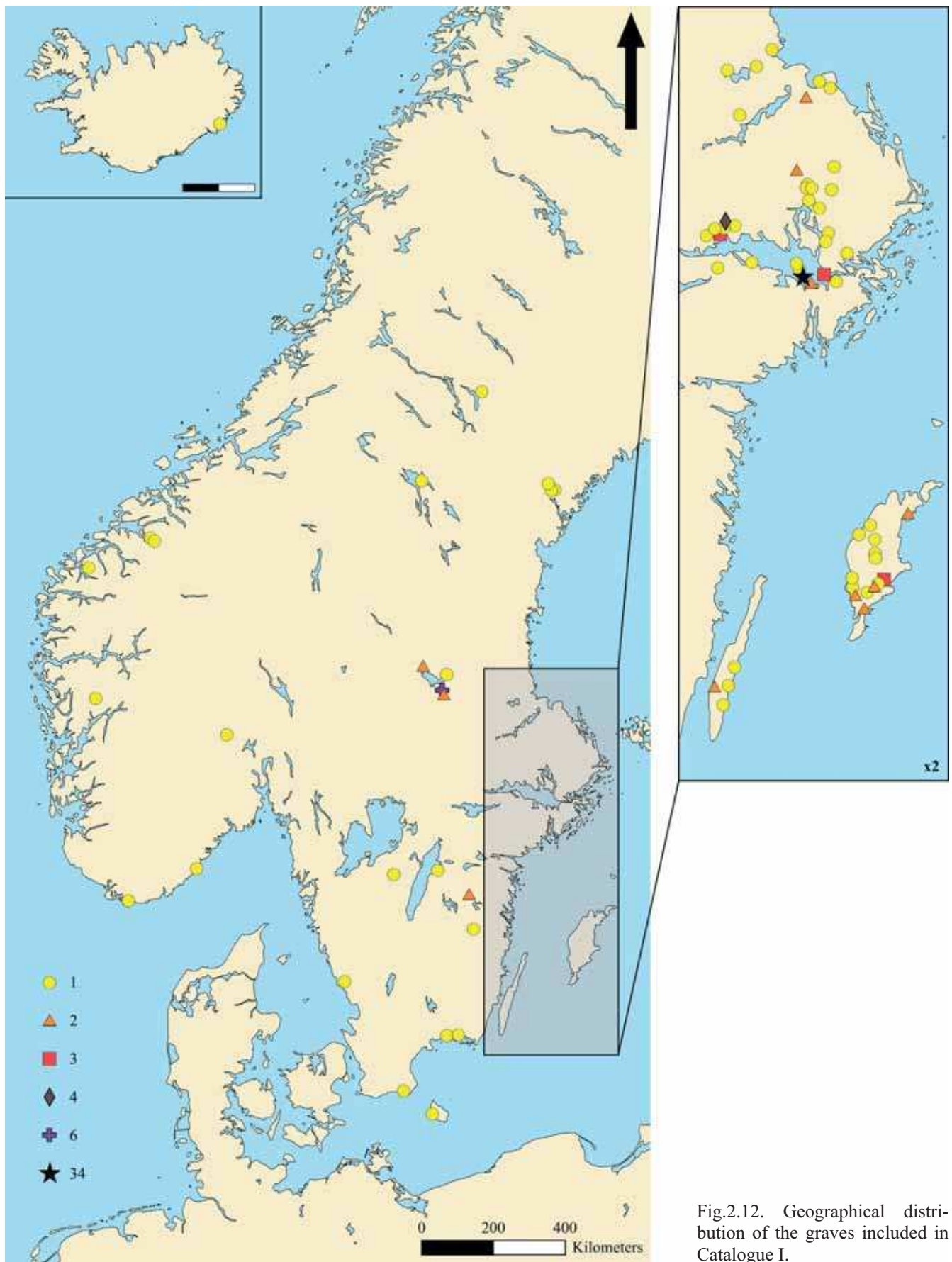


Fig.2.12. Geographical distribution of the graves included in Catalogue I.

influx of foreign coins into Viking-Age Scandinavia while the two others seem to postdate it. Grave 479A at Ire (Cat.I:33) contained a looped Roman coin as well as a number of precious ornaments. Based on its content and its position in the cemetery, it can be attributed to the second half of the eighth century. Grave 4 at Silte (Cat.I:37) is harder to date. It contained nothing beyond a Byzantine looped coin. Its stratigraphy, though, suggests that it is contemporary with the erection of the first wooden church, probably sometime in the second half of the twelfth century (Trotzig 1972). The other coin-pendant from Silte, which seems to derive from grave 7 or grave 8 (Cat.I:38), probably dates from the same period.

Graves with coin-pendants are known from all over Scandinavia (Fig.2.12). Their area of distribution extends from Iceland in the west to Gotland in the east, and from Bornholm in the south to the Swedish province of Jämtland in the north. There is, of course, considerable geographical variation within this large area. In most parts of Scandinavia, graves with coin-pendants are relatively rare. Only about one-fifth of them are located in an extensive area covering Iceland, Norway, Denmark and south-western Sweden. This contrasts strongly with the concentrations observed in eastern Scandinavia, especially in mid-Sweden and on the Baltic islands. The largest concentration of graves with coin-pendants can be found in the area stretching from Västmanland to Uppland, which accounts for almost half of the graves catalogued here. Another important concentration, with twenty graves, is the island of Gotland. Smaller clusters of finds occur in the provinces of Dalarna and Ångermanland, as well as on the island of Öland.

There are many differences in chronology between the areas identified here. In some areas, like Gotland or Dalarna, almost all

the graves with coin-pendants can be dated to Phase II, i.e. the later part of the Viking period. These graves often appear in Christian churchyards. Other areas, like the one stretching from Västmanland to Uppland, show a more mixed picture, with both early and late finds. No area seems to consist exclusively of early graves. These differences in chronology may indicate that the practice of reusing coins as pendants was not fashionable everywhere in Scandinavia at the same time, but they may also reflect regional variations in burial practices.

Table 2.6 illustrates how the graves containing coin-pendants vary in construction, with a focus on internal and external structures. These are, however, just two of many variables contributing to burial diversity. Other important variables coming into play include burial arrangement, placement of the body/bodies, selection and deposition of the grave goods. This diversity is consistent with what we know about the Viking-Age burial practices in general. As emphasised by Neil Price (2014:178), ‘there is an almost infinite variety in the detail of what people actually did with the dead’.

Inhumations slightly dominate the present sample. They account for about 50 per cent of all the graves documented here (Table 2.6). Four main types of inhumations with coin-pendants can be distinguished: simple inhumations, chamber graves, cist graves and boat graves. Simple inhumations are inhumations that lack a specially constructed structure. They can be with or without coffin. Inhumations of this type contrast markedly with chambers and cists, whose pits are respectively wood-lined and stone-lined.

Most striking is the large share of chamber graves in the sample, as well as the presence of several boat graves, where actual boats have been deposited (Table 2.6). These two types of inhumations have been inter-

Table 2.6. Variation in construction of the graves included in Catalogue I.

	Cairn	Flat grave	Mound	Stone-setting	Unknown	Total
Cremation- Boat?	0	0	1	0	0	1
Cremation- Layer	2	0	4	6	1	13
Cremation- Urn	3	0	14	14	1	32
Cremation- Unknown type	0	0	1	0	2	3
Inhumation- Boat	0	0	0	3	1	4
Inhumation- Chamber	0	5	7	0	4	16
Inhumation- Cist	0	1	2	2	2	7
Inhumation- With	0	8	6	3	3	20
Inhumation- Without	1	11	1	2	4	19
Inhumation- Unknown type	0	3	0	0	3	6
Unknown	0	0	5	1	7	13
Total	6	28	41	31	28	134

preted as belonging to the upper-class (e.g. Ljungkvist 2006; Price 2008), because they occur infrequently and usually cluster around distinctive places like proto-towns or centres of power (Price 2008:263–6). Also notable is the fact that the largest group of inhumations with coin-pendants consists of simple inhumations under flat graves. With five exceptions, all these graves can be connected with early wooden churches. They are normally oriented according to Christian fashion, with the head in the west.

Three main types of cremations with coin-pendants have been distinguished (Table 2.6), but the boundaries between these categories are not clear-cut. In all three cases, at least some of the bones and grave goods are scattered in the cremation layer. The identification of cremations with urns can be problematic. All the ceramic vessels found in cremations are not funeral urns. Some of them appear to have contained food or drink rather than cremated bones or artefacts. Unfortunately, information on the content of ceramic vessels is not always available, especially when dealing with old excavations. In the present work, it is assumed that the presence of ceramic vessels in cremations indicates the presence of a funerary urn unless

there is evidence for thinking otherwise. The only boat cremation with coin-pendants is Birka grave 418 (Cat.I:60). The interpretation of this grave as a boat cremation rests on the large number of rivets and nails found in the cremation layer (see Gräslund 1980:55–7).

The ratio between inhumations and cremations varies significantly from region to region. On Gotland, for instance, only one of the catalogued graves is a cremation, while the proportion of cremations in Västmanland exceeds 70 per cent. This variation is due to regional differences in the way the dead body was disposed of. Many studies have indeed shown the importance of local traditions in the burial practices of the Viking Age (Svanberg 2003; see also Price 2008:257–9). This is also due to the existence, within the sample, of chronological discrepancies between the regions. In regions where most of the graves with coin-pendants can be dated to the later part of the period, the burial practices are likely to have been deeply influenced by Christianity, which favoured inhumation of the body.

Coin-pendants sometimes occur in multiple burials, i.e. burials where several individuals were buried together. A good example of this is Birka grave 707 (Cat.I:68), which

contained two decayed skeletons in the same chamber. The skeletons were lying side by side, each with its own set of grave goods. Six other chamber-graves containing two individuals can be identified in our sample, all of them from Birka. Because they have yielded very few bones, their identification is primarily based on the presence of two sets of grave goods alongside each other. For obvious reasons, it is more difficult to determine how many individuals were deposited in cremations. An examination of the cremated bones would give us reliable information, but very few of the cremations with coin-pendants have been subjected to osteological study. The fact that several cremations (e.g. Cat.I:103, 134) contained more than one 'set' of grave goods may be indicative of multiple burials.

Graves with secondary burials are a special type of multiple burial. They also house the remains of several individuals, but these individuals were clearly deposited on separate occasions. The most dramatic example of secondary burial is provided by grave 5a at Butrajvs (Cat.I:36). This cairn, originally raised to cover a cremation from the early Iron Age, was reused for burial in the Viking Age, when an inhumation with a looped German coin was added at its centre. A total of five graves with secondary burials are furnished with coin-pendants. In most cases, both the primary burial and the secondary burial(s) can be dated to the Viking Age. In the present study, the largest number of burials in one grave is five (Cat.I:45).

Osteological information about the sex of the individuals buried with coin-pendants was available in fourteen cases. Although the degree of certainty varies, all these individuals have been identified as women, with one exception: the cremation grave from Barknåre (Cat.I:96), which has been osteologically sexed as male. Further evidence for sexing can come through analysis of the grave goods.

This method has been rightly criticised for stereotyping the relation between gender and sex (e.g. Back Danielsson 2007:60–3), but the osteological sample proposed here is too small to allow any reliable conclusions to be drawn. It should be noted that about a third of the graves lack gendered artefacts.

Many of the graves with coin-pendants contain artefacts typically associated with women, artefacts consisting mainly of jewellery and domestic implements. The most common of these artefacts are the oval brooches. They appear in 45 of the graves catalogued here. Other types of brooches typically associated with women include animal-head brooches, box brooches, disc brooches and trefoil brooches. Based on the brooch evidence only, more than half of the graves with coin-pendants can be gendered as female.

Grave 10 at Långön (Cat.I:125) is a special case. The remains of a belt indicate a male burial, but it seems that the grave belonged to a Sámi. Whether coin-pendants were worn by men or by women in Sámi culture is not very clear (cf. Zachrisson, I. 1997:224–5). Coin-pendants also appear in a number of double graves containing both male and female attributes. When this happens, the coin-pendants are systematically associated with the female ones, except in Birka grave 750 (Cat.I:72). This exception may be explained by the fact that the looped coin from Birka grave 750 was kept in a purse rather than displayed.

There is wide variation in the range and quantity of grave goods buried with the owners of coin-pendants. Some of the graves contain a profusion of artefacts (e.g. Cat.I:65, 103), while some others are very poorly furnished (e.g. Cat.I:35, 105). In a few cases (e.g. Cat.I:24, 37), the coin-pendant is even the only grave-good included. Nothing else was put into the grave. Along this continuum from richly-furnished to empty, the graves catalogued here are not equally distributed.

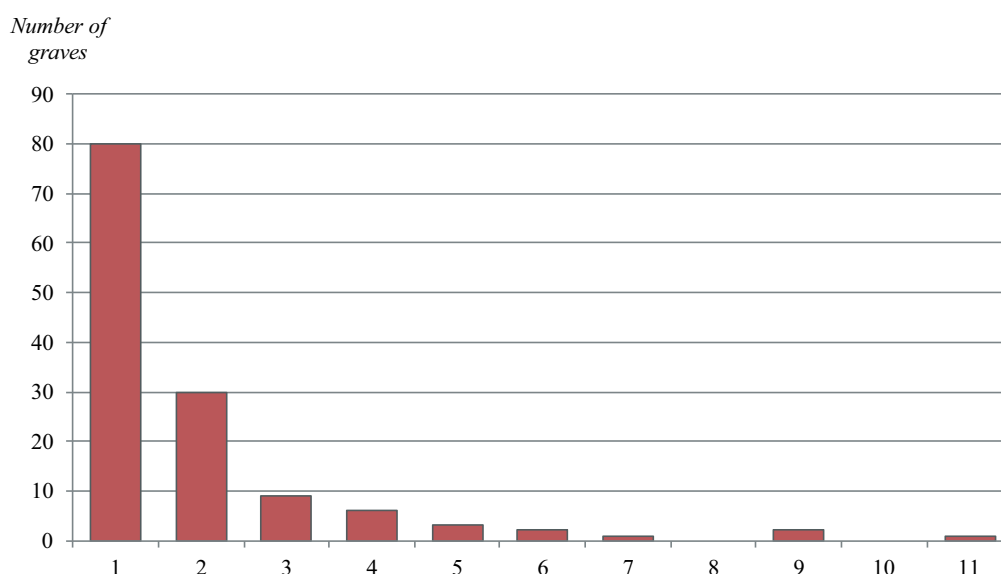


Fig.2.13. Frequency table of graves from Catalogue I according to the number of coins they contain.

They show a tendency towards the ‘richly-furnished’ end. Almost half of the graves with coin-pendants contain at least brooches, beads and additional ornaments of some kind. The richest of all the graves is probably Birka grave 750 (Cat.I:72), which is also regarded as the very richest at Birka (see Ringstedt 1997:138). It included, among other things, a Roman coin reused as a pendant, a set of weapons, several kinds of brooches, a Thor’s hammer, a silver cross, a glass mirror, a gaming board and its pieces, weights, various tools, two horses and their equipment, as well as two vessel pieces.

The graves listed here contain a total of 254 coin-pendants, which are distributed as follows: 73 pendants made from Islamic coins, 49 from Nordic, 41 from German, 39 from English, twenty from Carolingian, nine from Byzantine, six from Swedish, four from Roman, four from Sasanian, three from Norwegian, one from Bohemian, one from Danish, one from Italian, one from Irish and two from unknown. These are all silver coins, with the exception of the two Byzantine copper coins found at Djuped (Cat.I:123). It seems that a number of coin-pendants were gilded (e.g.

Cat.I:77, 86), but this phenomenon seems to be limited in scope.

Some of the reused coins found in graves are incomplete because of corrosion or fire damage. For obvious reasons, this is more often the case in cremations than in inhumations. There is no example of a reused coin that was intentionally fragmented in the grave catalogue, which indicates that the pierced and looped coin fragments occurring in hoards were not worn as such, but were hacked after having regained a currency role. About two-thirds of the coin-pendants were fitted with suspension loops. Unfortunately, these loops are often in a poor state of preservation. They can be corroded or broken off, making them more difficult to study. The rest of the material consists of pierced coins. Most are pierced with a single hole, but the practice of double piercing is also recorded. In seven cases, a ring is inserted into the hole or the loop. None of the coins are, however, further ornamented, for instance with an elaborate mount or a frame.

On average, the number of coin-pendants per grave is less than two. Almost all the graves contain between one and four of them,

with a clear domination of those containing just one (Fig. 2.13). Only in very rare cases do more than four coin-pendants occur together. Six coin-pendants were found, for instance, in grave 526 at Birka (Cat.I:63), nine in a grave at Rabækkegård (Cat.I:1) and eleven in grave 222 at Leksand kyrka (Cat.I:14). It is unclear whether the nine coin-pendants

from Tuna (Cat.I:90) derive from one or several graves. Interestingly, the average number of coin-pendants is significantly higher in inhumations than in cremations, with 2.1 and 1.6 coin-pendants per grave respectively. With one exception (Cat.I:119), all the graves containing more than four coin-pendants are inhumations.

Part II

The making of coin-pendants in the Viking Age

Chapter 3. Selection

Turning a coin into a pendant begins with selecting the coin that will be worn among the coins available. In this choice lies the key for understanding which features of the coins were considered significant by those using coin-pendants. Did the coin have to be unusual? Did it have to be beautiful? Must it bear a special symbol or image? This choice is all the more important given that the coin is the fundamental element in the coin-pendant.

3.1. Methodological considerations

This analysis of the selection process will be done by comparing the number of coins reused as pendants with the total number of coins available in Viking-Age Scandinavia. How many of these coins were turned into ornaments? Which coins were preferred or avoided? The focus will be put on the provenance of the coins, because it is at this level that the coins are typologically most different from each other. However, it is impossible to get an accurate picture without pressing the investigation to a more detailed level, by examining how much variation there is within each provenance group. Some individual coin types, which show particular patterns of selection, will thus be examined further.

The ‘hoard sample’, already presented above (Ch.2.2.2), will be at the centre of the present statistical analysis. Unlike the ‘grave catalogue’, which focuses exclusively on coin-pendants, the ‘hoard sample’ offers a significant body of material for comparison between reused coins and other coins as well

as between different provenance groups. The size of the sample will allow us to take a wide variety of variables into account.

A few coin groups that are hardly represented in the ‘hoard sample’ – because of their small size and/or because they were rarely hoarded – will be investigated differently. Among them are the Byzantine coins, the Carolingian coins, the Nordic coins of type KG3–6 and the so-called *Agnus Dei* coins. In these particular cases, the statistical analysis will be based on a complete sample including all the coins available for study, regardless of the context in which they have been recovered. It is important to note that smaller coin groups of this kind have often been published exhaustively (see e.g. Hammarberg et al. 1989; Garipzanov 2008; Keynes & Naismith 2011).

The quantitative approach adopted here provides a starting point for determining which criteria were used to select the coins to be turned into pendants. Once it is established which coins were preferred or avoided, a comparison between the different groups makes it possible to isolate the significant features and to assess their relevance in the process of selection. Also important is the extent to which the patterns vary geographically and temporally. This allows us to better understand the specific factors governing the selection.

Despite being systematic, this quantitative method has several limitations. Firstly, the coins entering the archaeological record are not necessarily totally representative of those

Table 3.1. Estimated distribution of the four main groups of Viking-Age coins in present-day Scandinavia (source: Eldjárn 1948; Skaare 1976; Wiechmann 1996; von Heijne 2004; Jonsson, K. 2015).

	Islamic	English	German	Scandinavian
Denmark	5,900	5,800	12,200	5,400
Germany (Schleswig)	800	2,000	5,800	700
Iceland	10	190	160	10
Norway	400	3,300	3,300	3,500
Sweden	86,900	43,200	107,800	9,200
Estimated total	94,010	54,490	129,260	18,810

brought to Scandinavia and circulating there. A significant proportion of these coins may have been melted down to make silver ingots or silver jewellery (see e.g. Hårdh 1976:113–27; Coupland 1991), probably affecting different coin groups in different ways. It has been suggested, for instance, that the scarcity of Carolingian coins discovered in Scandinavia was a consequence of their frequent use as raw material for the production of local jewellery (Coupland 1991, 2011:124). If this is correct, these coins would thus have been available for selection at some point, without leaving any clear trace in the archaeological record.

Secondly, it is difficult to tell with any precision when and where the selection for transformation took place. This is an important point, because the composition of the coin pool is different from one period to another and from one area to another. The selection of the same coin can happen in very different contexts, and thus have very different implications. For instance, selecting an Islamic coin in the ninth century may mean very different things than selecting the same coin two centuries later, when very few Islamic coins were still in circulation. Similarly, selecting a Danish coin in Denmark is not the same thing as selecting the same coin on Gotland, where the number of Danish coins was significantly lower and where they would have had no legal value.

Thirdly, the individual circumstances of

the selection are inaccessible to analysis. This limitation is inherent to any quantitative analysis, but deserves particular attention in the present case. Indeed, the coin pool was not completely homogeneous (see e.g. Metcalf 1998:365). Two neighbours could have access to very different coins, depending on how, when and where they had acquired them. From this point of view, each selection was made from a unique currency pool. These limitations all derive from the fact that the selection itself, as a single event, cannot be reconstructed in any detail. It is impossible to get a snapshot of this particular moment and to determine which coins were actually available to the individual involved in the process. What we can discern, on the other hand, are the structural outlines and the main trends, both of which can help us to understand how the coins were selected. This is the purpose of the following statistical analysis.

3.2. Coins and coinage in the Viking Age

In order to illuminate the process of selection, it is necessary to provide some background information on the currency used in Viking-Age Scandinavia. Which coins were available at that time and how were they available? The answer to this question is the starting point for any investigation of the ‘coin-pendant’ phenomenon. It is from this currency pool that the coins to be reused as

pendants are likely to have been drawn.

During the Viking Age, the currency used in Scandinavia consisted primarily of four coin groups: Islamic, English, German and Scandinavian (Table 3.1). These four groups coexisted with a wide range of smaller ones, for instance from Byzantium, Francia, Hungary, Ireland, Poland, the old Roman Empire and Rus'. This heterogeneity can be related to the absence of a controlled monetary economy until the very end of the Viking period (see Ch.1.1.3).

3.2.1. *Islamic coins*

The Islamic element dominates almost exclusively the currency used until the 970s. With very few exceptions, Islamic dirhams account for more than 90 per cent of the coins contained in hoards of this earlier period (see von Heijne 2004:76–81; Jonsen 2011:248). This predominance is less marked in the first half of the ninth century, especially in trading centres, where the single-finds indicate a circulating currency that included West European coins as well (Blackburn 2008:71). In the 970s, the flow of Islamic coins ceases almost completely. This does not mean that all Islamic coins disappear from the area at once. Some remained in circulation for a while, but their numbers decreased rapidly. Hoards from the second half of the eleventh century often still contain a small number of Islamic coins (e.g. Cat.II:42, 76).

Two phases can be distinguished when considering the importation of Islamic coins in the Viking Age (see e.g. Metcalf 1997; Kilger 2008b). Between c.800 and c.880, most of the Islamic coins brought to Scandinavia were Abbasid dirhams, with a significant portion of Umayyad dirhams. These dirhams were often accompanied by small groups of Sasanian drachms, which cannot be defined as Islamic coins *per se*, but

which arrived with them.¹⁹ Many of the coins from this early phase date from the seventh or eighth century. The Islamic coins were not regularly recalled and could circulate for very long periods of time (von Heijne 2004:192). Between c.890 and c.970, most of the Islamic coins brought to Scandinavia were Samanid dirhams, with very limited numbers of dirhams from other dynasties. The flow of Islamic dirhams culminates during this later phase, most notably in the first decades of the tenth century.

The Islamic element also comprises, both throughout the earlier and the later phase, a significant proportion of extra-Caliphate dirham imitations. These imitations have various geographical origins, including Volga Bulgaria, Khazaria and Rus'. Assessing their numbers is a difficult task because they can easily be mistaken for official dirhams. In most cases, the extra-Caliphate dirham imitations were made to look exactly like official dirhams. It has been estimated, mainly through the study of die-links, that they make up five to ten per cent of all the dirhams deposited in Scandinavian hoards (Rispling 1990:275).

In general terms, the group 'Islamic coins' is typologically homogeneous. Most of the coins conform to a standardised type, which follows the pattern of the reformed dirhams of Abd al-Malik (von Heijne 2004:66). They are imageless, with a central inscription and a marginal inscription on both sides. These coins are visually distinct from all the other coins used in Viking-Age Scandinavia. The Sasanian drachms, although associated with this inflow, are very different from the dirhams. Their obverse features a portrait of the emperor in profile, while their reverse features the Zoroastrian fire altar (Jangi 2014:10–2).

¹⁹ The Sasanian Empire was the last Iranian empire before the Muslim conquest. Although the dynasty came to an end in 651, many of the Sasanian coins remained in circulation in the Caliphates during Umayyad and Abbasid times (see Jangi 2014).

3.2.2. German and English coins

The English and the German coins together dominate the currency used in Scandinavia between c.990 and the end of the Viking Age. This joint predominance, sustained by separate inflows, varies from one region to another. The ratio of German:English coins is approximately 50:50 in Norway, 60:40 in Denmark, 70:30 in mainland Sweden and 75:25 on Gotland. Hoards, however, almost always contain the two elements mingled together, amalgamated through use in Scandinavia (Metcalf 1998:353).

The English element consists almost exclusively of pennies issued after the monetary reform of Edgar (959–975) in c.973. Pre-reform coins have been found in Scandinavia, but they are numerically insignificant. No more than 60 of these early coins are listed by Mark Blackburn and Kenneth Jonsson (1981), while the total number of recorded English coins is estimated to be around 50,000 (Table 3.1). The inflow of English coins is particularly strong between c.991 and c.1035, during the reigns of Æthelred II (978–1016) and Cnut (1016–1035), before a sharp diminution around the middle of the century (von Heijne 2004:106–7). Few coins issued by the successors of Edward the Confessor (1042–1066) have been recorded in the Scandinavian countries (Jonsson, K. 2014:552–7).

From a typological point of view, the pennies issued after the reform of Edgar are homogeneous. They tend to follow the same pattern, although there was a certain degree of variation within this format. On most coins, a portrait of the king appears on the obverse and a central cross appears on the reverse. The only exceptions are two issues of Æthelred II: the *Hand* type and the *Agnus Dei* type (see Naismith 2017).

The German coins form the largest group of all. They are more than twice as common as the English ones (Table 3.1). The first ar-

rival of German coins in Scandinavia can be dated to the second quarter of the tenth century, with their appearance in a small number of hoards (Hatz, G. 1974:48; Jonsson, K. 1990:140). Their number increases dramatically in the 990s, at the time of the introduction of the so-called Otto-Adelheidpfenninge. The inflow of German coins is at its greatest for about half a century, between c.990 and c.1040. After c.1050, there is a gradual decline in the numbers of German coins imported to Scandinavia, but the inflow continues to be significant until the beginning of the twelfth century (Hatz, G. 1974:50–1; Metcalf 1998:352).

The German coins found in Scandinavia came from all over Germany, with a predominance of certain regions, such as Saxony, Lower Lotharingia or Franconia (Hatz, G. 1974:41–2; von Heijne 2004:111–3). From a monetary point of view, Germany was far from unified. While in England the same currency was used throughout the country, Germany was divided into more than twenty currency regions (Metcalf 1998:348; see also Kilger 2000:99–100), hence a large number of different coin types.

A multitude of designs were used on German coins at that time (see Dannenberg 1876). The cross is clearly the dominant one, together with churches and busts. Other popular motifs include monograms, hands of benediction, crosiers, swords and various animals. The Otto-Adelheid-pfenninge, which is the most common German type in Scandinavia, shows a cross on the obverse and a church on the reverse. It can be difficult to discern the design on some of the German coins because they tend to be poorly struck.

3.2.3. Scandinavian coins

The Scandinavian coin group is present throughout the period, though on a very different scale. Two main phases can be identi-

fied: an early one from the beginning of the Viking Age to c.995 and a late one from c.995 to the end of the Viking Age.

Before c.995, the Scandinavian group consists exclusively of anonymous coins of light weight minted in southern Scandinavia, probably in Hedeby for the most part (see Malmer, B. 1966). These anonymous coins have conventionally been called Nordic coins since Malmer's seminal work (1966). The production of Nordic coins is intermittent, but increasingly extensive. With few exceptions, their circulation hardly extended beyond the Danish borders. The earliest series, known as KG3–6, began to be minted in the first decades of the ninth century. Some of these coins imitate the epigraphic CAROLUS-DORESTAD design that occurs on coins of Charlemagne (786–814) struck at Dorestad, while some others show pictorial designs, such as a house, a ship, cockerels or a deer. The size of the issue seems to have been limited. Less than 150 of the Hedeby coins have survived (Malmer, B. MS). The KG3–6 series, which came to an end around the middle of the ninth century, was followed by a hiatus of c.50 years, until a second series, known as KG7–9, was introduced in c.900. The coins from this series appear more frequently in hoards and seem to have played a greater role in the currency of the time (Malmer, B. 1966). From a stylistic point of view, they are very close to the first series, since they retain the CAROLUS-DORESTAD design. The KG7–9 series was replaced in c.975 by a last series, known as KG10–12, which can be attributed to Harald Bluetooth (c.958–986). These coins are the first in Scandinavia to feature a cross. They were apparently struck in considerable quantities (Moesgaard 2015:47–51; see also Malmer, B. 1966).

The beginning of the second phase of the Scandinavian coinage can be dated to c.995, when coins bearing the name of reigning kings are for the first time minted in the three

Scandinavian kingdoms: Denmark, Norway and Sweden. These coins, at least initially, are all imitations of Anglo-Saxon pennies. They typically show a cross and a bust (Malmer, B. 1995:10). In Norway, the volume of this production has long been very limited (Skaare 1976:58–64). Less than twenty coins are recorded for the reigns of Olaf Tryggvason (995–1000) and Olaf Haraldsson (1015–1028). It was not until c.1047 that a national coinage was definitely established, with the introduction of a new coin type by Harald Hardrada (1046–1066). This coin type, which featured a triquetra and a cross, was gradually debased during Harald Hardrada's reign (Skaare 1976:79–85). His successors continued to issue debased coins, abandoning the triquetra motif in favour of various busts. In Denmark and Sweden, the establishment of national coinages in c.995 was followed by years of intense minting activity, with its two main centres at Lund and at Sigtuna (see Malmer, B. 1997, 2010). Many of the early coins bear illegible inscriptions, but their attribution to one or the other mint has often been possible through die-links. Coin production in Sweden came to a halt in c.1030. It would not resume before the twelfth century. The Danish coinage, at about the same time, developed along new lines, with a multiplication of the mints and of the designs (von Heijne 2004:116–9). Two iconographic innovations are particularly important. In a first stage, the introduction of local designs in Lund and in Roskilde. In a second stage, the large-scale adoption of Byzantine prototypes by Sven Estridsen (1047–1074). Towards the end of the reign of Sven Estridsen, most of the Danish hoards only contain Danish coins.

3.2.4. *Byzantine, Carolingian and Roman coins*

The four coin groups described above form the core of the currency used in Viking-Age

Scandinavia. They alone account for more than 95 per cent of all the coins from the period. As already noted, the rest of the currency is fragmented into a myriad of smaller coin groups. They cannot all be described here, but some of these groups, which are of particular importance for the practice of reusing coins as pendants, deserve detailed consideration: the Byzantine, the Carolingian and the old Roman coins.

More than 700 Byzantine coins are known from Viking-Age Scandinavia (Hammarberg et al. 1989; Horsnæs 2015; Audy 2016). These coins are distributed over the entire period, but the majority belong to the years between c.945 and c.989. Interestingly, they comprise a significant proportion of gold and copper coins, an unusual composition in a Viking-Age context. These gold and copper coins appear exclusively in mainland Scandinavia, while the silver ones, called *miliarisia*, are significantly concentrated on Gotland (Audy 2016:147). Byzantine coinage was an important source of inspiration for early Scandinavian coins. It has been used as a model on many occasions, including for the coins of Harold Bluetooth (Malmer, B. 1966:90–3), the early coins minted in Sigtuna (Malmer, B. 1981) and the coins of Sven Estridsen (Hauberg 1900).

In Scandinavia, the Carolingian element consists mostly of coins issued during the reign of Louis the Pious (814–840): more than 70 per cent of the approximately 240 Carolingian coins listed by Ildar Garipzanov (2008) and Jesn Christian Moesgaard (MS) can be attributed to him. A large majority of these coins belong to the *Christiana Religio* type, a type with obvious Christian symbolism (Coupland 2011:116–9). The *Christiana Religio* coins bear a cross on the obverse and a church on the reverse and served as a model for many of the German types (see Dannenberg 1876). Finds of Carolingian coins are

known from all over Scandinavia, but concentrations can be observed in trading and aristocratic centres, like Tissø, Birka or Upåkra (see Garipzanov 2008).

A significant number of Roman coins are known from Viking-Age contexts. They have never been systematically inventoried on a Scandinavian basis, but their number can be estimated at around 120 (see Lind 1981; Horsnæs 2013:67–70). These coins presumably stem from the different inflows reaching Scandinavia in the first half of the first millennium, long before the beginning of the Viking Age. A few of the Roman coins found in Viking-Age contexts are gold *solidi*, but most of them consist of silver *denarii*. The Ocksarve hoard, for instance, which was deposited in c.1120, contained 81 Roman *denarii* (Lind 1981:nr61). Base metal coins also appear occasionally at trading centres, like Birka in Sweden or Kaupang in Norway (see e.g. Blackburn 2008:58–9). Roman coins seem to have been available throughout the period, their availability depending either on continued circulation or on the re-discovery of ancient hoards.

To sum up, it is possible to distinguish between two main phases of coin circulation in Scandinavia (see also Ch.2.3.2). During a first phase, between c.800 and c.980, the currency has a fairly uniform composition, almost completely dominated by the typologically homogeneous Islamic element. Very few coin groups circulate alongside and their size is very limited. Chief among them are Carolingian, pre-reform English and Nordic coins of type KG3–9. During a second phase, from c.980 to the end of the period, the Scandinavian currency becomes more diversified. The German and the English elements play a dominant role, but they appear together with many different coin groups: an increased number of local coins, a wider variety of for-

eign coins and a supply of old Islamic coins. This second phase ends with a homogenisation of the currency, caused by the gradual disappearance of all the foreign types starting from c.1050.

The overview presented here of the Viking-Age currency has given little place to differences between regions. This was not to imply that these differences were insignificant. Some of them, like the dominance of Gotland (see e.g. Metcalf 1998) or the existence of local currency regions (see e.g. Wiechmann 2007), may have influenced the process of selection in a significant way. The purpose of this overview was mainly to shed light on the major chronological developments shared by all the Scandinavian regions.

3.3. Coin selection: a morphological approach

The majority of the coin groups represented in the hoard sample are also found as coin-pendants (Table 2.2). Those which are not represented among the coin-pendants tend to be small in size, thus suggesting that their absence is related to sample size and sample selection. The observation that several coin groups lacking coin-pendants in the hoard sample do comprise some in the grave sample supports this hypothesis. Examples include Norwegian coins (Cat.I:16, 125), Roman coins (Cat.I:33, 41) and Italian coins (Cat.I:102). This presence of coin-pendants among almost all the coin groups known from Viking-Age Scandinavia leads us to believe that coins of any origin could be used as pendants.

At the same time, the fact that the coin groups were transformed into pendants in different proportions clearly demonstrates that the coins used as pendants were not selected randomly. Some groups were preferred over others. The transformation rate ranges from

approximately 40 per cent to less than one per cent (Table 3.2). Three coin groups seem to be particularly sought after, with a rate of reuse of more than twenty per cent: Carolingian, Nordic KG3–6 and Byzantine coins. Four groups are characterised by a relatively high transformation rate, ranging from ten to five per cent: Islamic, Sasanian, Bohemian and Swedish coins. All the other coin groups comprise less than three per cent of coin-pendants.

Table 3.2 summarises the main features of the groups represented by five coins or more in the hoard sample and/or in the grave sample. The purpose is to compare the coin groups and to determine what criteria were decisive in the process of selection. The main features taken into account are as follows:

- Transformation rate: in what proportion were the coin groups reused as pendants?
- Currency share: were these coins common or rare in the Viking Age?
- Coin-pendants share: were these coins common or rare among the Viking-Age coin-pendants?
- Main period of circulation: when were the different coin groups mainly available?
- Average weight: what was the value of the coins?
- Average diameter: what was the display potential of the coins?
- Main iconography: how were these coins decorated?
- Quality of strike: what was the visual quality of the coins?

It is important to note that a few new finds can easily alter the picture in the case of small coin groups. The reuse rate of Carolingian coins, for instance, has decreased from 37 per cent to 30 per cent in recent years with the discovery at Havsmarken of more than 50 Carolingian coins showing no sign of reuse.

Table 3.2. Main features of the coin groups represented by five coins or more in Catalogues I-II. All the data, including the individual data on each coin group, are derived from statistical analysis on Scandinavian finds (see sources). They have been adjusted to facilitate comparison.

	Circulation and use				Individual data					Sources
	Reuse rate	Currency share	Pendants share	Main period of circulation	Average weight	Average diameter	Inscription	Most common designs	Quality	Literature and size of the sample on which the data are based
Nordic KG3–6	45%	<1%	<1%	Period I	<1g	18–21mm	None	Pseudo-letters, deer, cocks, boat, mask	High	Malmer, B. MS (139 coins, individual); Malmer, B. 1966 (individual)
Carolingian	30%	<1%	<1%	Period I	1–2g	18–21mm	Circular	Cross, temple	High	Moesgaard MS (209 coins, individual); Garipzanov 2005 (23 coins, individual)
Byzantine	25%	<1%	2%	Period II	>2g	21–24mm	Field, circular	Cross, bust, inscription	High	Hammarberg et al. 1989 (626 coins, individual)
Bohemian	9%	<1%	<1%	Period II	c.1g	18–21mm	Circular	Cross, busts, temple, hand	Medium	CNS 1975–2011 (56 coins, individual)
Sasanian	7%	<1%	<1%	Period I	>2g	>24mm	Marginal	Bust, altar	High	Hoard sample (77 coins); CNS 1975–2011 (individual)
Roman	7%	<1%	<1%	Period II	>2g	<18mm	Circular	Bust, standing figure	Very worn	Lind 1981 (93 coins, individual)
Islamic	6%	35%	70%	Period I	>2g	>24mm	All-epigraphic	Kufic inscription	High	Hoard sample (12,161 coins); CNS 1975–2011 (individual)
Swedish	5%	<1%	<1%	Period II	c.2g	c.21mm	Circular	Bust, cross	Medium	Hoard sample (123 coins); Malmer, B 1989 (individual)
Irish	4%	<1%	<1%	Period II	1–2g	18–21mm	Circular	Bust, cross	Medium	CNS 1975–2011 (43 coins, individual); Wiechmann 1999 (33 coins, individual)
Anglo-Scandinavian	3%	1%	<1%	Period II	1–2g	c.21mm	Circular	Bust, cross	Medium	Hoard sample (418 coins); Malmer 1997 (individual)
English	2%	20%	15%	Period II	1–2g	18–21mm	Circular	Bust, cross	High	Hoard sample (7,625 coins); CNS 1975–2011 (individual)
Italian	2%	<1%	<1%	Period II	<1g	18–21mm	Circular	Cross, inscription	Low	Hatz, V. 1983 (80 coins, individual); CNS 1975–2011 (individual)
Hungarian	2%	<1%	<1%	Period II	<1g	<18mm	Circular	Cross, building, bust	Low	CNS 1975–2011 (25 coins, individual); Wiechmann 1999 (14 coins, individual)
German	1%	45%	10%	Period II	1–2g	18–21mm	Field, circular	Cross, busts, temple, hand	Variable	Hoard sample (12,973 coins); CNS 1975–2011 (individual)
Norwegian	1%	<1%	<1%	Period II	<1g	<18mm	Circular	Bust, triquetra, cross	Medium	Malmer, B. 1961 (individual); Skaare 1976 (257 coins, individual)
Nordic KG7–12	<1%	1%	<1%	Period II	<1g	<18mm	Circular	Cross, pseudo-inscriptions	Medium	Hoard sample (347 coins); Malmer, B. 1966 (individual); Moesgaard 2015 (individual)
Danish	<1%	5%	<1%	Period II	c.1g	<18mm	Circular	Cross, bust, triquetra	Medium	Hoard sample (884 coins); CNS 1975–2011 (individual)

3.3.1. *Rarity*

All the coin groups frequently reused as pendants are relatively small in size (Table 3.2). They each represent very small portions of the currency in circulation in Viking-Age Scandinavia, usually less than one per cent. The Nordic group of type KG3–6, for instance, comprises approximately 125 coins in total while the Byzantine group comprises approximately 750. This contrasts strongly with the four coin groups forming the greater part of the Viking-Age currency, all of which have relatively low transformation rates. Less than two per cent of the about 110,000 German coins known from Viking-Age Scandinavia show signs of having been reused as pendants. Clearly, there is a correlation between coinage size and transformation rate.

Although making the coins more attractive, rarity should not be regarded as a decisive criterion in itself. Rare coinages can also have low transformation rates. They are not necessarily particularly sought after. A case in point is the Italian group, which comprises no more than 100 coins in total (see Hatz, V. 1983). Despite this rarity, only three of the Italian coins deriving from Viking-Age contexts show signs of having been reused as pendants.

That some rare coin groups were particularly sought after should not blind us to the fact that the overwhelming majority of the Viking-Age coin-pendants do not belong to these groups. As shown in Table 3.2, the six coin groups most frequently turned into pendants account for less than five per cent of all the pierced and looped coins known from Scandinavia. The other 95 per cent consist almost exclusively of Islamic, German, English and Scandinavian coins, all of which belong to large coin groups. These large coin groups were not the most sought after, but they were the most commonly worn.

The Islamic coin-pendants are particularly



Fig.3.1. Difference in size between a Carolingian coin-pendant (Cat.I:124; photograph by the author) and an Islamic coin-pendant (SHM 17528; photograph by the author). Scale 1:1.

prominent. Almost 70 per cent of all the Viking-Age coin-pendants are made from Islamic coins. The fact that the largest coin groups are characterised by low transformation rates does not necessarily mean that these groups were less attractive than the others. To meet the same demand in coin-pendants, the proportion of coins that need to be transformed is lower when the coins are taken from a large group than from a small one.

3.3.2. *Size and weight*

Size does not appear to be a significant criterion for selection in the Viking Age. Several of the coin groups with high transformation rates are characterised by relatively small diameters. The Nordic coins of type KG3–6, for instance, measure approximately 19.5mm on average (Malmer, B. 1966:143) while the Carolingian coins measure about 20mm (Grierson & Blackburn 1986:194). Compared to Islamic coins, which have an average diameter of around 25mm, the difference is striking (Fig.3.1). It can also be noted that there are a number of very small coins among the coin-pendants found in graves. Examples include two Roman denarii of 16mm found on Gotland (Cat.I:41–2) and an English coin of 15mm found on the Norwegian coast (Cat.I:5).

That size is not a significant criterion for selection is further supported by a study of the Byzantine coins issued during the joint

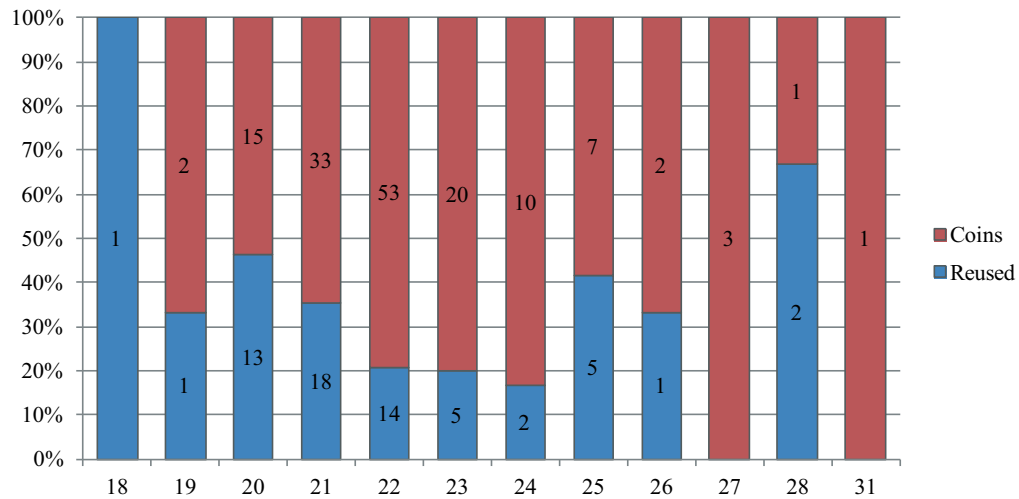


Fig.3.2. Frequency table showing the size (mm) of 209 miliaria of Basil II and Constantine VIII found in Sweden for which this feature is known (source: Hammarberg et al. 1989).



Fig.3.3. Poorly struck German coin with loop attached from the Johannishus hoard (SHM 3491; photograph: Kenneth Jonsson, NFG). Scale: 1.5:1.



Fig.3.4. Looped *Agnus Dei* coin from the Johannishus hoard (SHM 3491; photograph: Kenneth Jonsson, NFG). Scale: 1.5:1.

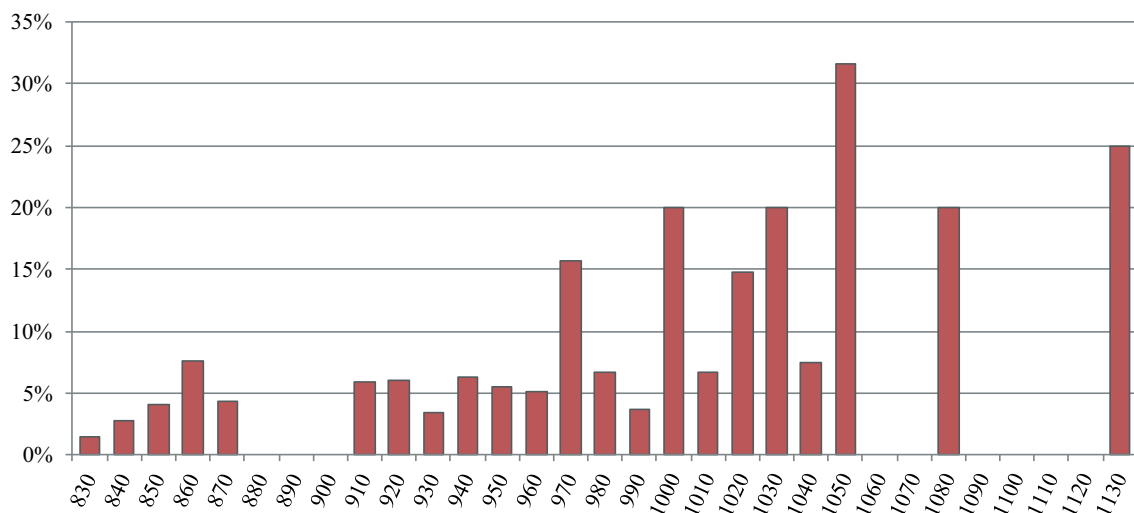


Fig.3.5. Proportion of reuse by decade among the Islamic coins included in Catalogue II. The null values in the decades 1060–70 and 1090–120 are not due to the absence of reuse, but to the absence of Islamic coins in the hoards sampled for these periods.

reign of Basil II and Constantine VIII. These coins, which have been exhaustively recorded and described (Hammarberg et al. 1989), vary significantly in size despite being homogeneous in type. They have diameters ranging from about 18mm to about 31mm (Fig.3.2). As shown in Figure 3.2, the proportion of reuse within this group does not depend on the diameter of the coins. Smaller and larger coins were both selected to be worn as pendants.

Likewise, there is nothing to suggest that weight played an important role in the process of selection. The heavy coins were not the only ones to be sought after. This can be illustrated by the Nordic KG3–6 group, which includes more than 40 per cent of coin-pendants. During Phase I, these coins are the lightest of all the coins in circulation in Scandinavia. They weigh less than 0.8g on average (Malmer, B. 1966), while most of the coins circulating at that time weigh more than 2g (Table 3.2). This light weight of the Nordic coins of type KG3–6 did not prevent them from being massively reused as pendants.

3.3.3. *Aesthetic quality*

Quality is hard to assess objectively and to compare. Many different features contribute to making the coins look better or worse, including sharpness of strike, centring of the designs and thickness of the flan. All these features affect the coin's overall aesthetics (Fig.3.3).

There seems to be a certain correlation between high transformation rate and high quality of strike. Indeed, all the coins frequently reused as pendants, such as the Carolingian or the Byzantine ones, are very well struck. They clearly stand out from an aesthetic point of view.

However, this correlation does not always hold, as is illustrated by a comparison between the English coin group and the Anglo-Scan-

dinavian coin group. Although being very similar from an iconographical point of view, these two groups show a marked difference in quality of strike. The Anglo-Scandinavian coins are 'more or less wrongly centred in relation to the flan' and they are often 'struck more than once, at least on some part of one side of the coin' (Malmer, B. 1989:43–4). This significant difference in quality between English coins and Anglo-Scandinavian coins is not reflected in the transformation rate. The Anglo-Scandinavian coins are even more frequently reused as pendants than the English ones (Table 3.2).

At the individual level, the condition of a coin at the time of selection does not only depend on the quality of strike, but also on intensity of circulation and secondary treatment. Coins can be damaged by many means, including use-wear, fragmentation, bending or pecking. Unfortunately, it is very hard to determine when such damage occurred, especially when the coin-pendants returned to circulation at a later point (see Ch. 7.2). Were these coins damaged before their transformation into pendants or after?

One way to obtain further insight into this issue is to focus on the coin-pendants found in graves. Because these coin-pendants were still used as ornaments when deposited, all the economy-related damage they display can be regarded as predating their transformation. There is little point in testing the silver when the coin is already pierced and used as ornament. Following this line of reasoning, we can clearly see that the damaged coins were not always excluded from the selection process. Some of the coin-pendants, for instance, are covered with pecks, such as the German coin found in grave 2 at Backa (Cat.I:22). Some others have been bent and flattened, such as the Swedish coin found in 1951 in the churchyard of Garde (Cat.I:26).

Aesthetic quality is likely to have played a

role in the process of selection. It was probably preferable to wear well-struck coins than types of poor fabric. However, this was hardly a decisive factor. Low quality coins could also be selected, even coins that could easily be described as ‘unaesthetic’.

3.3.4. *Inscriptions and images*

Almost all the coins reused as pendants in the Viking Age feature inscriptions or pseudo-inscriptions. This comes as no surprise, given that text is present on almost all the coins circulating in Scandinavia at the time. As already noted (see Introduction), text was used by those issuing coins to convey various political and religious messages.

The size and arrangement of these inscriptions vary significantly from one group to another. Coins range from all-epigraphic, like the Islamic ones, to anepigraphic, like the Nordic ones. Interestingly, both ends of the spectrum are represented among the coin groups most frequently reused as pendants in the Viking Age, the most striking contrast being between the Byzantine coins and the Nordic coins of type KG3–6. On the one hand, the Byzantine coins available in Scandinavia include much text. One side is all-epigraphic and the other features a full circular inscription. In this case, text dominates the image. On the other hand, many of the Nordic coins of type KG3–6 are anepigraphic. They completely lack inscriptions. This may indicate that the presence of inscriptions was not decisive for selecting the coins.

The coin groups with the highest transformation rates all bear distinctive designs that have a special resonance in the Viking Age. A good example is provided by the Nordic coins of type KG3–6, on which appear representational images of different kinds, such as deer, cockerels, ships or snakes, as well as a wide range of symbols, such as masks, eight-shaped signs or crosses (Malmer, B.

1966). Most of these images were common in Viking-Age art and religion (see Varenus 1994). The iconography of the Carolingian coins circulating in Viking-Age Scandinavia is also striking. Almost all these coins belong to the *Christiana Religio* type issued by Louis the Pious between c.822 and 840. The *Christiana Religio* coins bear an equal-armed cross on the obverse and a temple on the reverse, thus conveying a strong Christian message.

That some coins were selected on the basis of their iconography can be further illustrated by the *Agnus Dei* coinage of Æthelred II (Fig.3.4, see Ch. 10.3). This coinage, issued in c.1009, features a depiction of the Lamb of God on the obverse and of the Holy Dove on the reverse (see Keynes & Naismith 2011). The *Agnus Dei* coins seem to have been particularly appreciated in Viking-Age Scandinavia. They are 25 times more often turned into pendants than the other English coins circulating at that time.²⁰ It is also significant that the *Agnus Dei* coinage inspired a number of imitations in eleventh-century Scandinavia (Keynes & Naismith 2011:207; see Jensen, J.S. 1995a:58–9; Malmer, B. 2010:60).

Despite these observations, the role played by iconography should not be overestimated. There are many reasons to believe that images were not always essential to the process of selection. Firstly, the largest group of coin-pendants in Viking-Age Scandinavia lack images. The Islamic dirhams, which represent more than 70 per cent of all the pierced and looped coins, are all-epigraphic. Secondly, two coin groups decorated with similar designs could be reused in very different proportions. The best example of this is provided by the Otto-Adelheid coinage, which was issued in Goslar between c.991 and 1040. Although bearing a cross and a temple inspired by the

20 About 50 per cent of the fourteen *Agnus Dei* coins found in Scandinavia show traces of having been reused as pendants (Keynes & Naismith 2011:206–7).

Carolingian deniers of the *Christiana Religio* type, these coins are not particularly sought after. They have a transformation rate of about 1.5 per cent, while that of the Carolingian deniers is around 30 per cent (Table 3.2). Thirdly, even the coin groups with distinctive designs do not always seem to have been primarily selected on that basis. The Nordic coins of type KG3–6, for instance, consist of two main typological variants, one with images and one with pseudo-inscriptions. Interestingly, both have a transformation rate of approximately 45 per cent of coin-pendants (see Malmer, B. MS).

3.4. Coin selection: a spatio-temporal approach

Comparing all the coin groups together provides valuable information on the criteria used to select the coins, but also a distorted picture of the process of selection. The different coin groups were not available everywhere in Scandinavia at the same time and on the same scale. There was great geographical and chronological variation. It is therefore necessary to investigate further the relationship between distribution and selection.

3.4.1 Chronological variation

As emphasised in section 2.3.2, the practice of turning coins into pendants is more common in Phase I than in Phase II, the general transformation rate dropping from about six per cent to about two per cent after c.980. This contrast between Phase I and Phase II is reflected, to a large extent, in the transformation rates of the different coin groups (Table 3.2). The coin groups circulating mainly during Phase I all include *more* than six per cent of coin-pendants. In two cases, the transformation rate even exceeds 30 per cent. On the other hand, the coin groups circulating mainly during Phase II almost all include

less than six per cent of coin-pendants. There are only two exceptions: Byzantine coins and Bohemian coins.

However, the question of chronological variation goes beyond this contrast between Phase I and Phase II. There are also coin groups that are represented throughout the Viking period and whose internal chronology reveals different patterns of distribution. Two of these coin groups will be investigated in more detail in the following: the Islamic group and the English group.

Although the main flow of Islamic coins almost completely dries up after c.970, this coin group does not immediately disappear from the Scandinavian economy. During Phase II, the Islamic coins still represent more than three per cent of the coins deposited in hoards. This presence of the Islamic element during Phase II can be explained in two ways. Firstly, some of the Islamic coins imported before c.970 continued to circulate in Scandinavia for a while. It was not until the establishment of a regulated coin economy (Ch.1.1.3), an event that happened at different times in the Scandinavian kingdoms, that they were definitively removed from the currency in circulation. Secondly, a small number of Islamic coins continue to be imported until the end of the first quarter of the eleventh century (see Johansson 1997). These coins represent dynasties often absent from Phase I, such as the Marwanids, the Uqaylids or the Ziyarids.

Remarkably, the proportion of Islamic coins showing signs of having been suspended is higher during Phase II than during Phase I (Fig.3.5). On average, their transformation rate rises from less than six to more than twelve per cent. This coin group even seems to gain in attractiveness over time, as is shown by the peaks observed after 1050. One possible explanation is that the Islamic coins reused as pendants enjoyed a longer

life than the other Islamic coins, thus leading to their overrepresentation in Phase II. This hypothesis is supported by the degree of use-wear on some of the Islamic coin-pendants deriving from late hoards, which suggests prolonged use (Fig.3.6). Another explanation is that the Islamic coins became more attractive in Phase II, probably on account of their rarity. This hypothesis is supported by the fact that some of the Islamic coin-pendants deposited in Phase II are mounted with loops dating to the eleventh-century. At Børglum, for instance, an Abbasid coin minted in AD 777/8 has a loop made from a fragment of a *Long Cross* penny of Æthelred II, a coin type issued between c.997 and 1003 (Audy 2015:102–3). If this hypothesis is correct, the attractiveness of the Islamic coins during Phase II can be compared to that of the Byzantine coins.

A small number of English coins issued before Edgar's reform of the coinage in c.973 are known from Scandinavian finds. In total, 60 coins have been listed by Blackburn and Jonsen (1981:50), but additional finds bring the total to about 100. During Phase I, the English coin group is thus roughly equivalent in size to the Carolingian or the early Scandinavian one. It is only in Phase II that it becomes a major share of the currency in circulation.

The proportion of English coins reused as pendants is significantly higher during Phase I than during Phase II. Despite fragmentary data, at least fourteen pendants made from English coins issued before the reform of Edgar in c.973 could be identified, i.e. about fifteen per cent of the total material,²¹ while the proportion of reuse of the post-reform coinages does



Fig.3.6. Abbasid coin from 862/3 from the Man-negårde hoard, dated to 1102 (SHM 11300; photograph by the author). Scale: 1.5:1.



Fig.3.7. Coin issued by Cnut of Northumbria that was probably found in the Birka cemeteries (KMK 101937; photograph by the author). Scale 1.5:1.

not exceed two per cent (Table 3.2). This contrast not only reflects the general differences in coin usage between Phase I and Phase II, but also seems to indicate that the English coins were more attractive before their massive arrival in Scandinavia (Fig.3.7). Interestingly, these early English coins seem to have been more appreciated in western Scandinavia and in the mid-Swedish area than in southern Scandinavia, where they are almost never reused as pendants (but see SCBI 4.679).

3.4.2. Geographical variation

That the frequency of reuse could vary geographically within coin groups has been noted on several occasions (e.g. Malmer, B. 1966; Audy 2016). According to Garipzanov (2008), for instance, the distribution patterns of Carolingian coins can be divided into three main areas. In southern Denmark, close to the Carolingian border, the Carolingian coins had no cultural or social value, probably be-

²¹ It was not possible to get individual information on all these coins, but fourteen pierced and looped could be identified: Cat.I:4, 5, 69, 78, 83, 84 (x2), 91 (x2); SCBI 4.60-1, SCBI 4.679, SCBI 65.30 and SCBI 65.23–4. The last one is a coin issued by Cnut of Northumbria possibly found in the Birka cemeteries (Fig.3.7).

cause of the political confrontation with the e Empire. These coins were rare and almost never reused as pendants. In an area extending from northern Jutland to Skåne, the Carolingian coins had a certain symbolic value, as suggested by their occasional reuse as pendants. The practice seems to have gone out of fashion abruptly in the third quarter of the ninth century when 'Viking raids into Carolingian territories demonstrated the military weakness of the Franks'. In an area encompassing mid-Sweden and southern Norway, the Carolingian coins were predominantly used as signs of social prestige. They were almost all reused as pendants and deposited in graves. Moreover, Garipzanov notes that there are a few central places and trading centres, like Haithabu, Gudme or Kaupang, in which Carolingian coins predominantly performed a monetary function (Garipzanov 2008:85–6).

With the dramatic increase of the Carolingian material in Denmark in recent years,²² the picture has changed to some extent. Some pierced coins have been found in areas from which they were previously absent, such as Fyn (Moesgaard MS). Despite this, the idea that the Carolingian coins tend to be used as a means of exchange in certain places, and as ornaments in others, still holds. The site of Havsmarken, which has yielded 52 Carolingian coins since its discovery in 2008, deserves special attention in this regard. The great concentration of single finds of Carolingian coins at Havsmarken has been interpreted as evidence that this site was the main gateway of Carolingian coins into Denmark. They were probably brought there as a result of trade (Moesgaard MS). At Havsmarken, only one of the 52 Carolingian coins has been pierced for suspension.

22 More than 100 Carolingian coins have been found in Denmark since the publication of Garipzanov's article in 2008, multiplying by four their total number. Most of these recent finds are single finds made by metal detectorists.

This contrasts markedly with the rest of Denmark, where about two-thirds of the Carolingian coins show signs of reuse as pendants. In other words, it seems that the Carolingian coins gain in symbolic value as they circulate away from their point of arrival.

Another group showing considerable geographical variation in reuse proportion is the Byzantine coin group, and especially its silver component (Fig.3.8). In this case, no site stands out as having a unique composition, but clear differences between regions can be discerned. Gotland has the lowest transformation rate, with about seventeen per cent of coins showing signs of reuse as pendants. On the Scandinavian Peninsula, on the other hand, the Byzantine group includes about 48 per cent of coin-pendants. With 24 per cent of reuse, southern Scandinavia lies between these two values.

Two main factors may have contributed to this variation. Firstly, the Byzantine coins were significantly more common on Gotland than anywhere else in Scandinavia, Gotland accounting for about 70 per cent of the total material (Fig 3.8). It is possible that the Byzantine coins were less attractive on Gotland because of this relative abundance. Secondly, it seems that Byzantium had less close contact with Gotland than with eastern Sweden or Denmark, as is suggested by the absence of copper coins, seals and other direct imports in Gotlandic finds (see Androschchuk 2016a). This difference in the nature of the contacts may explain why the Byzantine coins had a special value outside Gotland.

By contrast, the four coin groups forming the greater part of the Viking-Age currency show little geographical variation, with proportions of reuse fairly homogeneous within each group (Table 3.3). There are small differences, but most of them seem to depend on the general patterns of coin usage in the different regions. A good example of this is provided by the Is-

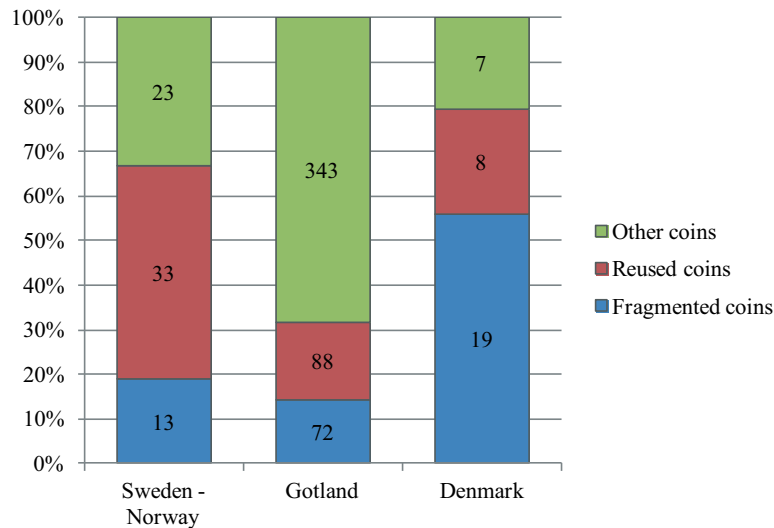


Fig.3.8. Suspension and fragmentation of the Byzantine miliaria found in Scandinavia (source: Audy 2016:151).

Table 3.3. Proportion of reuse of the four main coin groups during Phase II.

	English	German	Islamic	Scandinavian
Bornholm	2.1%	0.4%	12.3%	1.8%
Denmark	1.4%	0.4%	11%	0.3%
Gotland	2.5%	1.7%	12%	2.6%
Norway-Iceland	3.4%	1.5%	23.5%	6%
Sweden	1%	1.2%	14.2%	1.3%

Islamic coins from Phase II found in Norway and Iceland, which have a transformation rate that exceeds twenty per cent, while that in other regions is around twelve per cent. This contrast does not necessarily mean that the Islamic coins were particularly appreciated in this area in the eleventh century. Rather, it seems that all coins in general were more often reused as pendants there than in the rest of Scandinavia.

It is not possible to isolate a single criterion underlying the selection of all the coins reused as pendants in Viking-Age Scandinavia. The material is too heterogeneous. There seems to have been a particular taste for rare coins, but

several other factors are likely to have been important, such as iconography and quality of strike. These factors mainly relate to the visual quality of the coin. The distance – both geographical and cultural – from the source of supply probably played a role as well.

This diversity places the focus on the object ‘coin’ itself. It seems that coins were not primarily chosen because they were rare, beautiful and/or well struck. They were primarily chosen because they were coins. If, by any chance, a rare, beautiful and/or well-struck coin was available at the time of selection, there are reasons to think that this one would be preferred. It was a bonus, not necessarily a precondition.

Chapter 4. Transformation

The means of suspension are the only elements that can be directly related to the transformation of the coins into pendants. Unlike the coins, they were specifically produced to be part of the ornaments. For this reason, the means of suspension play a special role in understanding the life of the pierced and looped coins: studying them makes it possible to understand how, where and when the coins were transformed. The means of suspension will here be studied in three steps: establishing a typology, discussing the manufacturing techniques and investigating their distribution.

4.1. Methodological considerations

The methods used for suspending coins in the Viking Age have been very little studied. The most notable exception is the work by Mark Blackburn on the Hoen hoard (Blackburn 2006), in which the author proposes an in-depth analysis of the loops attached to the Hoen coins. This analysis includes both a typology of the loops and a description of their manufacturing techniques, with the purpose of better understanding how and when the coins reused as pendants were acquired.

Blackburn's typology proved to be very helpful in reconstructing the life history of the Hoen coin-pendants. Based on three main features, i.e. 'type of construction', 'fixing method' and 'decoration', he was able to show that the Hoen loops were added on at least eleven different occasions over an extended period of time from the Migration period to the third quarter of the ninth century. He was also able

to show that the loops were added in different areas, including Francia and Scandinavia (Blackburn 2006:196–9). In the present chapter, the same sort of analysis will be applied to all the coin-pendants used in Viking-Age Scandinavia.

Even if it is a very good starting point, the Hoen hoard only provides a limited insight into the methods used for suspending the Viking-Age coins in a more general way. The loops it contains are atypical. They are among the few to be made of gold, they are characterised by the highest quality of craftsmanship and they display an unusually good state of preservation. Moreover, the overwhelming majority of the means of suspension known from Viking-Age Scandinavia are not represented in this find. None of the Hoen coins is pierced or equipped with an undecorated loop.

Two main problems arise when trying to develop a comprehensive typology of the means of suspension attached to coins in the Viking Age. Firstly, these means of suspension are simple devices. They tend to have few distinctive features of the kind that enables differentiation. Holes, for instance, are immaterial. Their surface cannot be decorated or their metal composition analysed. They can only be classified based on a small number of typological elements, including form and size. The same is true, to some extent, for all the means of suspension, which are very simple devices compared to full-size ornaments. From one point of view, this may be seen as an advantage. There are few variables that need to be taken into account to categorise

rise the means of suspension. In reality, this tends to undermine the categorisation process, as the categories are founded on too few distinctive features. Furthermore, this physical simplicity can pose problems of interpretation. The fewer the distinctive features, the more difficult the identification of places and dates of production. As pointed out by Mats P. Malmer (1963:23), one or two similar features may be due to coincidence.

Secondly, the means of suspension are often crudely manufactured, with little attention to detail. Some damage associated with production can even be observed, such as material deformation or surface mutilation (Fig.4.1). This lack of thoroughness is easy to explain. The means of suspension are very small devices. Loops normally measure less than 1cm in length and 3–4mm in width. It means that their manufacture and decoration required meticulous work while the details on them were hardly visible to the eye. The production of well-finished and fine quality loops was probably not a priority. For this reason, many means of suspension have irregular forms and decoration, making them more difficult to characterise.

Despite these difficulties, it is possible to sort the means used for suspending Viking-Age coins into a number of groups based on perceived similarities and differences. The boundaries between these groups are sometimes hardly discernible, but much effort has been made to define them so as to reduce to a minimum the number of ambiguous cases. Following Leo Klejn (1982), types are regarded in this study as ideal-images toward which particular items gravitate. There are no sharp borders between the different types of suspensions, even by using what Malmer calls ‘logically correct verbal definitions’ (Malmer, M. 1963:19). The homemade character of the coin-pendants probably accentuates the blurriness of the borders.



Fig.4.1. Loop with edge that has been damaged by one of the two rivets (Cat.I:90; photograph by the author). Scale 6:1.

In this chapter, we are not so much concerned with determining whether the similarities and differences between types of suspension were regarded as significant by their makers and/or users. What matters is to identify types and techniques that can serve as a guide to understanding where and when the coins were turned into pendants. The potential of this approach has been clearly demonstrated by Blackburn (2006), as he was able to assign the Hoen loops to different periods and areas (see above).

The following analysis is based on data collected through research visits in Scandinavian coin cabinets and in Swedish museums. A small sample of looped coins was also borrowed from the coin cabinet at Stockholm for microscopic examination at the Archaeological Research Laboratory, Stockholm University. This study was undertaken with the help of Maria Wojnar-Johansson.

4.2. Towards a typology of the means of suspension

In Viking-Age Scandinavia, five main methods for suspending coins can be distinguished (Fig.4.2), from a simple piercing to the addition of a frame or mount:

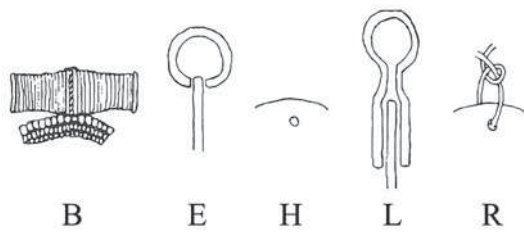


Fig.4.2. Methods used for suspending coins in the Viking Age (adapted from Blackburn 2006).

- Biconical mount (B)
- Edge-mounted loop (E)
- Hole (H)
- 'Sandwiched' loop (L)
- Ring (R)

These different methods are evident to very different extents. Setting coins is almost never used in the Viking Age. It almost only occurs in the Hoen hoard. The rim-mounted loops are not the norm either, but they appear occasionally. Coins with 'sandwiched' loops and coins with rings form larger groups of material. They account for eight per cent and two per cent respectively of all the coin-pendants. The most frequent method for suspending coins is to pierce them. More than 90 per cent of the Viking-Age coin-pendants are provided with a hole.

Settings, rings, loops and holes have all been classified using the same typology, which is based on the following categories of typological elements: shape, decoration and techniques. It should be noted that all these categories are not necessarily relevant to the study of each group. The material used to create the means of suspension has been taken into account, but does not appear in the type definition. It is only when the means of suspension is not made from silver that this information is provided on the side. The size of the means of suspension can vary significantly from one specimen to another, especially in the case of holes and rings. This feature is not included here, because it does not seem to be typologically significant.

4.2.1. Biconical mounts

The biconical or barrel mounts (Fig.4.2, B) are constructed from 'two hollow cones of coiled wire joined at their wider ends' (Blackburn 2006:187). They are normally attached to an elaborate filigree border in which the coin is fixed. Mounts of this type are very unusual in Viking-Age contexts. Few examples are known, only one of which is a Viking-Age product (see App.I:4). The filigree borders used in conjunction with biconical mounts are regularly found on other types of coin jewellery, especially coin-brooches.

4.2.2. Edge-mounted loops

The edge-mounted loops (Fig.4.2, E), which consist of an annular band of metal whose two ends meet the coin at a right angle, are only represented by a few examples in the present material (e.g. Cat.I:126). These loops are typical of the Migration period (Blackburn 2006:184), but their combination with Viking-Age coins clearly shows that they were also produced sporadically at that time.

4.2.3. Holes

Holes (Fig.4.2, H) are typologically less distinct than the other types of suspension. They are too simple to tell much. Moreover, they tend to lack uniformity. Many of them have shapes and dimensions deviating from the ideal types, which makes the boundaries between the different groups particularly difficult to discern. In the present study, only their form has been considered as a meaningful criterion.

Type

1. Rounded hole
2. Three-sided hole
3. Four-sided hole
4. Other shapes

In the Viking Age, holes are occasionally used to suspend pendants adapted from foreign and local pieces of metalwork. However, they occur rarely on pendants produced in Scandinavian workshops (see Callmer 1989), thus suggesting that they were not the preferred means of suspension. The problem with holes is that they do not allow the pendants to hang properly. If the cord is inserted directly into the hole, then the pendant will never stop turning around. One solution is to pierce the pendant twice, so that it is maintained straight. This solution was sometimes adopted by those making coin-pendants (see below).

4.2.4. Sandwiched loops

The Viking-Age sandwiched loops (Fig.4.2, L) show considerable diversity. Their classification thus involves taking into account many different variables and to rank them. Sandwiched loops are differentiated primarily on the basis of the fixing method. They are then subdivided into classes based on decoration and form. Some of these classes include one or several variants.

Type

- r. Riveted loop
- s. Soldered loop

Class (Fig.4.3)

- 1. Undecorated
- 2. Parallel ribs covering both the upper and the lower part of the loop
 - a. Central groove flanked by two ribs
 - b. Between three and five ribs distributed over the surface
 - c. Very narrow ribs exceeding five in number
- 3. Parallel ribs covering only the upper part of the loop
- 4. Coin design
- 5. Other designs

Form (Fig.4.4)

- A. Rectangular lower part: at least two straight edges and one right angle

- B. Rounded or pointed lower part: at least two convex or angular edges

- C. Uneven lower part: at least two irregular edges

Almost all the loops attached to Viking-Age coins are so-called 'sandwiched' loops. This type of loop is formed from a folded band of metal whose ends overlap the edge of the coin on both sides. The part of the loop overlapping the coin has been called the 'lower part'.

As pointed out by Blackburn (2006:187), the 'sandwiched' loop is the standard mount used for coins in the Viking Age. It started to appear in Frisia and England in the seventh century. Some of these loops are made from coin fragments, as is indicated by the occasional presence of coin designs on their surface (Fig.4.5).

The overwhelming majority of the sandwiched loops are constructed from a single band of metal that has been folded and riveted to the coin. Soldering is rarely used for the attachment of sandwiched loops. This

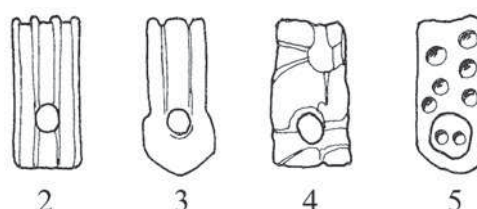


Fig.4.3. Classes of decoration: (2) ribs covering the length of the loop, (3) ribs covering the upper part of the loop, (4) coin designs, (5) other designs (adapted from Hammarberg et al. 1989).

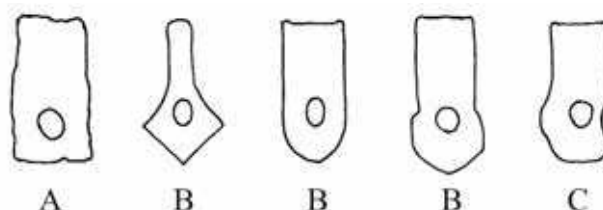


Fig.4.4. Variants of form: (A) rectangular lower part, (B) rounded or pointed lower part, (C) uneven lower part (adapted from Hammarberg et al. 1989).

method is largely confined to the Hoen hoard (Blackburn 2006:188–9) and a grave at Tuna (Cat.I:90). A number of loops are made from two bands of metal instead of one, but these loops can be difficult to identify, especially when the upper part of the loop is badly preserved.

Among the decorated loops, those bearing parallel ribs strongly predominate. Together, the loops of class 2 and class 3 account for more than 95 per cent of the decorated material. These two classes can, however, be easily distinguished. In class 3, the part of the loop overlapping the coin is undecorated. This portion was left flat to receive the rivet. In class 2, the part of the loop overlapping the coin is decorated, even though there can be a gap between the end of the loop and the end of the ribs (Fig.4.6). This positioning of the rivet on the ribs often causes their deformation.

The distinction between class 4 and class 1 is less firmly established, as there is no clear-cut boundary between the two categories. In some cases, the coin designs have been left untouched when the loop was prepared. They are still perfectly visible to the naked eye and can be viewed as a decoration. In other cases, the coin designs have been almost completely erased when the loop was prepared. Their identification results from a very close inspection of the loop's surface. In the absence of a clear-cut boundary, all the loops that could be identified as being coin fragments have been attributed to class 4.

Only the part of the loop overlapping the coin has been considered to assess form. The upper part of the loop, on the other hand, has been considered too problematic, because it tends to be irregularly shaped. Reasons for this irregularity include: wear damage, hammering to strengthen the loop and crude manufacture. Within class B, no distinction has been made between pointed ends and round-



Fig.4.5. Loop made from a coin fragment (Cat.I:40; photograph by the author). Scale 6:1.



Fig.4.6. Loop of class Lr2b with a small gap between the end of the loop and the end of the ribs (Cat.II:17; photograph by the author). Scale 6:1.

ed ends. These two shapes should be seen as two ends of a continuum (Fig.4.4).

In the Viking Age, sandwiched loops of this kind are used to suspend many other types of pendants, such as crosses, shield-shaped pendants or reused pieces of metalwork. A good example of this is grave 632 at Birka (Cat.I:65), where four pendants have a sandwiched loop attached: a Byzantine coin, a sieve-shaped pendant, an oriental mount

and a silver vessel fragment. The typology proposed here should cover the overwhelming majority of the sandwiched loops from the Viking Age.

4.2.5. Rings

The rings are the easiest type of suspension to categorise. Typologically speaking, they form a rather consistent group and the different types are clearly distinguishable. Rings can be inserted both into loops and into holes, but they are more frequently used in conjunction with the former.

Type (Fig.4.7)

1. Wire with loose ends
2. Wire with soldered ends
3. Wire with ends twisted together in a knot

Class (Fig.4.8)

- A. Plain wire
- B. Ribbed wire
- C. Intertwined wire

In the Viking Age, rings appear in a wide range of contexts. They are used to suspend different types of pendants, including crucifixes and Thor's hammers, but they can also fulfil many other functions. Particularly striking is the similarity between the rings of type 3A and some rings that have been interpreted as means of payment (Kilger 2008c:315–7).

4.2.6. Conclusion

Table 4.1 and Table 4.2 present the type distribution for the rings and sandwiched loops included in List 1. The other methods for suspending coins are not considered here. The edge-mounted loops and the biconical mounts are too few for detailed typological discussion. The pierced coins are too problematic, because it is often impossible to say whether the holes were originally intended to be directly used as the means of suspension or if they were in the process of being pre-

pared to receive a riveted loop.

A number of types clearly stand out here. The main types of sandwiched loops are the following: Lr1A, Lr1B, Lr2A, Lr3A and Lr3B. The question of whether form is always a relevant typological feature cannot really be settled here. This will become more evident as we discuss chronological and geographical variation. It can only be noted that the double looped coins are sometimes provided with loops of different forms. The main types of rings are the following: R1B, R2B and R3A. Type R3A predominates heavily, mainly because of its frequent association with coin-chains.

The number of means of suspension included in these tables exceeds the number of coin-pendants included in the catalogue as the same coin-pendant can be provided with several means of suspension. There are several ways to explain this phenomenon. Firstly, the addition of a ring requires that the coin is also pierced or looped. Secondly, several means of suspension can be combined to allow for a more elaborate or a more convenient display. Thirdly, the same coin can be adapted in various ways throughout its life. The presence of several means of suspension is indicated with

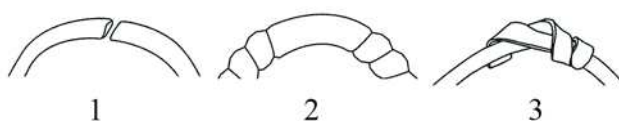


Fig.4.7. Types of ends: (1) loose ends, (2) soldered ends, (3) ends twisted together in a knot (drawing: Romain Mougenot).

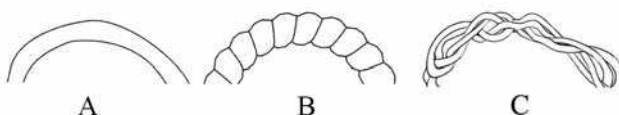


Fig.4.8. Classes of wire: (A) plain wire, (B) ribbed wire, (C) intertwined wire (drawing: Romain Mougenot).

Table 4.1 & 4.2. Distribution of sandwiched loops and rings according to types (source List 1)

Loops (L)		Form A	Form B	Form C	Total	Rings (R)		Class A	Class B	Class C	Total
Riveted (r)	Class 1	63	39	2	104	Type 1	6	10	0	16	
	Class 2	52	9	0	61	Type 2	0	13	0	13	
	Class 3	40	50	2	92	Type 3	51	3	2	56	
	Class 4	1	3	0	4	Total	57	26	2	85	
	Class 5	3	3	2	8						
Soldered (s)	Class 1	2	1	0	3						
	Class 2	7	1	0	8						
	Class 3	0	1	0	1						
Total		168	107	6	281						

using the sign '+'. In the case of double perforations, the type denomination is preceded by the letter 'd'.

4.3. Transformation as a production process

Basic understanding of the production process is essential for determining when and where the coins were turned into pendants. What were the materials, tools and techniques required and how were they available in Viking-Age Scandinavia? Special attention must also be paid to the level of complexity involved in producing the coin-pendants and to the level of quality achieved, so as to get a clearer idea of who was transforming the coins.

4.3.1. Holes

In the Viking Age, most of the coins with holes seem to have been pierced in the same way. First, the coin was laid flat, preferably on a soft support (Gustaf Trotzig, pers. comm.). If one side was meant to be displayed over the other, this side had to be placed face up, so that the design could be oriented correctly. Then, the coin was punched with a pointed tool, causing a small portion of metal to be pressed out on the back side. The resulting hole conformed to the shape of the tool used

for the punching. It is worth noting that this method for making holes has no influence on the weight of the coins. There is no loss of material.

The number of operations required to make the hole could differ depending on the thickness of the coin, but also on aesthetic and practical concerns. When the hole was punched in one operation, all the metal was pressed out on one side of the coin, thus forming a prominent rim (Fig.4.9). Of course, this rim could be flattened with a hammer, but there still remains an irregular corona around the hole. On the other hand, when the hole was made from both sides by flipping the coin one or several times, the metal was more evenly pressed out. Normally, this resulted in two very small rims around the hole, one on each side of the coin.

It is easy to identify which side was considered the front one when the coin was pierced in a single operation. The side with the rim around the hole is the side that was out of sight at the time of piercing. It was not meant to be correctly oriented and probably not to be displayed. When the hole was punched from both sides, it is more difficult to interpret the evidence of the rim. The side with the most prominent rim is not necessarily the side that was hidden at the time of piercing. It all depends on how the piercing operation was executed. A good example of this is provided by an

English coin from grave 2 at Backa (Cat.I:22). In this case, the hole is placed perfectly in the axis of the cross, but the rim suggests that the coin was pierced from the other side, despite a clear lack of interest in the portrait design. This would indicate that the hole was started from the side bearing the cross and finished from the other side. To investigate orientation, it is therefore necessary to rely on both the technical and the iconographic evidence.

The differences in form between the various types of holes can mostly be ascribed to the tools used to pierce the coins. Rounded holes were made using a circular punch while three-sided holes were made using the point of a knife (Talvio 2000:983). The tool with which the multi-angled and irregular holes were made is harder to identify. Depending on the case, these particular shapes can be the result of different factors, such as wear or misproduction. Some holes, especially those with a rectangular shape, seem to have been made using a cutting punch instead of a pointed punch.

Sometimes, the coins have been prepared before being pierced, with the creation of a small projection along the edge (Fig.4.10). The point was probably to provide a larger and thinner area for piercing (Moesgaard MS), but also to create an aesthetic effect. This modification was either made by chipping the coin around the projection, by flattening the coin at the level of the projection or by a combination of both methods.²³

Piercing a coin is a very simple process. There is no need for special equipment. All it takes is a pointed tool like a punch or a knife and a beating tool like a hammer. These tools are frequently found in Viking-Age graves, showing that they were easily accessible at



Fig.4.9. Hole surrounded by a prominent rim (Cat.I:18; photograph by the author). Scale 6:1.



Fig.4.10. Coin with a projection along the edge (SF 22; photograph by the author). Scale 1.5:1.



Fig.4.11. Small band of metal found at the Sigtuna mint (SF; photograph by the author). Scale 3:1.

the time. There is no need for special skills either, even if the degree of know-how does influence the neatness of the hole. The only technical difficulty is to locate the hole the correct distance from the edge of the coin to achieve a balance between solidity and aesthetics. From this, it can be assumed that piercing a coin was within almost everyone's reach.

Given the high number of badly executed holes, it is also clear that this operation was not normally undertaken by metal specialists. In many cases, the hole is unfinished, or was

²³ There are also many cases where the projection along the edge seems to be due to use wear, the hard beads placed on each side of the coins creating these two depressions around the means of suspension.

placed so close to the edge that it broke or was shaped irregularly. This low quality of craftsmanship supports the hypothesis that the pierced coins were homemade pendants, produced in a very decentralised way.

4.3.2. *Loops*

Even if loops show a greater diversity in terms of manufacturing methods, they all require the same basic element, i.e. a band of metal. This element exists in different materials, but silver predominates.²⁴ Bands of metal are normally cut from thin, flat metal pieces, which can be obtained in two ways: either by producing sheet metal parts or by reusing existing thin metal objects.

Sheet metal is one of the most fundamental forms used in metalworking and was certainly known throughout Scandinavia in the Viking Age. The method available at the time was ‘hammering accompanied by regular annealing, gradually stretching and spreading the metal to a suitable gauge’ (Gustafsson 2013:57). That some of the bands of metal attached to coins were directly fabricated from metal sheet is difficult to prove. There is some evidence of band production in Scandinavian metal workshops, where we may assume that the band of metal was produced ‘from scratch’ (Fig.4.11), but it is impossible to know whether or not these bands were intended for coin-pendants.

The easiest way to obtain a band of metal was to cut it from a thin, flat metal object, one obvious candidate being coins. In total, twelve examples of coin fragments reused as loops have been identified in this study (see Ch.7.1.1), but it is likely that many other loops were made in the same way. They are just harder to identify because their designs were completely erased. Coins seem to have

been frequently used as raw material for the production of other objects. This can be illustrated by some of the crosses found in the Birka cemeteries, whose diameters and shapes conform to that of Islamic coins (cf. Arbman 1940). It is striking that a similar cross found in Russia still has coin designs visible on its surface (Staecker 1999:96). Of course, not all the metal bands were made from cut coins, as attested by the existence of loops made from copper and gold or by the existence of thick silver loops.

Some of the thickest loops of class Lr3 have a rounded shape, which suggests that they were produced differently. Instead of being cut from flat metal pieces, they were formed from a silver rod, the ends of which were flattened to receive the rivet. In Viking-Age Scandinavia, silver rods of this kind seem to have been easily accessible. They occur frequently in hoards as hack silver (see e.g. Hårdh 1976:92). It is clear, though, that their reworking into loops was more complicated than that of bands of metal, as it involved hammering.

Loop decoration is particularly difficult to study. It shows great diversity and often requires magnification to be interpreted accurately. Moreover, there is no perfect match between techniques of production and types of decoration. The same technique can be used to produce different types of decoration while the same type of decoration can be made using different techniques.

Ribbed decoration, similar to that found on loops of class Lr2 and Lr3, has been thoroughly discussed by Blackburn in the context of the Hoen hoard. According to him, three possible techniques can be considered for the production of ribbed loops: carving, chasing and swaging (Blackburn 2006:189–90; see also Coatsworth & Pinder 2002:118–25).²⁵

24 The fact that the copper loops were removed when the coin-pendants regained a currency role may partly explain why silver predominates.

25 Draw-swaging is also mentioned, but there is no evidence that this technique was known in early medieval Europe (Blackburn 2006:189).

Carving may be defined as the removal of material with a sharp tool. In the case of the Hoen loops, it would have been done with a grooved scraper the width of the strip. Chasing is a technique in which the design is impressed on the surface by use of a single-edged punch. To form the line, the metalworker repeatedly strikes the punch as it travels along the object. Swaging involves the use of dies with a ribbed design into which the loop is forced. Unlike chasing and carving, this technique would not leave longitudinal striations along the ribs and grooves.

Based on microscopic analysis of the traces of manufacture, Blackburn divides the Hoen loops into two groups (Blackburn 2006:189–90): flat-backed loops, which are interpreted as having been carved with a grooved tool, and corrugated loops, which are interpreted as having been swaged. One additional pendant, decorated with convergent grooves, is considered separately. In this case, the design appears to have been carved or chased individually using a simple pointed tool. It is important to note that no coins with corrugated loops attached seem to have been found in Scandinavia outside the Hoen hoard.

It is difficult to determine which of these methods was used when extending Blackburn's study to all the loops found in Scandinavia. Indeed, very few of them could be examined under a microscope. A looped German coin from the Saigs hoard displays possible evidence of chasing, with small cuts along the edge of the groove suggesting repeated punching (Fig.4.12). Some striations can be observed within the grooves of a loop from Mannegårde, but these traces are too faint to allow any conclusions to be drawn (Fig.4.13). The complete absence of striations on another loop from Mannegårde is consistent with the grooves having been swaged (Fig.4.14). This absence of striation characterises many of the ribbed loops that



Fig.4.12. Loop with cuts along the edge of the upper groove (SHM 20879; SEM picture: Maria Wojnar-Johansson, AFL). Mag: 16X.

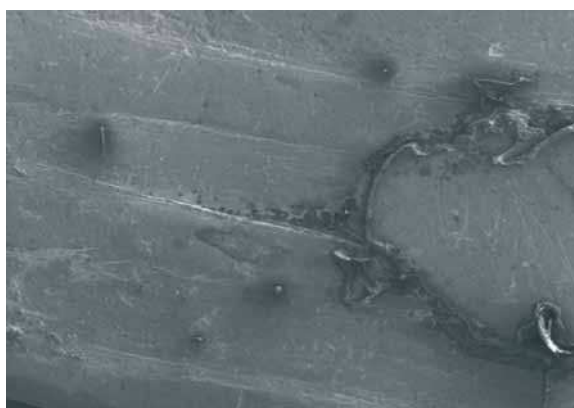


Fig.4.13. Loop with striations within the grooves (SHM 5814; SEM picture: Maria Wojnar-Johansson, AFL). Mag: 16X.



Fig.4.14. Loop with plain grooves (SHM 5814; SEM picture: Maria Wojnar-Johansson, AFL). Mag: 16X.

could be studied under a microscope.

Another possible method for producing ribbed loops, overlooked by Blackburn, is that of chisel-punching. This method involves the use of a chisel the length of the loop with

which the grooves are each punched in one movement onto the surface. The difficulty with chisel-punching is to position the ribs parallel to each other. Of course, this can be overcome by carefully spacing them, but it is more likely that this method was only used to produce loops with a single central groove.

Despite the patchy evidence, there are reasons to believe that the two most common techniques for decorating loops were swaging and chisel-punching. This hypothesis is supported by some of the features of the ribs, but also by what we know about metal-working tools in the Viking Age. No scraper of the type described by Blackburn is known from Scandinavia at that time. If this tool had commonly been used to produce ribbed loops, then we might expect it to be archaeologically attested. On the other hand, chisels were part of the basic equipment of the metalworker, as is illustrated by the presence of a specimen with a 4.7cm cutting edge in the Mästermyr find (Fig.4.15; Arwidsson & Berg 1983:16). It is interesting to note that chisels seem to have been used to cut coins into pieces (Jonsson, K. 2004:4–5). Very few patrices with a grooved design are documented, but at least one specimen has recently turned up in the Uppåkra excavations (Fig.4.16). Birgitta Hårdh proposes that this patrix was used to make loops (Hårdh 2010:292).

Two techniques were available to join together pieces of metal in the Viking Age: soldering and riveting. Both were used for the attachment of loops, though to different extents (see above). Soldering is a process in which the pieces of metal are joined together by using heat and a solder alloy. It requires special training and special skills, one difficulty being to properly heat the joints. In the Viking Age, this technique is often associated with the production of high-quality objects, such as filigree jewellery (see Duczko 1985:25–9). When done neatly, the soldered

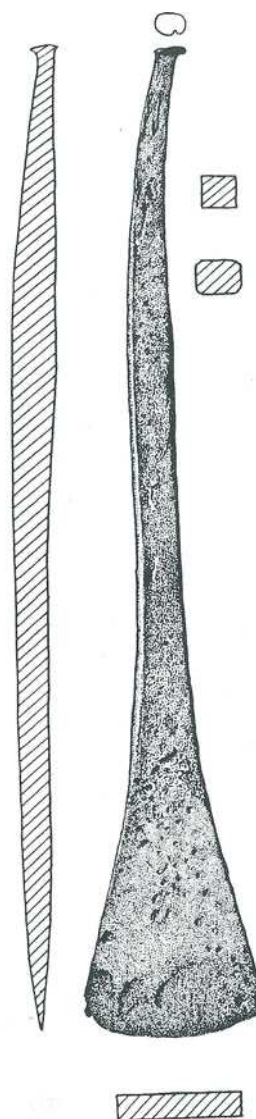


Fig.4.15. Chisel from Mästermyr (Arwidsson & Berg 1983; drawing: Janis Cirulis). Scale 1:2.



Fig.4.16. Patrix with groove design from Uppåkra (Hårdh 2010; photograph: Bengt Almgren, LUHM). Scale 1.5:1.

joints are hardly visible. Riveting involves the driving of a short bar into the pieces to be joined. The rivet is inserted into holes made for the purpose. Even though riveting is technically simpler than soldering (Trotzig

2014:230), its process is impossible without some craft skills. The main difficulty is to expand the rivet body evenly in all directions without twisting the bar. The choice of riveting is often regarded as technically motivated, but rivets can also have an aesthetic function.

The production of looped coins is more complicated than that of pierced coins. It requires tools, material, time and know-how, things that are not within everyone's reach. However, the methods used to make them vary considerably and range across a wide spectrum of complexity. Riveting a rectangular coin fragment is very different from soldering a corrugated loop made from metal sheet. The two procedures imply different levels of craftsmanship. The fact that some of the loops were not produced by highly-skilled specialists is supported by the existence of manufacturing mistakes.

4.3.3. *Rings*

The rings attached to Viking-Age coins are all formed from one or several pieces of round-section wire. What varies from one ring to another is the way the wire has been worked and shaped. In early medieval Europe, various methods of making round-section wire are known: hammering, block-twisting, strip-twisting, strip-drawing, folding, wire-drawing and smoothing (Whitfield 1990:13).

Several of these methods may well have been used in Viking-Age Scandinavia, but it seems that wire-drawing was the norm (Duczko 1985:22). This technique involves the use of a draw-plate, which is pierced by a series of holes of diminishing diameter. A draw-plate found at Staraja Ladoga, for instance, comprises 78 holes with diameters between 2mm and 0.2mm (Duczko 1985:17). The procedure is to draw a metal wire 'through a number of holes in succes-

sion, each one smaller than the last one, until the appropriate size is reached' (Whitfield 1990:22). Draw-plates are known from a variety of Viking-Age productive sites, such as Birka, Hedeby and Sigtuna (Stjerna 1998:85). Two examples were also found in the Mästermyr tool chest (Arwidsson & Berg 1983:15).

The wire attached to coins often shows traces of having been reworked after production. In some cases, the piece of plain wire was flattened at both ends by hammering, so as to facilitate knot tying. This technique is used, in particular, on many rings attached to coin-chains. In other cases, the wire was decorated with a row of small ribs. The production of ornamental wire – either ribbed or beaded – has been described by Wladyslaw Duczko in his study of the filigree and granulation work at Birka. According to him, a special tool called a 'beading file' was used by the craftsperson (Duczko 1985:19).

Clearly, the making of wire is technically demanding. It requires skills and equipment, which suggests a production by specialists. This interpretation is supported by the neatness of many of the rings attached to loops. The rings of type R1B, in particular, show a marked uniformity of quality, with well executed decoration and regular circular shape. This is not to say that all the rings are high-quality products. There are examples of wires that have been very crudely shaped and tied. The fact that rings are used to make many different objects (see above) also implies that they were produced by many different craftspeople.

4.4. Dating and locating the transformation

When it comes to spatial and temporal distribution, the different types of suspension cannot all be investigated in the same way. Some types of suspension, such as the rim-mounted loops, are only represented by

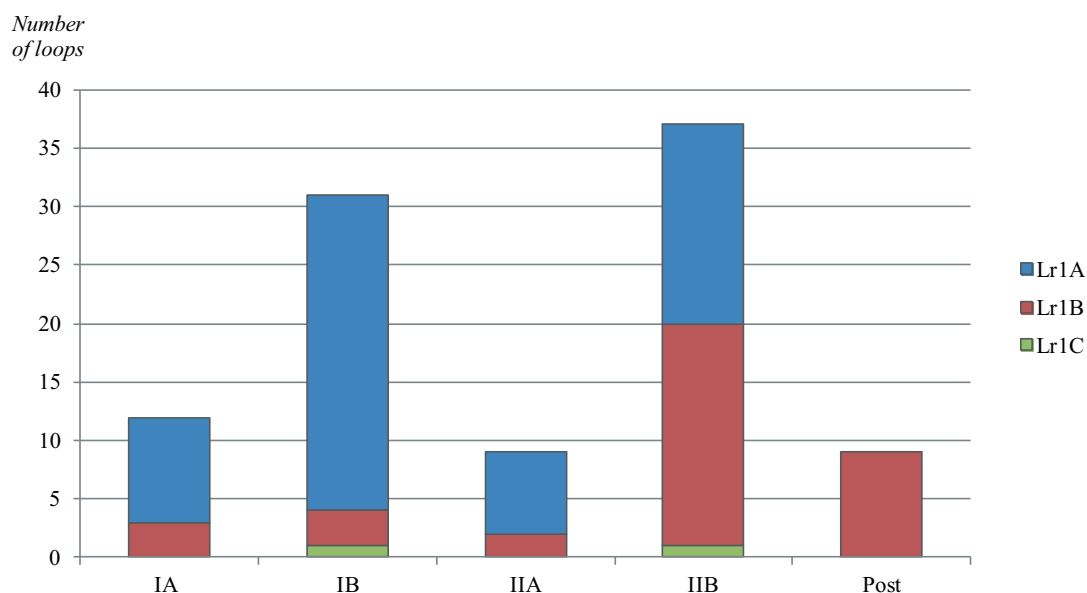


Fig.4.17. Chronological distribution of the loops of type Lr1 (source: List 1).

a few examples in the catalogues (Cat.I:126; Cat.II:49), meaning that the patterns emerging may be questionable. These small groups of coin-pendants will not be discussed here. Another problem is the strong eastern bias shown by the material (see Ch.2.3.3). Observing an eastern concentration for a type of suspension is not in itself the proof of an eastern production. It can also reflect the differences in archaeological coverage and preservation between the regions.

4.4.1. Round and other holes

Round holes are found everywhere in great numbers throughout the Viking Age. They cannot be attributed to a specific area or a specific period. This comes as no surprise given the simplicity of this type of suspension. Making three-sided holes has often been interpreted as a northern practice, showing close connections with the Sámi (Zachrisson, I. 1997:225). This interpretation is partly supported by grave 10 at Långön (Cat.I:125), where four of the five coins have been pierced with a knife. However, it should not be forgotten that the practice of making

three-sided holes is also common further south, as is illustrated by the hoard found at Kannikegærdet on Bornholm (Cat.II:3), with its seventeen coins pierced in this way.

4.4.2. Loops of type Lr1

As can be seen from Figure 4.17, the undecorated loops remained in use throughout the entire Viking Age, from Phase IA to Phase IIB. The earliest coin find with undecorated loops is from a grave at Tuna (Cat.I:90), which has been dated by Johan Callmer to the period 820–45 (Callmer 1977:168). It is not possible to determine exactly how much time passed between transformation and deposition of the nine coins, but the absence of coins issued after 784/5 suggests that the set was formed at an early date, probably even before 800. The latest coin with an undecorated loop catalogued here is a Danish coin issued during the reign of Sven Estridsen (App.II:10A), thus indicating that loops of this type were still produced towards the end of the Viking Age.

Two main groups of undecorated loops can be distinguished: those of type Lr1A, with a

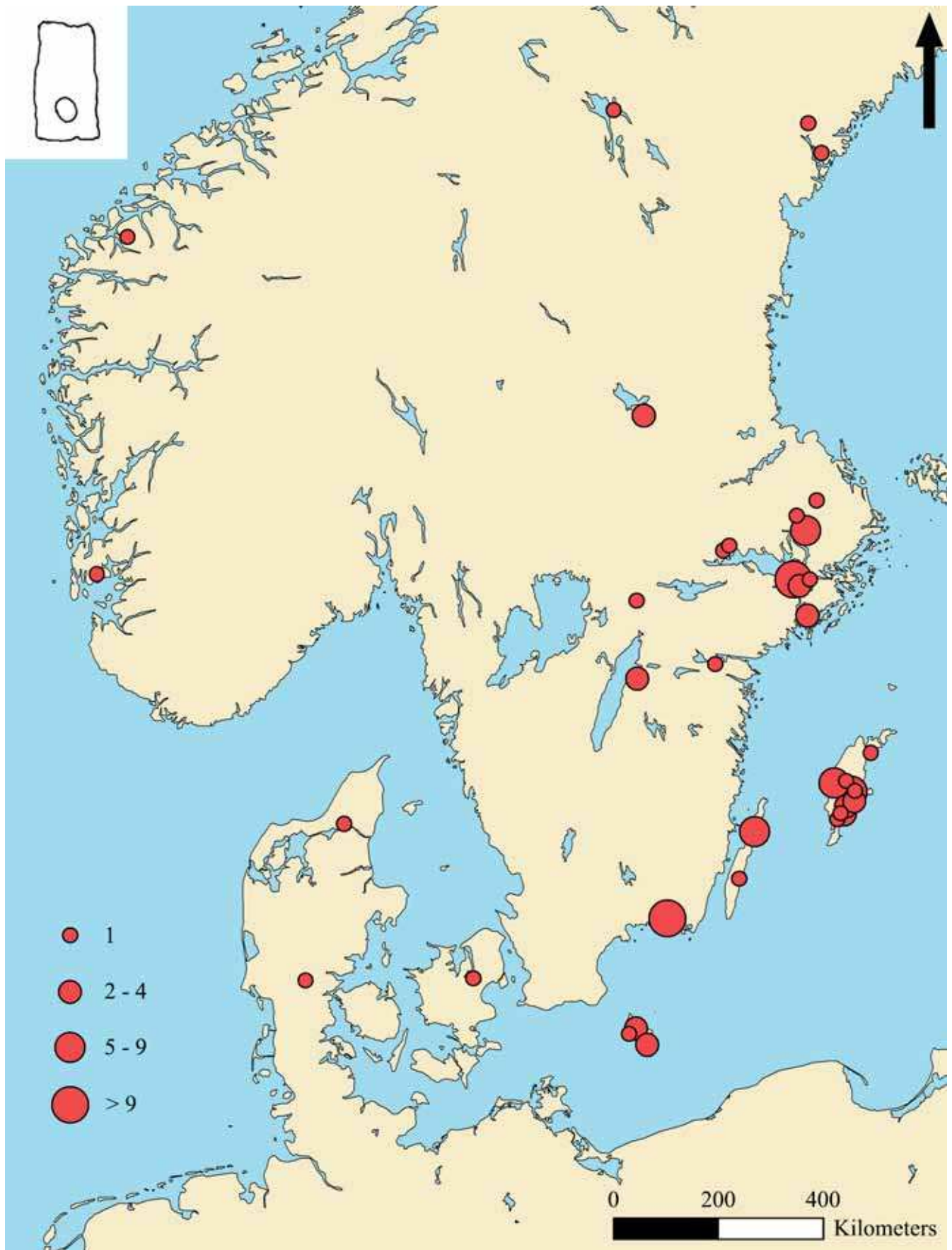


Fig.4.18. Geographical distribution of the loops of type Lr1 (source: List 1).

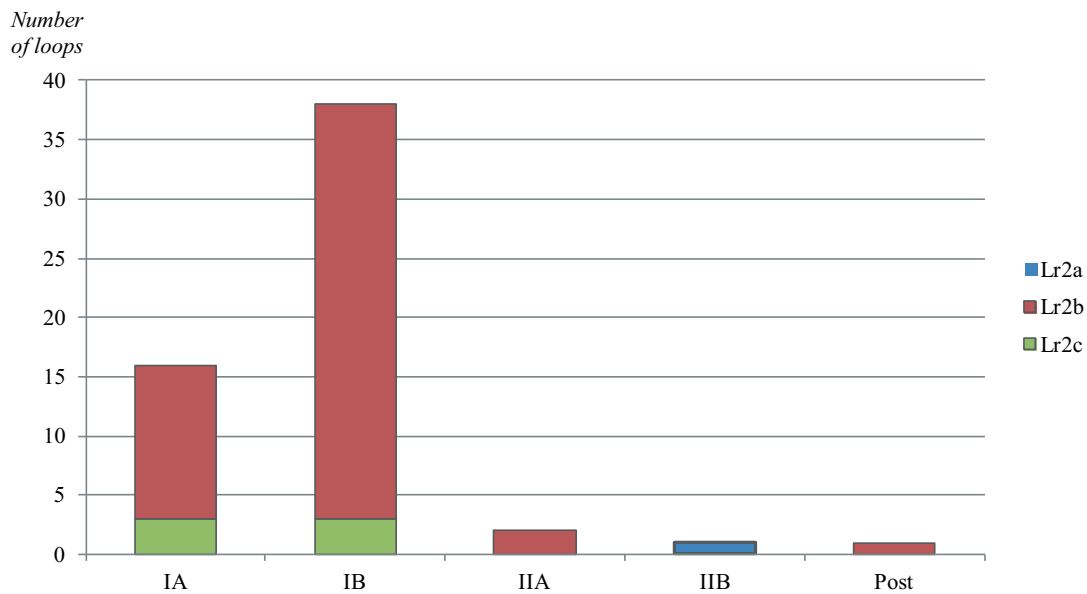


Fig.4.19. Chronological distribution of the loops of type Lr2 (source: List 1).

rectangular end, and those of type Lr1B, with a pointed or rounded end. Both types occur throughout the period, but in different proportions. The loops of type Lr1A seem to be more numerous in Phase I while those of type Lr1B seem to be more numerous in Phase II. Many of the undecorated loops of type Lr1B belong to coin-chains, the chronology of which will be further discussed below.

The undecorated loops are widely distributed in Scandinavia, being present from the northern province of Jämtland to the Danish mainland and from Gotland to the Norwegian coast (Fig.4.18). There are clusters of finds in Uppland and on Gotland, but nothing unusual considering the prominence of these two regions in our material. The wide distribution of the undecorated loops suggests that they were produced in many different locations. Their simplicity probably made widespread production possible.

4.4.3. Loops of type Lr2

Figure 4.19 shows the chronological distribution of the loops of type Lr2. With few exceptions, all the contexts in which they appear can be dated to Phase I. The earliest coin find with a loop of type Lr2 is the Långhalsen

hoard (Cat.II:66), which has a *tpq* of 862/3. Two graves may be slightly earlier (Cat.55, 67), as they have been dated by Callmer to the period 845–75 (Callmer 1977:165–8). The majority of the loops of type Lr2 occur in tenth-century contexts. For instance, six are from the Vårby hoard (App.I:9), probably deposited in the 940s (see Ch.10.2.1). The presence of several loops of this type in contexts ascribed to Phase II is not necessarily inconsistent with the idea that they were made in Phase I. In two cases (Cat.I:108; Cat.II:38), the coins to which the loops of class Lr2 are riveted are Islamic coins deposited shortly after the beginning of the eleventh century. It is therefore likely that their transformation had already taken place in the tenth century. In another case (App.II:5H), the loop belongs to a different variant, called Lr2a, which can be stylistically and contextually associated with later types of loops. There is probably no direct link between Lr2a and Lr2b. It is only in grave 3 at Silte that a loop of class Lr2b appears to have been produced after the end of Phase I, this loop being attached to a Byzantine coin issued after c.977 (Cat.I:37). Although there is no way to determine exactly when the coin was transformed, the coin-pen-



Fig.4.21. Cross-pendant from Birka grave 517 (SHM 34000; photograph: Christer Åhlin, SHM). Scale 1.5:1.

dant from Silte indicates that the production of loops of this type may have continued sporadically after the end of Phase I.

The vast majority of the loops of class Lr2 are concentrated in eastern Scandinavia (Fig.4.20). They are particularly numerous in the provinces of Uppland and Södermanland as well as on the island of Gotland. This concentration in eastern Scandinavia suggests that loops of type Lr2 were produced in the area. With its economy based on handicraft and trade (Ambrosiani 2008), Birka is one possible place of production. At Birka, about two-thirds of the classifiable loops attached to coins belong to type Lr2. This is also the

case of many of the loops attached to pendants such as crosses or shield-shaped pendants (Fig.4.21).

Another possibility is that some of the loops were made while the coins travelled between the Islamic world and Scandinavia. The loops of class Lr2 are very frequently found along the Varangian route, especially in Rus'. This can be exemplified by the Gnezdovo hoard, which contained a large collection of coin-pendants provided with such loops (see Durant et al. 2010). Despite this, there can be no doubt that at least some of the loops of class Lr2 found in Scandinavia were made locally, since a significant proportion of the coins to which they are attached are of Scandinavian origin (e.g. Cat.I:63, 73). A small-scale production in southern Scandinavia cannot be excluded either, especially in view of the fact that a possible patris was found at Uppåkra (see Ch.4.3.2).

4.4.4. Loops of type Lr3

The loops of type Lr3 can almost all be ascribed to Phase II (Fig.4.22). The only exceptions are two loops deriving from the Hoen hoard, both of which seem to belong

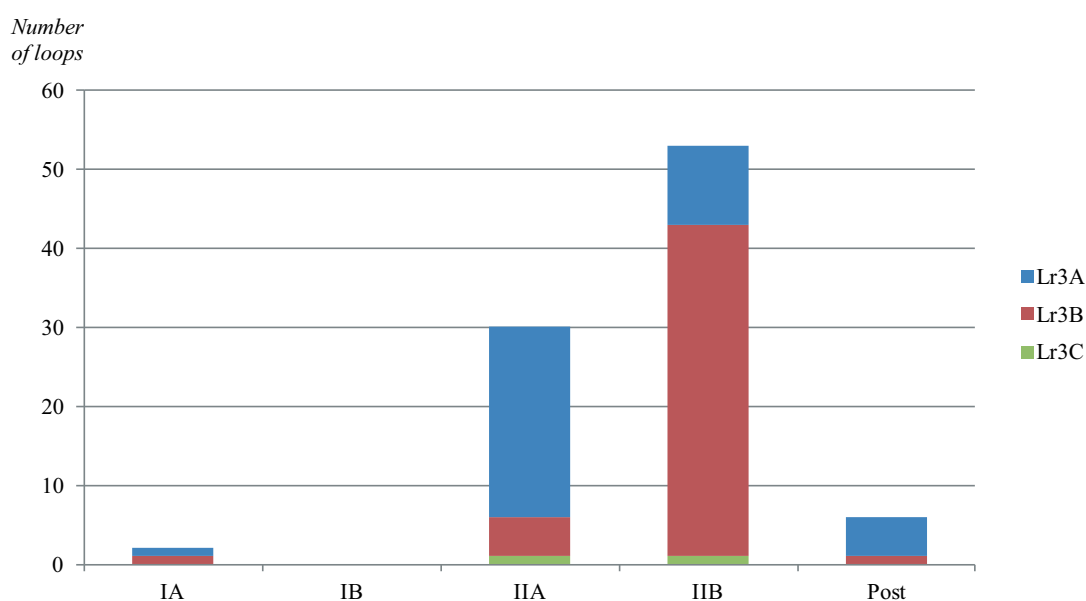


Fig.4.22. Chronological distribution of the loops of type Lr3 (source: List 1).

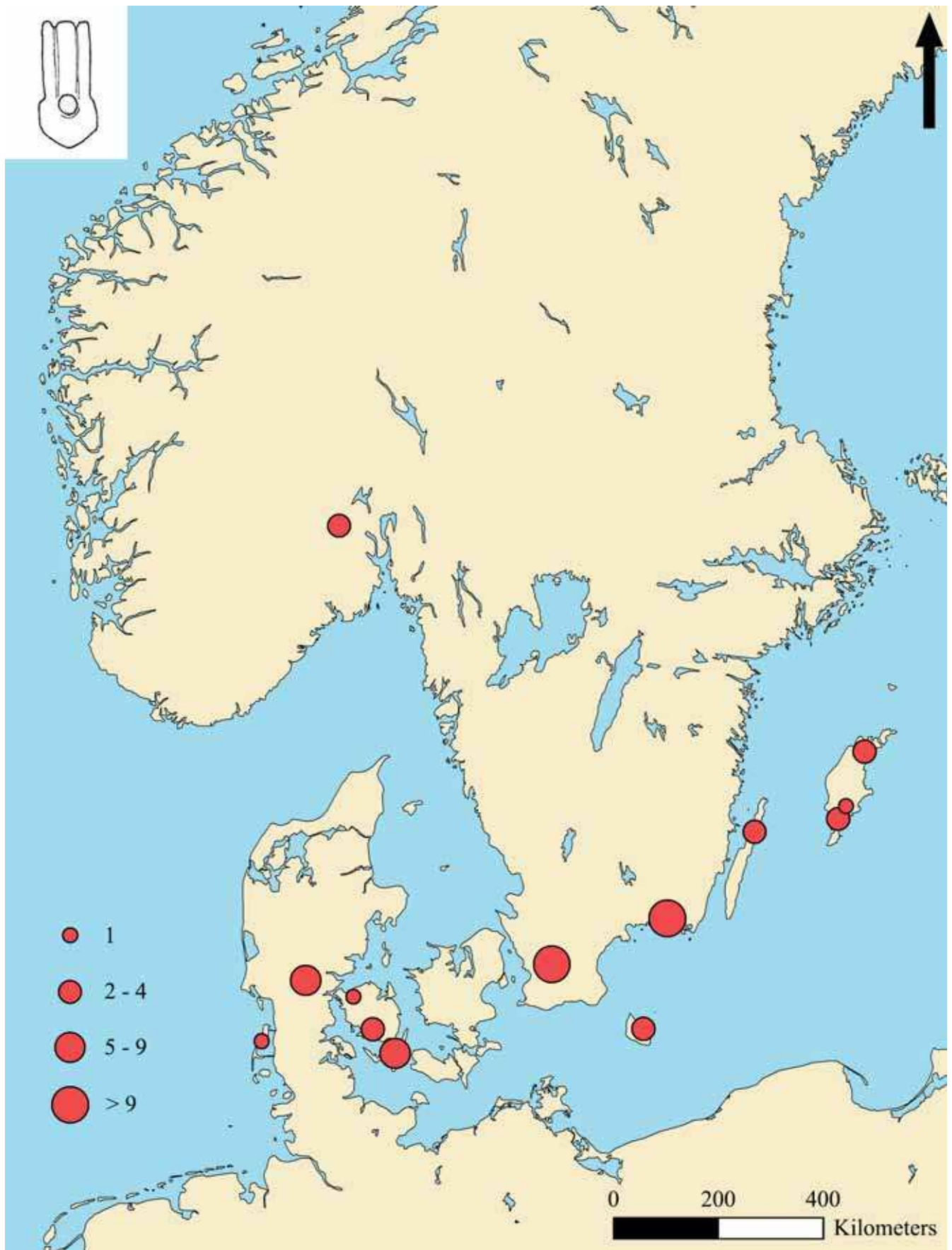


Fig.4.23. Geographical distribution of the loops of type Lr3 (source: List 1).

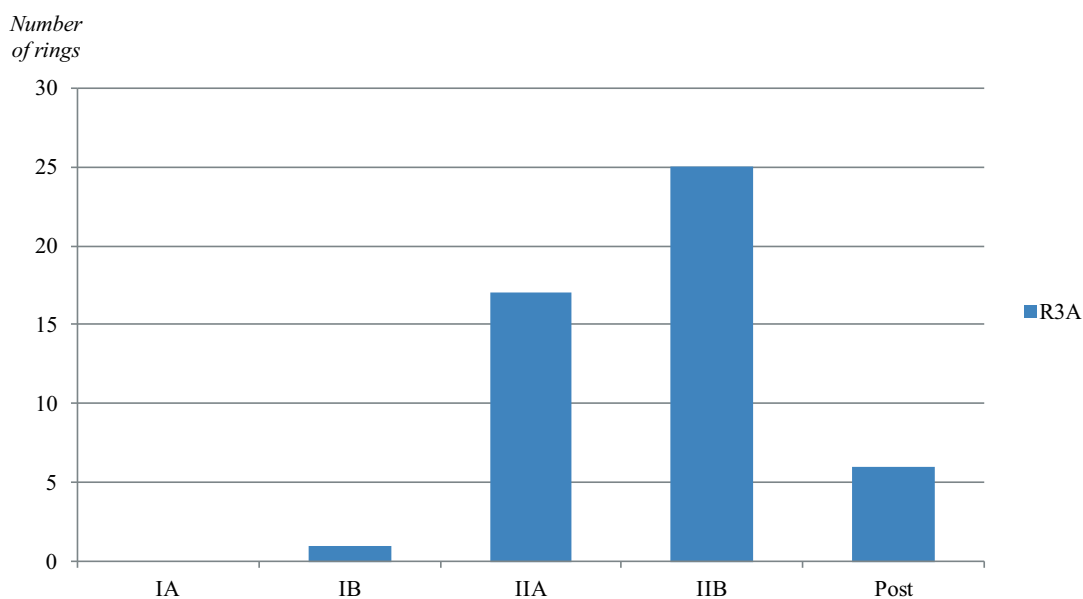


Fig.4.24. Chronological distribution of the rings of type R3A (source: List 1).

to a different tradition. Apart from Hoen, the earliest hoard containing a coin with a loop of type Lr3 is the List hoard, with a *tpq* of c.1000. This loop is attached to a miliaresion of Basil II and Constantine VIII issued during the period c.977–89, which dates the loop to the last quarter of the tenth century. Loops of type Lr3 remain rare until the second third of the eleventh century, when the fashion for coin-chains seems to emerge. Twenty loops of this type are attached to the coin-chain from Äspinge, produced sometime between c.1009 and c.1047 (App.II:9). The latest coin with a loop of type Lr3 listed here is a German coin of Bishop Reinhard issued between 1106 and 1123. This coin provides the *tpq* for the hoard, which means that its lifespan cannot be determined.

The overwhelming majority of the loops of Lr3 are concentrated in southern Scandinavia, in an area stretching from western Jutland to the province of Blekinge (Fig.4.23). Loops of this type also appear occasionally on Gotland, but they are almost completely unknown from mid-Sweden. This distribution, which contrasts markedly with that of the other loop types, suggests that the main

centre of production was in this case located in southern Scandinavia. The fact that a significant number of the coins equipped with loops of type Lr3 are Danish coins – about ten per cent – provides support for this hypothesis. It should be noted, though, that a Norwegian penny with loop of type Lr3 was found under the floor of the Mære church, in Norway (Skaare 1976:nr163). That this loop was both found in Norway and attached to a Norwegian coin suggests that production also existed outside the kingdom of Denmark.

4.4.5. Rings of type R3A

Figure 4.24 shows the chronological distribution of the rings of type R3A attached to coins. With few exceptions, all the contexts in which they appear can be ascribed to Phase II. The earliest hoard containing a ring of type R3A attached to a coin is the Lillsved hoard, whose *tpq* is 969/70 (Cat.II:65), but it was not until the second third of the eleventh century that the rings of type R3A became frequently used in combination with coins. The latest coin with a ring of type R3A is a German coin of Bishop Reinhard issued between 1106 and 1123 (App.II:2). This example shows that rings of

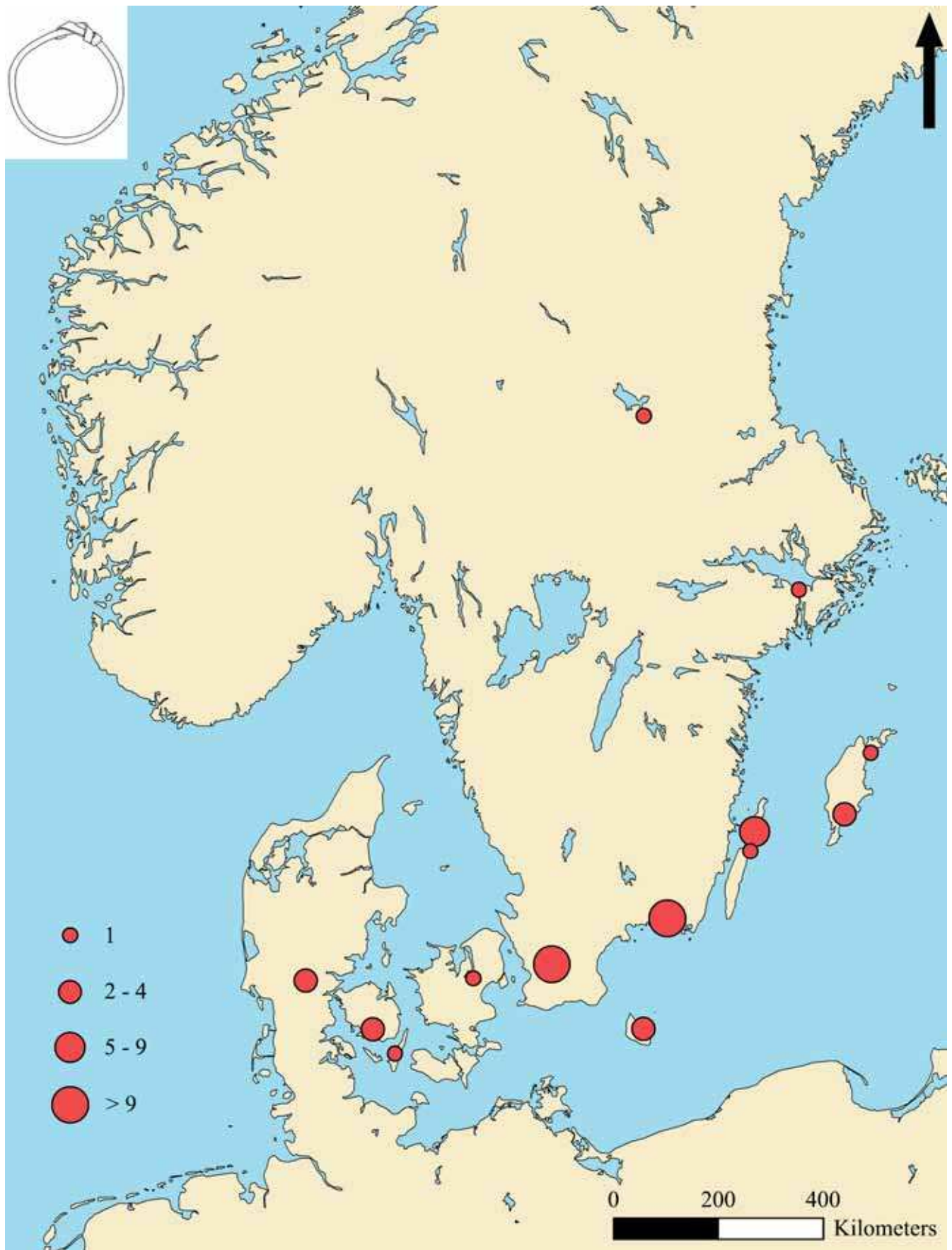


Fig.4.25. Geographical distribution of the rings of type R3A (source: List 1).

type R3A were still combined with coins in the first decades of the twelfth century.

The coin-pendants with rings of type R3A are found predominantly in southern Scandinavia, especially in the provinces of Skåne and Sjælland (Fig.4.25). Such a southern concentration may indicate that many of the coin-pendants with rings of type R3A were produced in the area. Taken individually, however, it is clear that this ring type was produced elsewhere in Scandinavia. Rings of type R3A – not attached to coins – are known, for instance, from some of the Birka graves (Arbman 1940:Taf.83) and from some Gotlandic hoards (e.g. Cat.II:54). Also interesting is the fact that the Lillsved coin-pendant (Cat.II:65) combines a ring of type R3A with a loop of type Lr2bA, the production of which seems to be primarily concentrated in eastern Scandinavia. Given that the coin-pendant itself was found in eastern Scandinavia, the ring attached to it is likely to have been added in this area as well.

A significant proportion of the rings of type R3A are combined with loops of type Lr3. This combination, which is particularly common on coin-chains found in southern Scandinavia, might be connected with the Lund mint. Indeed, a coin-like pendant

bearing the name of Lund is equipped with the combination Lr3/R3A (Galster 1950:47). This coin-like pendant was probably made by the moneyers working at Lund, as they seem to have been concurrently involved in jewellery production (see Jensen 1995a, 1995b). Is it possible that the Lund moneyers made coin-pendants as well?

When we put these various pieces together, an interesting pattern emerges: the more complex the type of suspension and its production process, the more localised the geographical and the chronological distribution. The contrast is particularly obvious when comparing coins with holes of type H1 and the two types of riveted loops with ribs. The former type of suspension, with its home-made character, is found throughout Scandinavia and throughout the Viking period. There is no special pattern of distribution. The latter types of suspension, which require material and skills, are found concentrated in certain regions and at certain times. This pattern may indicate the existence of workshops where the more complex types of coin-pendants were produced. This also implies that there existed different social contexts for the production of coin-pendants.

Chapter 5. Orientation

The matter of design orientation in the practice of wearing coins as pendants has been the subject of several recent investigations, essentially devoted to some particular coin groups, such as the English, Byzantine or Carolingian material (see e.g. Garipzanov 2008; Screen 2014; Audy 2016). It has also been discussed in connection with the Hoen hoard (Blackburn 2006) and the Birka cemeteries (Audy 2012), where a greater variety of coin groups are represented. Design orientation is probably the most studied aspect of the practice of coin reuse. These various studies have identified some patterns of orientation, thus showing that the coin designs were not orientated randomly. Despite this, there is still much to learn about the relationship between the coin designs and their owners. How were the designs perceived? Were they oriented for aesthetic reasons or for symbolic ones?

5.1. Methodological considerations

Determining the exact location of the means of suspension is rarely a problem, unless the coin-pendant is very badly preserved and/or heavily worn (e.g. Cat.I:21, 64, 109). This location in relation to the coin designs is expressed in degrees, so that a design displayed the right way up is described as being orientated at 0 degree and one displayed upside-down as being orientated at 180 degrees. The die axis of the coins, also traditionally expressed in degrees, is not explicitly specified here, but can be deduced from the design orientation of both sides of the coin.



Fig.5.1. Nordic coin of type KG3 with hole (Cat.I:63; photograph by the author). Scale 1.5:1.



Fig.5.2. Carolingian coin of Charlemagne with loop attached (Cat.I:55; photograph: Gabriel Hildebrand, SMH). Scale 1.5:1.

From a technical point of view, there is no difficulty in piercing a Viking-Age coin at a predetermined location. Viking-Age coins are flat and thin pieces of metal. They are almost all made of fine silver, a fairly soft material. Holes – including those required for riveting loops – are easy to make exactly where the point of the tool is placed²⁶ (see also Ch.4.3.1). The location of the suspension should thus be regarded as the result of a conscious action, even in the case of random placement. By studying the relation between the means of suspension and the coin designs,

²⁶ Experiments performed by the author with silver flans confirm that there is no technical difficulty in placing holes and loops.

it can be determined whether or not these designs were understood and which side of the coin was meant to be displayed.

Figure 5.1 shows one of the Nordic coins found in grave 526 at Birka (Cat.I:63). On this coin, the hole is located at 270 degrees in relation to the obverse design and at 0 degree in relation to the reverse design. This orientation leaves no doubt about which side of the coin was preferred. The coin was pierced so that the ship was orientated correctly, while the CAROLUS design was not meant to be displayed. Figure 5.2 shows a Carolingian coin found in grave 66 at Birka. On this coin, the hole is located at 120 degrees in relation to the obverse design and at 90 degrees in relation to the reverse design. This orientation suggests that neither the bust nor the temple were regarded as significant *per se*, as neither was displayed the right way up.

Not all designs, however, need to be orientated the right way up in order to be correctly displayed. Some designs, like equal-armed crosses and quatrefoils, are multi-symmetrical. They can be viewed in the same way from different angles. Others, like swords and hands can be viewed from any angle without their meaning being fundamentally changed. The existence of these ‘rotating’ designs makes it more difficult to run statistical analyses. Irregular angles in Catalogue I do not necessarily mean that the designs are not respected. This has to be assessed on a case by case basis.

Moreover, the inverted orientation of designs can be ambiguous in its interpretation. This orientation is not, as one might think, necessarily synonymous with a lack of interest or understanding. On the contrary, inverted designs have sometimes been interpreted as indicating a special relationship with the owner, the most notable example being that of the Wilton cross (Fig.1.3). According to Marion Archibald, the fact that the solidus in

the Wilton cross was mounted upside-down underlines ‘the idea that it was intended to be upright to the downward devotional contemplation of the wearer’ (Archibald 2013:61–2). Because it is impossible to know in advance whether or not the same applies in a Scandinavian context and to all types of designs, the inverted orientation has been provisionally considered incorrect, except in the case of Byzantine coins with stepped crosses, which seem to be very often displayed in this way (see Malmer, B. 1996:93).

Inscriptions present an even greater challenge. In theory, they should always be orientated in the same direction to be correctly displayed, with the text appearing horizontally and the right way up. In practice, we may wonder to what extent these conventions were known in Viking-Age Scandinavia, where the Latin and the Kufic alphabets could not be read – or at least were unintelligible to most people. Can we consider a text displayed upside-down or perpendicularly as wrongly orientated, as an attempt to apply vaguely familiar conventions or as an aesthetic concern? In accordance with the observations made by Mark Blackburn (2006:192–3), all the inscriptions with a vertical or horizontal alignment are temporally considered as correctly orientated.

Another difficulty relates to the interpretation of the means of suspension placed some degrees away from the design axis. Which point of deviation indicates that the owner of the pendant did not respond to the design? At what point does a design cease to be significant? Figure 5.3 shows three examples of coin-pendants with loops placed off-axis, at an angle of about 25 degrees from the normal viewing position. One is a Nordic coin decorated with a deer (Cat.I:57), one is an English coin decorated with a small cross (Cat.I:40) and one is an Anglo-Scandinavian coin decorated with a long cross (Cat.I:39).



Fig.5.3. Three coins with loops placed at an angle of c.25 degrees off-axis: one Nordic (Cat.I:57; photograph by the author), one English (Cat.I:40; photograph by the author) and one Anglo-Scandinavian (Cat.I:39; photograph: Gabriel Hildebrand, SMH). Scale 1:1.

Interestingly, deviation from the main axis is perceived very differently depending on the design. In the case of the deer and the small cross, the fact that the designs were displayed at an angle is hardly perceptible. There is no reason to think that this would have affected their meaning. In the case of the long cross, the fact that the design was displayed at an angle is more disturbing. The cross appears almost as an X or as a saltire. As these examples clearly demonstrate, the way deviation is perceived varies significantly depending on whether or not there is a clear axis of symmetry.

The interpretation of these off-axis placements is further complicated by the fact that some holes or loops may have been placed off-axis on purpose, so as to avoid hiding or damaging designs. A good example of this is provided by some Carolingian coins of the *Christiana Religio* type reused as pendants. In his study, Ildar Garipzanov (2008:72–80) makes the distinction between two groups of coin-pendants displaying the temple the right way up: those with the roof cross covered by a hole or loop and those with the roof cross left intact by placing the hole or loop some degrees off-axis. The desire to leave the roof cross intact is interpreted by Garipzanov as possibly revealing a Christian background (see Garipzanov 2008). Other examples of this kind seem to have occurred occasional-

ly among the Byzantine and English coins, but this special respect for coin designs is clearly an exception in the Viking Age (see Ch.5.3.3).

These different factors make it difficult to determine how much deviation from the design axis should be tolerated. Can a design orientated at an angle of fifteen degrees be regarded as correctly displayed? Elina Screen (2014) chose to accept a tolerance of up to twenty degrees clockwise or counter-clockwise, no matter the coin design. This means, for instance, that a small cross appearing at an angle of 25 degrees, like in Figure 5.3, would not be regarded as being respected despite the deviation being hardly perceptible. Given the differences in perception existing between the different coin designs, it seems unreasonable to apply the same tolerance to all of them. That is why two degrees of tolerance have been used in this chapter: a tolerance of fifteen degrees when the design has a clear axis of symmetry and a tolerance of 30 degrees when the design has no clear axis of symmetry. This solution is perhaps not ideal, but has the advantage of better reflecting the diversity of perceptions.

Finally, it should be noted that the die-axes of the coins reused as pendants play a very important role in determining which sides of the coin-pendants were meant to be displayed. Two types of die-axis can be distinguished: regular die-axes, with the two sides of the coin being coordinated; irregular die-axes, with the two sides of the coin being independent from each other. When it comes to understanding how the coin designs were orientated when suspended, regular die-axes are more difficult to interpret than irregular ones: with regular die-axes, it is impossible to orientate one side without also orientating the other. Byzantine coins have regular die-axes of either 0 or 180 degrees (Hammerberg et al. 1989:12). English (Harvey 2012:86–7) and

Nordic coins (Malmer, B. 1966:156–9) are also often coordinated, even if they show less consistency, with die-axes of either 0, 90, 180 or 270 degrees. Irregular die-axes predominate among almost all the other coin groups, including German, Islamic, Carolingian and Anglo-Scandinavian.

5.2. Orientation: an iconographical perspective

Understanding how the owners of Viking-Age coin-pendants responded to the coin designs requires answering two questions: what types of designs were orientated correctly and which sides of the coins were chosen for display? These two aspects of design orientation are correlated, but not perfectly so. A correctly-orientated design is not necessarily meant to be displayed when the two sides of the coins are coordinated.

For the purposes of this study, the coin designs have been grouped into five categories depending on the main decorative element appearing on them: ‘crosses’, ‘busts/human figures’, ‘inscriptions’, ‘buildings’ and ‘other pictorial images’.²⁷ Of course, many coins combine several of these elements in the same design, for instance when a cross is surrounded by a circular inscription, but only the central and/or dominant element has been used for dividing the groups. Moreover, there is much diversity within each of the design groups, with many decorative elements ranging from crudely depicted to more accurate.

²⁷ This division into five groups is based both on perceptual and numismatic factors. The groups ‘crosses’, ‘busts/human figures’, ‘inscriptions’ and ‘buildings’, which can easily be distinguished from each other, are the dominant coin designs of the time. The group ‘other pictorial images’, is less coherent than the four others. It is made up of unusual coin designs which show a tendency towards naturalistic representation.

5.2.1. Design orientation

Figure 5.4 and Figure 5.5 provide an overview of the differences in orientation existing among the five main types of design. Figure 5.4 focuses on the coins combining different types of designs on each side while Figure 5.5 focuses on the coins bearing the same type of design on both sides. These two figures are complementary, but their data need to be analysed separately. When coins combining different types of designs on each side respect only one side, it can be inferred that the non-orientated design was ignored for meaningful reasons. When coins bearing twice the same type of design respect only one of them, it is evident that the non-orientated design was not regarded as less significant than the orientated one. The non-orientated design should here be regarded as a null value.

As can be seen from Figure 5.4, there is much variation in orientation among the different types of designs found on Viking-Age coin-pendants. Indeed, the way designs are orientated depends much on what they feature. Only a small proportion of the designs bearing busts or buildings are displayed the right way up, respectively 22 and 29 per cent. Crosses, on the other hand, are predominantly respected, with 59 per cent of designs correctly orientated. Designs featuring inscriptions or pictorial images are those with the highest proportion of correct orientation, respectively 68 and 86 per cent.

A similar picture emerges from Fig. 5.5, even if the sample is too small here to be conclusive. Busts are again the least respected of all the designs. According to Figure 5.5, only a third of the coins bearing busts on both sides display at least one of the two sides correctly. Pictorial images, crosses and inscriptions, which were the most appreciated designs according to Figure 5.4, are also those with the highest proportions of correct orientation in Figure 5.5. Half of the coins

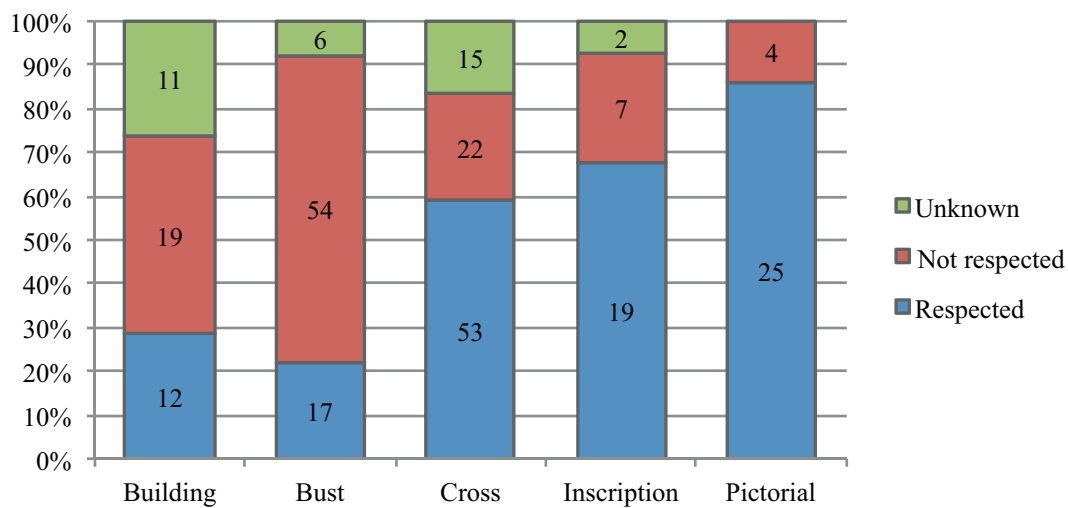


Fig.5.4. Orientation of the main types of designs on coins combining different designs on each side (source: Catalogue 1).

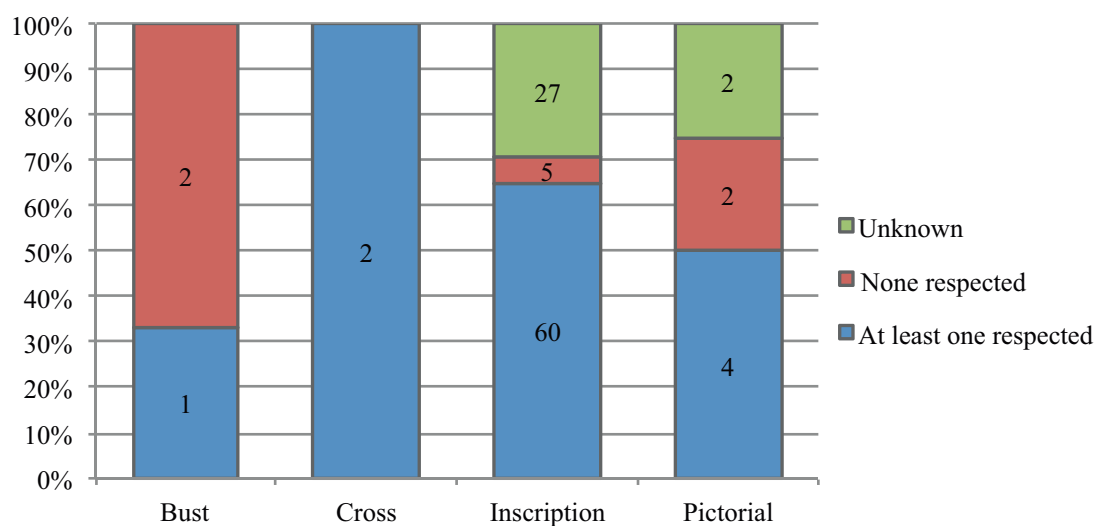


Fig.5.5. Orientation of the main types of designs on coins combining the same designs on both sides. None of the coins included here combines buildings on both sides (source: Catalogue 1).

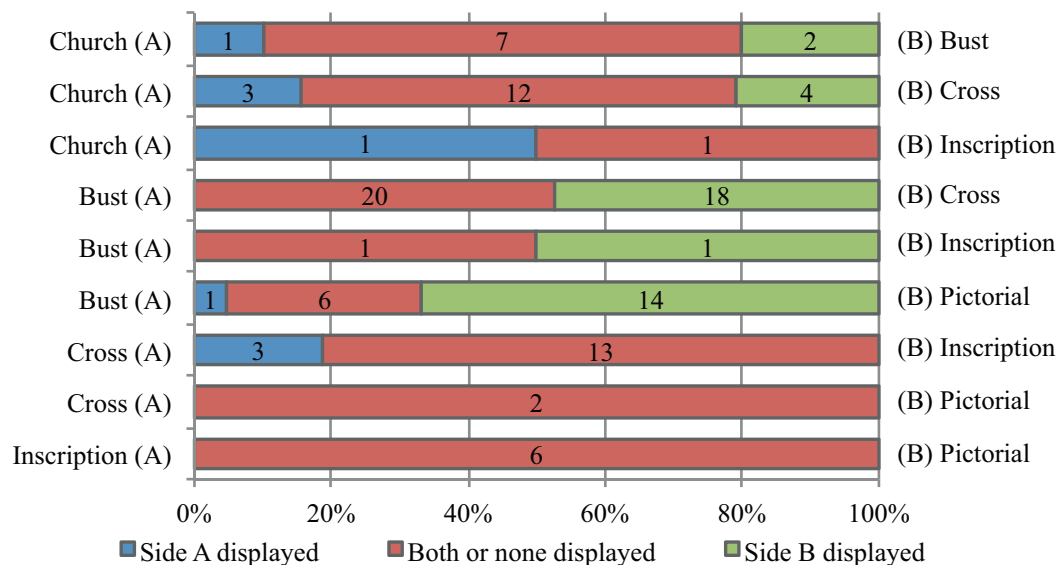


Fig.5.6. Orientation of the main types of designs in relation to each other (source: Catalogue 1).

combining two pictorial images, two-thirds of those combining two inscriptions and all of those combining two crosses orientate at least one of the sides.

The problem with this approach is that it ignores the numismatic constraints governing design orientation. As already pointed out, the fact that a design is often orientated correctly does not necessarily mean that it was intended to be displayed or that it had a special meaning. This correct orientation can be a side effect of a regular die axis. It can also be a side effect of the presence of ‘rotating’ designs. In other words, some of the design types identified above as engendering a positive response may be so because they appear on coin groups with certain features. For this reason, it is necessary to investigate how these different design types are combined. The idea is to determine their relative importance by ranking them from most to least preferred.

5.2.2. Ranking the coin designs

Figure 5.6 shows how the designs combined together on the same coin are orientated in

relation to each other. This figure provides further information on design orientation, but also a basis for determining which sides of the coins were chosen for display. When only one side of the coin is respected by the means of suspension, we can assume that this side was meant to be displayed. Some of the patterns observed here accord well with those observed above. Busts, in particular, seem to have played a very limited role. When a bust is combined with a cross without being coordinated, the cross is always preferred to the bust. When a bust is combined with a pictorial image, the bust is almost always ignored in favour of the pictorial image. Inscriptions, on the other hand, offer a different picture from that emerging above. Despite often being correctly orientated, they seem to be rarely preferred to the designs with which they are combined. This can be illustrated by a couple of striking examples from Catalogue I. In grave 557 at Birka (Cat.I:64), the Byzantine coin, which has a die axis of 30 degrees, is pierced exactly below the cross, while the Greek inscription on the reverse is suspended at an angle. In a disturbed grave from Tuna

(Cat.I:118), the German coin, which has a die axis of 240 degrees, is looped to display the equal-armed cross, while the Latin inscription on the reverse appears obliquely.

Determining which sides were preferred can also be done by using the evidence of wear. More precisely, the idea is to investigate differences in wear between the two sides of the coin, so as to identify which side was hidden. This method relies on the fact that the hidden side of the coin-pendant is constantly rubbed on the clothes when suspended, causing it to be more heavily worn than the other side. One problem with this type of evidence is that it cannot be used systematically. Wear depends on how long and how intensively the coins have been employed as pendants. A coin-pendant with a short lifespan is unlikely to present enough signs of wear to be accurately interpreted. Another problem is that wear is hard to measure objectively (Malmer, B. 1966:41). It needs to be assessed 'by eye'. Nevertheless, this method for determining the side chosen for display is the only one that can be applied to coins with coordinated die-axes.²⁸

An interesting example is provided by a Carolingian coin from grave 418 at Birka (Cat.I:60). This coin, which has two broken holes on the edge, was obviously used as a pendant for a very long time. As a consequence, there is a clear difference in wear between the two sides of the coin, the side with the temple being much more damaged than the other. This means that the equal-armed cross on the obverse was meant to be displayed, even though it was no longer orientated correctly at the time when the

third hole was made. Several other examples point in the same direction, supporting the observations made above regarding the preferred designs. The cross, for instance, tends to be better preserved than the bust (e.g. Cat.I:21–2, 38, 40) and the pictorial images to be better preserved than the human figures (e.g. Cat.I:75, 80–1). Some counterexamples can be found as well (e.g. Cat.I:37), but they are few in number.

All these results confirm that the coins reused as pendants during the Viking Age were orientated intentionally. Their orientation usually respected one of the two designs in some way. They also make it possible to establish a ranking of the different types of designs from most common to least frequently displayed. These preferences are only tendencies, though. There can be divergences at the individual level.

Busts are clearly the least appreciated of all the designs. They appear very frequently on the coins reused as pendants in Viking-Age Scandinavia, but they are very often ignored in favour of the other side. This lack of interest in busts represents a change from earlier periods, and especially from the Migration period, during which the imperial portrait seems to have 'played a special role in the Germanic symbolic language' (Bursche 2008:400). Screen (2014:369) notes a preference for busts in the early Viking Age, but there is little evidence of this outside the Hoen hoard (see e.g. Cat.I:4, 55, 95).

Buildings are not often meant to be displayed either. Only in a few cases are they preferred to the other side of the coin when the two designs are not coordinated. Most interestingly, there seems to be considerable diversity within this group. Among the buildings orientated correctly are, for instance, those appearing on the Nordic coins of type KG3 (Cat.I:67, 98), which depict a Scandinavian longhouse. This may indicate that the

²⁸ It may be possible to determine which sides of the coins were displayed by using the means of suspension as evidence, for instance when a loop is decorated on one side only or when a hole is surrounded by a prominent rim, but this method can be applied with confidence in just a few special cases (see e.g. Cat.I:81, 111).

various buildings appearing on coins were perceived and understood differently (see Ch.5.4.1).

As already pointed out by Blackburn (2006:192–3), inscriptions tend to be shown geometrically, i.e. either with a vertical or a horizontal alignment. However, there is a clear contrast between coins bearing inscriptions on both sides and those combining inscriptions with other designs. In the former case, the inscriptions were almost always orientated correctly and meant to be displayed. In the latter case, they were usually ignored in favour of the other side. This suggests that the inscriptions appearing on Viking-Age coins certainly played a role – at least an aesthetic one – but that they were less significant than most of the other designs.

Crosses play an important role in the Viking-Age practice of coin reuse. They are often displayed correctly and preferred to the other side of the coin. Moreover, the example of grave 418 at Birka (Cat.I:60) suggests that their display did not always require a correct orientation. They could be shown without being respected. This example raises the question of whether the designs in general needed to be correctly orientated to be significant. Some pictorial images, for instance, appear at an angle even if they obviously had a special meaning to most users (e.g. Cat.I:9, 75).

The group ‘other pictorial images’ is without doubt the most appreciated of all. Only few of these designs seem to have been ignored in favour of the other side. This directly echoes the observations made while studying the process of selection (Ch.3.3.4). As already pointed out, the coin groups with the highest transformation rates all bear distinctive designs that have a special resonance in the Viking Age.

5.3. Orientation: a practical perspective

How the coins were orientated depends largely on how the designs appearing on them were perceived and understood, but other practical factors can play a role as well: placement marks, graffiti and design integrity.

5.3.1. Placement marks

Occasionally, small elements of the coin designs were used as ‘placement marks’, the hole or loop being intentionally placed onto or within them. These design elements usually consist of letters from the outer circular inscription, as is illustrated by the penny of Æthelred II found in grave 49 at Bjurhovda (Fig.1; Cat.I:114). The hole made in this coin was carefully placed within the letter O of the word Deora, without regard to the Hand of God or the bust of the king. It seems that the motivation of the owner was practical rather than ornamental. The shape of the letter O was used as a frame for containing the hole. The fact that the Hand of God appearing on this coin can be read from any angle may explain why the individual turning the coin into a pendant needed a ‘placement mark’ to help her/him orientate the design.

Using letters as ‘placement marks’ was not the norm in the Viking Age. With the exception of the penny from grave 49 at Bjurhovda (Cat.I:114), and possibly a Carolingian denier from a grave at Salum (Cat.I:124), none of the coins included in Catalogue I are pierced or looped in this way. Other examples can be found in the literature, though. Screen (2014:366) identifies four English coins pierced through a letter such as an O or wynn (ƿ). Moesgaard (MS) also identifies a Carolingian coin pierced through the O of the obverse legend.

In addition to letters, some other design elements have sometimes served as ‘placement marks’ for the means of suspension. This

seems to be the case of the globule appearing beneath the cross crosslet of miliaresia of Constantine VII and Romanos II (Fig.5.7). Out of 22 miliaresia of this type known from Viking-Age Scandinavia, sixteen are pierced or looped onto or very close to the globule, thus displaying the cross upside down (Audy 2016:152). This use of the globule as a ‘placement mark’ would explain why so many miliaresia of Constantine VII and Romanos II are orientated at 180 degrees, while the orientation of the other Byzantine coins, which lack a globule or feature smaller ones, is more variable.

The occasional use of design elements as marks for placing the means of suspension is worth emphasising. It shows that the coin designs were not exclusively consigned to an ornamental or symbolic role. These designs could also have a practical function, providing visual focal points for placing the holes or the loops. This practical function of the coin designs illustrates further how varied the responses to coins can be.

5.3.2. *Graffiti*

The matter of orientation becomes even more complex when the reused coins are decorated with additional graffiti (Blackburn 2006:193). In this case, the question arises as to whether the coins are orientated to display their own designs or the scratches appearing on them. It is important to note, in this regard, that the graffiti scratched on coins are hardly visible to the naked eye. They could probably not be seen by anyone except by those having knowledge of their presence.

If we exclude nicks and other test marks, Viking-Age coins rarely bear graffiti. Coins with graffiti, the number of which is hard to estimate, probably represent less than one per cent of the Viking-Age numismatic material (Knirk 2006:178). A systematic study of about 34,000 coins at the Coin Cabinet in



Fig.5.7. Miliarsion of Constantine VII and Romanos II (Malmer, B. 1968; drawing: Brita Malmer). Not to scale.



Fig.5.8. Graffito representing two birds on a pierced coin from the Hemse hoard (SHM 23040; van der Meer & Lagerqvist 1960). Not to scale.

Stockholm by Inger Hammarberg and Gert Rispling (1985) has yielded a total of 1,173 coins with graffiti, making up 3.5 per cent of the total, but this study focuses almost exclusively on Oriental coins, a group greatly overrepresented when it comes to this practice (Hammarberg & Rispling 1985:64). Of the 254 coins listed in Catalogue I, only three bear obvious graffiti: one English penny (Cat.I:38) and two Islamic dirhams (Cat.I:34, 53).

Some Viking-Age finds are particularly rich in coins with graffiti. A good example of this is the Hoen hoard, in which graffiti occur on nine of the twenty coins (Knirk 2006). With one exception, these consist of simple patterns, such as V-shaped and X-shaped marks. One coin, though, bears a runic inscription interpreted as an inflected form of

the adjective *langr*, ‘long’ (Knirk 2006:175). Interestingly, none of the coins seem to have been orientated to display the graffiti correctly. In a few cases, the graffiti are symmetrical with the loops, but this is probably a side effect of the graffiti being aligned with the coin designs (Blackburn 2006:193).

Even though they are not the norm, correctly-orientated graffiti occur occasionally on the Viking-Age coin-pendants. In the Hemse hoard (SHM 23040), for instance, a penny of Æthelred II is orientated to display symmetrically the ‘facing bird’ graffiti appearing on the reverse of the coin (Fig.5.8). The bird depicted on the obverse, which is not exactly coordinated with the ‘facing bird’ graffiti, has clearly been ignored. Cross-shaped graffiti can also be respected in some cases, with the means of suspension being placed in the axis of one arm (Fig.5.9). These graffiti have been interpreted as having a religious function (Linder Welin 1956:150). Finally, there are examples of non-orientable graffiti, usually consisting of lines and simple patterns, made in relation to the means of suspension (Fig.5.9). These graffiti probably had some significance for the owner of the coin-pendants, but it is unclear what that could be.

It is difficult to determine whether or not the graffiti appearing on the coin-pendants catalogued here were meant to be displayed by their owners. They are either ambiguous or badly preserved. Moreover, the coin designs on which they are scratched seem to be respected in all cases, which may be explained in two ways: either the designs themselves were meant to be displayed or the designs were aligned with the graffiti meant to be displayed.

The circular graffiti scratched on the Umayyad dirham from grave 3 at Hålbý (Cat.I:53) looks like a compass rose or a circular dial. It can be viewed from any

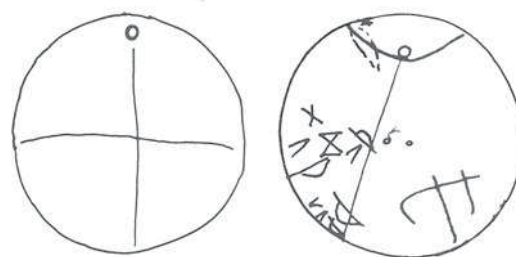


Fig.5.9. Graffiti on two pierced dirhams representing respectively a cross and various symbols (Hammarberg & Rispling 1985). Not to scale.

angle without its meaning being changed in any way. The rune-like graffiti appearing on both sides of the English coin from the Silte churchyard are not coordinated (Cat.I:38), meaning that they cannot be displayed the right way up at the same time. The patterns on the reverse, which are intended to accentuate the shape of the long cross, were respected probably because of their alignment with the cross itself. The graffiti occupying the obverse field of the Samanid dirham from the Hemse cemetery (Cat.I.34) is too damaged to be identified, which implies that its orientation cannot be assessed. Some other cuts appear close to the hole on both sides, but these marks should probably be related to the transformation process. Despite these difficulties of interpretation, the fact that the graffiti on coins could be meant to be displayed confirms that the coin designs were not all that mattered.

5.3.3. Design integrity

When turning a coin into a pendant, a choice often has to be made between orientating the design correctly and showing it in its entirety. Indeed, placing a means of suspension precisely in the axis of a coin design often involves covering parts of it. Long crosses, buildings and the like tend to extend very close to the edge of the coins, leaving too little space to insert a means of suspension in-between. This tension between design ori-

entation and design integrity provides further insight into the intentions of those owning coin-pendants.

Most frequently, those turning coins into pendants prefer to accurately orientate the coin designs rather than to keep them intact. They seem to be rarely concerned with maintaining their integrity. A good example of this is provided by the *Agnus Dei* penny from the Maidla hoard, Estonia (Fig.5.10; see Dolley & Talvio 1979; Keynes & Naismith 2011:nr13). Coins of this type seem to have been worn because of their distinctive designs (see Ch.3.3.4). They feature a Lamb of God and a Holy Dove, two symbols with a special resonance in a Christian and pre-Christian context. Despite this, the *Agnus Dei* penny from the Maidla hoard has been mounted with a suspension loop that covers both the head of the Lamb of God and that of the Holy Dove. It would have been easy for the owner of the coin-pendant to find a free space on either side without rotating the coin very much, but it was decided to give priority to design orientation over design integrity. This results in an unusual iconographic composition, with the coin-pendant featuring two headless figures. Interestingly, many of the *Agnus Dei* pennies reused as pendants follow the same pattern of transformation (see e.g. Keynes & Naismith 2011:nr.5, 21). In more than 50 per cent of the cases, the means of suspension partly cover either the Lamb of God, the Holy Dove or both of them. It seems that it was more important to show the design symmetrically than to show it in its entirety.

Parts of crosses can also be covered to some extent by the means of suspension. A case in point is the *Long Cross* design appearing on English and Anglo-Scandinavian pennies, the arms of which reach the edge of the flan. Out of twelve *Long Cross* pennies correctly orientated in Catalogue I, ten are displayed without any deviation (e.g. Cat.I:13–4, 22,



Fig.5.10. *Agnus Dei* penny with loop attached from the Maidla hoard, Estonia (SCBI 51:364; with permission from the British Academy). Scale 1.5:1.



Fig.5.11. Byzantine coin with loop found at Levanger (T 27165; photograph: Ruth Iren Øien, NTNU). Scale 1.5:1.

38), thus involving some damage to the cross.

The act of covering parts of long crosses has different implications than that of covering parts of pictorial designs. Because equal-armed crosses are multi-symmetrical, the mind of the viewer can easily restore the missing part. The loss of integrity does not necessarily involve a loss of meaning. However, there are cases where the cross is so damaged by the means of suspension that this may reflect a lack of knowledge or a lack of interest (Fig.5.11). Clearly, no effort was made to try to preserve the cross as much as possible.

Some of the secondary design elements covered by the means of suspension are also covered despite having a special resonance in a Viking-Age context. Examples include initial crosses (Cat.I:14, 60), fish (Cat.I:92) and masks (Cat.I:62), all of which may be ascribed

a symbolic significance (see e.g. Malmer, B. 2004). Also interesting is the case of the Anglo-Viking coin found in grave 963 at Birka (Cat.I:83). This coin, probably minted in the 920s, is decorated with an equal-armed cross on the obverse and a Thor's hammer below a sword on the reverse. Although being highly significant in Viking-Age Scandinavia, the Thor's hammer is partly hidden by the riveted loop. In this case, it is possible that the Thor's hammer was not recognised when the coin was turned into a pendant. It is also possible that it was hidden on purpose, but this appears less likely in view of the position of the loop on the edge of the image.

All these observations cast some doubt on the idea of intentional deviation suggested by Garipzanov, according to which some initial crosses on Carolingian coins would have been left intact because of their religious meaning. Usually, the owners of coin-pendants do not seem to have cared much about the integrity of the designs or about the secondary design elements, regardless of their significance. Even if many designs – especially those with crosses and pictures – had an important role to play, covering them partly was not really seen as a problem.

There are some exceptions, though. A few of the *Agnus Dei* pennies are pierced or looped so that the Lamb of God and the Holy Dove are displayed in their entirety. In this case, the means of suspension are placed at 45 degrees or so in relation to the designs (see e.g. Keynes & Naismith 2011:nr.4). The same happens with some Nordic coins bearing ships and deer. In the Spangereid grave (Cat.I:9), for instance, the means of suspension that can be studied have been attached at an angle in order to occupy one of the free spaces of the coins. These few exceptions seem to occur within coin groups featuring pictorial types.

It is striking here that those turning coins

into pendants and/or wearing coin-pendants are not interested in the design details or motivated by them. Important design elements could be covered or damaged without visible repercussions. Instead, what seems to matter is the general appearance of the coin-pendants, and especially the symmetrical display of the designs appearing on them.

5.4. Understanding variation

Despite the existence of overall trends, there is significant variation in how the coin designs are orientated in Viking-Age Scandinavia. The same designs can be displayed in many ways – the right way up, upside-down or at an angle – sometimes in one and the same grave (e.g. Cat.I:14, 125). In all likelihood, this variation can be partly ascribed to differences in understanding and meaning at the personal level, but several structural factors can also be identified.

5.5.1. Aesthetic and technical quality

Design orientation seems to depend significantly on the visual appearance of the coins, and more particularly on the quality with which the coins have been struck. A case in point is provided by the German coin group, which is the coin group represented in Catalogue I with the lowest quality of strike (see Table 3.2). Clearly, this coin group is less accurately orientated than the others, with about one-third of the examples being *not* orientated coins. This is partly due to the fact that many of the German coins bear busts or buildings, two types of design that were rarely respected. However, the fact that many of these designs are so weakly struck that they are hardly visible surely played a role as well.

Also important is the degree of naturalism conveyed by the different pictorial designs. The more accurate the rendering, the better

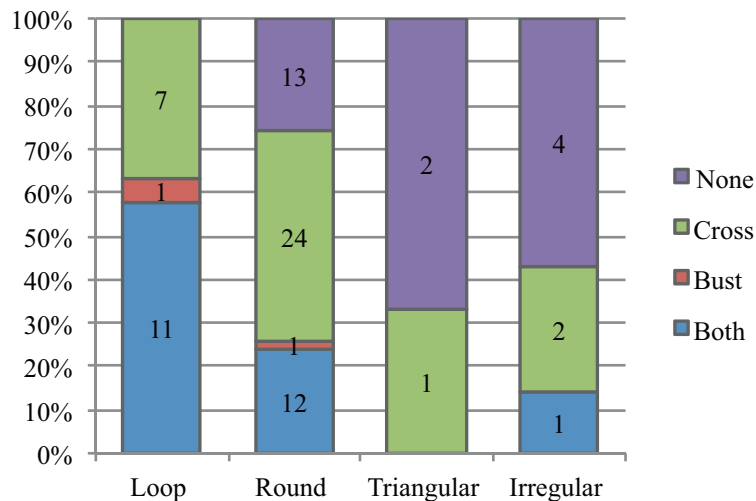


Fig.5.12. Orientation of a sample of late English coins according to their suspension types (source: SCBI 6, 18, 40, 52, 54, 66).

the orientation tends to be. A good example of this is provided by the reused coins featuring human figures/busts. This type of design varies significantly in appearance, ranging from relatively naturalistic to highly conventionalised. Two groups of coins can be seen as standing at opposite ends of this spectrum: the English and the German group. English coins of the time often feature simple but precise profiles while German coins often feature more stylised facing busts. Interestingly, these two groups have very different patterns of orientation, with respectively 30 and seven per cent of respected busts. Their orientation probably depended on whether the busts could be identified or not. This correlation between degree of naturalism and orientation is accentuated by the fact that the coins with the less naturalistic designs are usually those with the lower quality of strike.

The quality of the means of suspension seems to influence significantly how the coin designs are orientated in Viking-Age Scandinavia. The higher the quality of the means of suspension, the better the orientation tends to be. This relation is not evident in data from Catalogue I, probably because of the poor

preservation of the coin-pendants in graves (see Ch.2.2.1), but can be illustrated by examining other groups of coin-pendants, such as a group of late English coin-pendants deriving from various contexts (Fig.5.12). Within this group, the coins with loops attached are systematically displayed correctly, with either the bust, the cross or both designs being respected. Similarly, the coins provided with a round hole are frequently displayed correctly, even if more than a quarter of them are characterised by random orientation. The coins provided with a triangular hole or an irregular hole, on the other hand, are only occasionally displayed correctly, thus giving the impression of a random placement.

This association between high quality and correct orientation is even more evident in the case of coin-chains, which are among the most elaborate coin-ornaments produced in Viking-Age Scandinavia. The coins attached to these chains, and particularly those decorated with crosses, are almost systematically orientated correctly, in order to form aesthetically homogeneous sets. A good example of this is provided by coin-chain B from Johannishus (App.II:5B). This chain combines six English

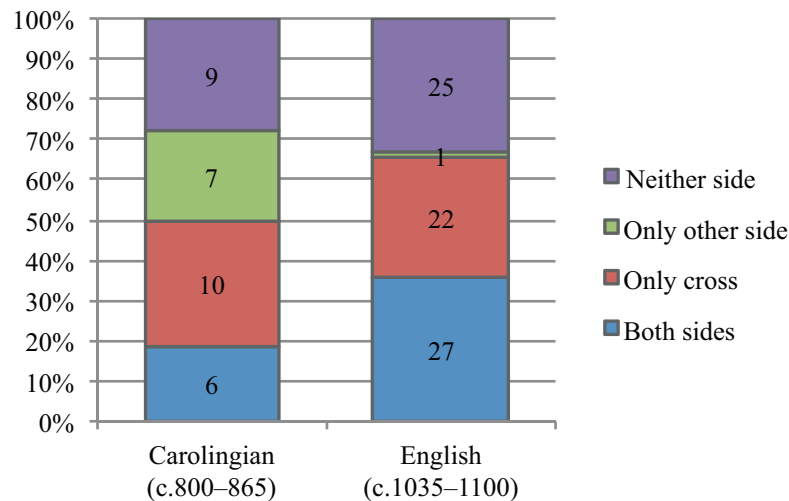


Fig.5.13. Orientation of two coin groups featuring equal-armed crosses: Carolingian coins from the period c.800–865 and English coins from the period c.1035–1100 (source: Garipzanov 2008; SCBI 6, 18, 40, 52, 54, 66).

coins, five *Long Cross* pennies of Æthelred II and one *Pointed Helmet* penny of Cnut. Remarkably, all these coins are orientated so that the crosses appear correctly.

The fact that high-quality coin-pendants are characterised by better orientation is not particularly surprising. Producing them required greater care and expertise (see Ch.4.3.2), attributes likely to influence the other features of the coin-pendants. This difference in orientation between pierced coins and looped coins can also be observed in other periods, for instance in the case of the Migration period *solidi* reused as a pendant (Fagerlie 1967). None of the looped *solidi* listed by Joan M. Fagerlie is orientated randomly, while this is often true of pierced specimens.

5.5.2. Chronological and geographical variation

It is difficult to get a clear picture of how design orientation varies over time. The types of designs in use during Phase I and Phase II are too different to be systematically compared, and the phases are too short to allow conclusions to be drawn about internal changes.

Generally speaking, it seems that there is

a continuous tendency towards geometric/regular orientation, but some differences between phases also emerge. Figure 5.13, for instance, points to interesting changes in the response to crosses. This figure provides data on two Viking-Age coin groups featuring equal-armed crosses: ninth-century Carolingian coins and eleventh-century English coins. Clearly, the proportion of well-orientated crosses increases with time, from 50 per cent to more than 65 per cent. This pattern may be connected with the Christianisation of Scandinavia, which led to an increased familiarity with the design (see Ch.8.2.2).

There also seems to be a certain relation between design orientation and geographical distribution, with an increased number of randomly-orientated coin designs occurring in remote areas. The contrast is particularly striking when examining the coin-pendants listed in Catalogue I. In central areas like Uppland or Gotland, the proportion of coins orientated to display none of their designs does not exceed fifteen per cent. Pendants of this type are the exception. In remote areas like Dalarna and Ångermanland, the proportion of coins orientated to display none of their

designs exceeds 45 per cent. Pendants of this type are the norm.

Two factors can be put forward to explain why so many coin designs were not respected when coins were modified in northern Scandinavia. Firstly, the coin-pendants used in these areas usually belong to the lower quality categories of material. Most of them are either pierced or crudely looped. As pointed out above, the lower the quality of the coin-pendants, the less precise the orientation tends to be. Secondly, a significant proportion of the coin-pendants found in these areas are made from German coins, whose designs often belong to types that are predominantly not respected, such as buildings and busts. The proportion of German coins even exceeds 50 per cent in Dalar-na.

Nevertheless, these two factors alone can hardly explain why so many coin designs were not respected in northern Scandinavia. It is also probable that, in these remote areas, the owners of coin-pendants were less familiar with coins and had a more limited understanding of their designs. This hypoth-

esis is supported, for instance, by the composition of the coin group in grave 10 at Långön (Cat.I:125). The coins in this grave consist of three German and two Norwegian coins. With one exception, they are all pierced without regard to the designs.

Designs clearly play a significant role in how the coins reused as pendants are orientated in the Viking Age. In most cases, the orientation appears to respect in some way the images and/or inscriptions on their surfaces. Despite this, the coins reused as pendants do not necessarily seem to have been selected because of the designs they carry (see also Ch.3.3.4). Some of the images appearing on the coins selected for suspension were probably not even recognised. There is also a clear tendency to hide parts of the designs or to damage them with the means of suspension. Obviously, the owners of coin-pendants have rarely tried to preserve the images and/or inscriptions appearing on the coins, as if a geometric display was more important than an 'intact' display.

Part III

The Viking-Age coin-pendants in use

Chapter 6. Combination

To understand the Viking-Age coin-pendants, we need to examine the sets within which they were placed when worn. This can be done on two levels: with a focus on how the coin-pendants were combined with each other and with a focus on how they were combined with other ornaments. Revealing the structure of the sets will enable a better understanding of the reasons for selecting and transforming coins in Viking-Age Scandinavia.

6.1. Methodological considerations

The term ‘combination’ has a long history in archaeology, especially through what has been called a ‘find-combination’ (see Thomsen 1836; see also Trigger 1989:73–9). The find-combination method is based on the idea that the combination of artefacts in closed finds can be used as a basis for establishing chronologies. By studying which types occur and reoccur together, it becomes possible to arrange them in continuous chronological series. This chronological dimension of combination is important when discussing the sets of ornaments in which the coin-pendants occur, but there is more to combination than chronology. In this section, most of the focus will be on the sets themselves, i.e. their aesthetic and functional qualities. How and why were certain ornaments brought together? What can we learn about the meaning of the Viking-Age coin-pendants from the way they were combined?

John Chapman (2000:46) defines sets as

‘integrally related groups of individual elements’. According to this definition, the elements of a set are enchained or bound to each other. They form a composite body. The relationship between a set and its components can be compared to that between a complete object and its fragments. Both can be described in terms of parts and wholes. Chapman (2000:47) makes a distinction between sets of objects and collections of objects. The term ‘collection’ applies to an associated grouping of objects with a less clear internal structure. This distinction is useful when classifying the contexts in which the coin-pendants appear, even if Chapman’s definition lacks sufficient objective criteria to identify the different types of structures.

There is a sharp contrast between hoards and graves regarding combination, a contrast that echoes the distinction between sets and collections. In principle, the coin-pendants buried in hoards have little chance of being combined with the ornaments with which they were originally worn. Because of their return to circulation (see Ch. 7.1.3), they have been mixed with many other silver objects. These objects should be regarded as collections. They are interchangeable as long as their silver value remains the same. On the other hand, the coin-pendants buried in graves are very likely to be combined with the ornaments with which they were originally worn. The sets to which they belong were not dispersed like those found in hoards. This makes the graves particularly well suited to serve as a basis for the study of combination.

Using the burial evidence to study how the coin-pendants were worn poses methodological problems. Firstly, we must overcome a fundamental contradiction: is it possible to understand how the coin-pendants were worn in life by focusing on how they were used in death? Of course, the pendants contained in graves often show signs of wear, thus indicating that they were not produced specifically as grave goods. However, there is no guarantee that the sets were preserved in their original state when the deceased and his/her belongings were prepared for burial (see Ch.1.2.2). Some pendants or beads may have been removed or added, a hypothesis supported by the difference in composition between the hoard material and the grave material (see Ch.7.4.2). To put the grave material into perspective, it is useful to rely on the evidence provided by jewellery hoards. As already noted (Ch.2.2.2), hoards of this kind contain entire sets of personal belongings. The coin-pendants buried in these hoards are thus likely to be combined with the ornaments with which they were originally worn. The problem with jewellery hoards is that they often seem to represent several ornamental sets.

Secondly, there are many graves in which the sets with coin-pendants cannot be investigated in place, either because they were scattered in the cremation layer when found or because their position was not documented by the finder. In both cases, it is impossible to determine how the different pendants were originally arranged and displayed. This raises the question of whether the pendants that were found together in a grave, but for which the original position in relation to the body is unknown, should be regarded as a set at all. Can we be sure that they were all combined at some point? Given that the pendants found in place are rarely divided into several groups, it is assumed that all the pendants deriving

from the same grave originally formed a set, unless there is evidence to suggest otherwise.

Thirdly, there is a discrepancy between the dynamic character of set formation and the static character of the burial evidence. On the one hand, the sets in which the coin-pendants occur often appear to have formed gradually. They consist of heterogeneous groups of beads and pendants, with varying origins and varying chronologies. Elements were probably added or removed in the course of time. On the other hand, the graves from which the pendants are recovered provide a frozen picture. What we can see is the final stage of the life of the jewellery set. To overcome this difficulty, particular attention will be paid to the relative chronology of the sets.

6.2. Combining coin-pendants together

A total of 53 Viking-Age graves contain sets of coin-pendants, i.e. two coin-pendants or more intended to be worn together. These sets are an important source of information. They can help us to understand the chronological and the conceptual links existing between the different types of coins reused as pendants.

6.2.1. *Size of the sets*

The most common way of wearing coins in Viking-Age Scandinavia was to wear only one of them (Fig.2.14). In about 60 per cent of the graves, they occur as single specimens. There are examples of graves with single coin-pendants all over Scandinavia, but two main concentrations can be identified. One is located on Gotland, where sixteen of the twenty graves contain single coin-pendants.²⁹ The other encompasses the north of Uppland and Gästrikland, with a small cluster of eight graves all containing single coin-pendants.³⁰

²⁹ Cat.I:23–6, 29–38, 41–42.

³⁰ Cat.I:43–46, 96–7, 109–10.

Also common are the sets that include between two and four coin-pendants (Fig.2.14). Together, they account for more than 30 per cent of all grave finds. Sets of this kind have a wide geographical distribution, which extends from Iceland to Gotland. A particular concentration can be observed in the Birka cemeteries, where almost 60 per cent of the graves contain sets belonging to this category. Several distinctive sites along Lake Mälaren, like Hovgården (Cat.I:88), Helgö (Cat.I:93) or Lovö (Cat.I:98–9), show a similar picture.

Very few sets of pendants include five coins or more, a total of nine examples being known from Scandinavia (Fig.2.14). The distribution of these sets is very different from that of the smaller ones. Most occur *outside* the areas where graves with coin-pendants are usually concentrated. One set with nine coin-pendants, for instance, originates from Bornholm (Cat.I:1), while one with seven coin-pendants is from southern Norway (Cat.I:4). By contrast, no grave containing five coin-pendants or more is known from Gotland and only one from Birka (Cat.I:63).

It is often emphasised that the Scandinavian female jewellery set exhibits remarkable standardisation in the Viking Age (Jansson 1996:14; Kaland 1992:193). Only on Gotland can we find very different types of brooches and pendants (see e.g. Carlsson, A. 1983; Thunmark-Nylén 2006). However, there is also evidence to support the existence of local jewellery traditions. This can be illustrated by the content of two graves found around Lake Siljan, in Dalarna: grave 5B at Kråkberg (Cat.I:21) and grave 3 at Västannor (Cat.I:19). Both graves, dated to Phase IIB, are furnished with similar grave-goods, i.e. oval brooches, annular brooches, beads and coin-pendants. The two oval brooches are of exactly the same type, with eleventh-century plant ornament. The presence of oval brooches in this context is particularly intriguing, given that these

ornaments had been out of fashion for about a century. The Siljan brooches are the latest oval brooches ever produced in Viking-Age Scandinavia (Jansson 1985:202–3). This late production of oval brooches, as well as their combination with the same ornaments, clearly indicates the existence of a local jewellery tradition in the Siljan area (Sandberg 1998:185).

The existence of local jewellery traditions may explain the geographical differences in the number of coin-pendants worn together, but the question of why each tradition has developed along a certain line remains. An answer to this question is to be found in the opposition rarity/abundance. The sets including the highest numbers of coin-pendants tend to occur where and when coins are otherwise uncommon. Two sets including five coin-pendants or more derive from Dalarna (Cat.I:14, 21), which was a secondary area in terms of coin circulation. Two are known from ninth-century Norway (Cat.I:4, 9), where few coins were available at the time (see Skaare 1976:43–53; Gullbekk 2014:340–1). One is from a very early Upplandic grave (Cat.I:90). This set was probably formed when the first Islamic coins arrived to Scandinavia. One is from an undated grave from Västmanland (Cat.I:119), but its composition suggests that the coins were collected at a very early point. One was found in grave 10 at Långön (Cat.I:125), which is the northernmost grave with coin-pendants from Scandinavia. The only exception is Bornholm, where large sets of coin-pendants seem to have been worn despite the high availability of coins locally (Cat.I:1; App.I:1).

On the other hand, the finds of single coin-pendants tend to occur where and when coins are very common. Particularly striking is the fact that Gotland, which has the most important concentration of hoards in Viking-Age Scandinavia, is also the area with

the highest proportion of graves containing single coin-pendants.

The number of coins combined does not seem to depend much on the economic status of the wearer. Single coin-pendants, for instance, are found in a wide variety of graves: rich as well as modest ones, inhumations as well as cremations, in churchyards as well as pre-Christian cemeteries. They are seemingly not associated with a particular type of individual. The only pattern visible is that of a link between chamber-graves and sets including two to four coin-pendants, but this is due to the quasi-absence of chamber-graves with coin-pendants outside Birka, where sets of this kind predominate.

Although there are some exceptions, the number of coin-pendants combined together remains relatively limited in the graves under investigation (Fig.1.14). Less than ten per cent of the sets include five coin-pendants or more. On average, the number of coin-pendants per grave does not exceed two. Wearing a small number of coin-pendants does not appear to have been a choice by default. It cannot be explained by a lack of availability of selectable coins. Coins were easy to find on Gotland or at Birka, where the sets are nevertheless of limited size. It would have been possible to enlarge the sets if there was a desire to do so. It cannot be explained by a lack of means either. Many of the graves containing just a few coin-pendants are richly furnished (e.g. Cat.I:70, 2). It would not have been difficult for the individuals buried in these graves to purchase additional specimens.

6.2.2. Types of sets

In grave 4 at Stånga (Fig.6:1; Cat.I:39), four reused coins were found in the neck area. One is a *Long Cross* penny of Æthelred II, two are Sigtuna imitations of this penny and one is a German coin minted in Corvey. This



Fig.6.1. The four coin-pendants found in grave 4 at Stånga (Cat.I:39; photograph: Gabriel Hildebrand, SHM). Scale 1.5:1.

grave is an interesting example of combination. It provides an idea of the kinds of differences that can occur between coins worn together, with three coins which are of the same type without all having the same origin, and a fourth coin which is nothing like the three others.

There are many degrees of differences among the coins circulating in Viking-Age Scandinavia. Some are perfectly identical, as they were struck with the same dies. Some are of exactly the same design, but were struck with different dies. Some are of the same type, but details show that they originate from different mints or different areas. Some are of different types, but follow the same iconographic pattern. Some follow different iconographic patterns, but are of the same origin. Some are completely dissimilar, as they were issued in areas with very different numismatic traditions. Unfortunately, it is very difficult to say at what point the differences became significant for the wearers of coin-pendants. Similarities and differences were probably perceived differently depending on what coins were used and who was looking at them (see Ch.1.2.5).

With this in mind, the sets of coin-pendants have been classified into three groups according to basic differences in the appearance of the coins of which they are composed. Firstly, there are sets that are exclusively or predominantly made up of visually identical coins. Coins have been considered as visually identical as long as it is not possible to differentiate between them without reading the legends or having numismatic training. In this spirit, the Islamic coins issued under different dynasties can all be placed in a single group even though they differ in detail (Fig.6.2). Secondly, there are sets that are exclusively or predominantly composed of coins with a common origin. Coins have been considered to have a common origin as long as they were issued in territories under the control of the same overlord. This common origin usually implies a certain consistency of style and theme. Thirdly, there are sets that are exclusively or predominantly composed of dissimilar coins. Coins have been regarded as dissimilar as long as they are neither of similar types nor originating from the same territory. The degree of difference between dissimilar coins varies significantly from one set to another.

A total of 30 sets are exclusively or predominantly made up of identical coins (Table 6.1; Fig.6.2). This represents about 55 per cent of all the graves containing more than one coin-pendant. There is a clear contrast between Phase I and Phase II as regards this form of combination. During Phase I, approximately 70 per cent of the sets are exclusively or predominantly composed of visually identical coins. During Phase II, the rate drops to approximately 30 per cent. The contrast between the two periods can partly be explained by the high number of Islamic coins reused as pendants before c.980, provided that all these coins have been considered as visually identical in the present study. However, it



Fig.6.2. Two Islamic coins from grave 707 at Birka, one Umayyad and one Abbasid (Cat.I:68; photograph by the author). Scale 1.5:1.

is not only Islamic coins that were combined in this way during Phase I. The existence of sets made of identical Carolingian coins or Nordic coins is also notable (see e.g. Cat.I:4, 57), especially given the rarity of the two coin-groups. These rare coins appear in more than half of the sets that are exclusively or predominantly composed of identical coins. Not surprisingly, the overwhelming majority of the sets combining coins in this way present a very strong chronological consistency. The only exceptions relate to sets of Islamic coins, some of which include coins that are distant in date (see e.g. Cat.I:68–9).

A total of thirteen sets are exclusively or predominantly composed of coins with a common origin (Table 6.1). This represents about 25 per cent of all the graves containing more than one coin-pendant. Two areas of concentration can be identified. The first one is the province of Dalarna, with four sets exclusively composed of German or English coins. The second one is Birka and its hinterland, with five sets exclusively composed of Nordic coins. Interestingly, two of the sets exclusively composed of Nordic coins cover a wide chronological range (Cat.I:81, 85). They both combine coins that were minted more than 50 years apart, i.e. a coin of Malmer's class KG 5 and a coin of Malmer's class KG 7 (Fig.6.3). It seems that the common origin

Table 6.1. Sets of coin-pendants by size and by type.

Cat.I	Province	Parish, site	Phase	Size	Combination	Comments
2	Vesturland (Is)	Mýrasýsla, Mjóidalur	IB	2	Identical	
7	Møre og Romsdal (No)	Grytten, Tomberg	IIA?	2	Identical	
12	Dalarna (Sw)	Leksand, Kyrkudden 138	IIB	2	Origin	
13	Dalarna (Sw)	Leksand, Kyrkudden 156	IIB	2	Identical	
17	Dalarna (Sw)	Leksand, Kyrkudden 252	IIB	2	Origin	
22	Dalarna (Sw)	Rättvik, Backa 2	IIB?	2	Dissimilar	
27	Gotland (Sw)	Garde, Churchyard 1953:1	IIB	2	Origin	
28	Gotland (Sw)	Garde, Churchyard 1968	IIB	2	Dissimilar	
53	Södermanland (Sw)	Vansö, Hålbys 3	IA	2	Identical	
54	Uppland (Sw)	Adelsö, Björkö 58	I-	2	Identical	
56	Uppland (Sw)	Adelsö, Björkö 168	IB	2	Dissimilar	
62	Uppland (Sw)	Adelsö, Björkö 508	IA	2	Identical	
64	Uppland (Sw)	Adelsö, Björkö 557	IB	2	Dissimilar	
66	Uppland (Sw)	Adelsö, Björkö 639	IA	2	Identical	
67	Uppland (Sw)	Adelsö, Björkö 646	IA	2	Origin	
68	Uppland (Sw)	Adelsö, Björkö 707	IB	2	Identical	
75	Uppland (Sw)	Adelsö, Björkö 835	IB	2	Dissimilar	
79	Uppland (Sw)	Adelsö, Björkö 847	IB	2	Identical	
81	Uppland (Sw)	Adelsö, Björkö 943	IB	2	Origin	
85	Uppland (Sw)	Adelsö, Björkö 968	IB	2	Origin	
88	Uppland (Sw)	Adelsö, Hovgården 9	IB	2	Identical	
91	Uppland (Sw)	Bondkyrka, Sunnersta 13	IB?	2	Origin	
95	Uppland (Sw)	Gamla Uppsala, Prästgården 36	IA	2	Dissimilar	
98	Uppland (Sw)	Lovö, Söderby 13:31	IA	2	Origin	
99	Uppland (Sw)	Lovö, Söderby 16:21	IA	2	Identical	
112	Västmanland (Sw)	Badelunda, Bjurhovda 12	II-	2	Identical	
123	Ångermanland (Sw)	Styrnäs, Djuped	IB	2	Identical	
124	Ångermanland (Sw)	Torsåker, Salum	IA	2	Identical	
126	Ångermanland (Sw)	Överlänäs, Holm 5	IIA?	2	Identical	
130	Öland (Sw)	Vickleby, Karlevi	IB	2	Identical	
20	Dalarna (Sw)	Mora, Kråkberg 4	IIB	3	Origin	
47	Halland (Sw)	Vinberg, Sannagård 195	IA?	3	Identical	Element of dissimilarity
69	Uppland (Sw)	Adelsö, Björkö 731	IB	3	Identical	Element of dissimilarity
71	Uppland (Sw)	Adelsö, Björkö 738	IB	3	Identical	
82	Uppland (Sw)	Adelsö, Björkö 954	IB	3	Identical	Element of dissimilarity
83	Uppland (Sw)	Adelsö, Björkö 963	IB	3	Dissimilar	
84	Uppland (Sw)	Adelsö, Björkö 967	IB	3	Origin	Element of dissimilarity
93	Uppland (Sw)	Ekerö, Helgö 23	IA?	3	Identical	Element of dissimilarity
114	Västmanland (Sw)	Badelunda, Bjurhovda 49	II-	3	Origin	
19	Dalarna (Sw)	Leksand, Västannor 3	IIB	4	Dissimilar	
39	Gotland (Sw)	Stånga, Churchyard 4	IIB	4	Identical	Element of dissimilarity
57	Uppland (Sw)	Adelsö, Björkö 184	IB	4	Identical	
80	Uppland (Sw)	Adelsö, Björkö 860	IB	4	Identical	Element of dissimilarity
134	Östergötland (Sw)	Vadstena, Galgebergsgårdet I:1	IB	4	Identical	Element of dissimilarity
9	Vest-Agder (No)	Spangereid, Spangereid 43	IA	5	Identical	Element of dissimilarity
119	Västmanland (Sw)	Badelunda, Vedby 7	I-	5	Identical	
125	Ångermanland (Sw)	Tåsjö, Långön 10	IIB	5	Dissimilar	
21	Dalarna (Sw)	Mora, Kråkberg 5	IIB	6	Origin	
63	Uppland (Sw)	Adelsö, Björkö 526	IA	6	Origin	
4	Buskerud (No)	Krødsherad, Søndre Bö	IB	7	Identical	Element of dissimilarity
1	Bornholm (Dk)	Knudsker, Rabækkegård	IB	9	Identical	
90	Uppland (Sw)	Alsike, Tuna	IA	9	Identical	
14	Dalarna (Sw)	Leksand, Kyrkudden 222	IIB	11	Dissimilar	

of these two coins was recognised despite the chronological gap and the different designs.

A total of ten sets are exclusively or predominantly composed of dissimilar coins (Table 6.1). This represents about nineteen per cent of all the graves containing more than one coin-pendant. The sets in question look very different depending on their size. The smaller sets tend to combine coins that have very little in common, such as a Nordic and an Islamic coin in grave 835 at Birka (Cat.I:75) or an English and a German coin in grave 2 at Backa (Cat.I:22). The larger sets, on the other hand, tend to combine several groups of identical coins and/or groups of coins with common origins. A good example of this is grave 222 at Kyrkudden (Cat.I:14). The coin-pendants from this grave can be divided into four batches:

- 1- Three dissimilar coins – one English, one Irish coin and one Scandinavian – minted between c.997 and 1010.
- 2- Two identical coins of Otto-Adelheid type minted between c.991 and 1040.
- 3- Three coins of German origin minted between c.1014 and 1051.
- 4- Three identical coins of William II minted between c.1090 and 1093.

In Viking-Age Scandinavia, the sets of coin-pendants tend to have a homogeneous character. They are typically made of coins that are either identical or of common origin. Nevertheless, many of the sets with a homogeneous composition also include an element of heterogeneity. Grave 43 at Spangereid (Cat.I:9), furnished with five coin-pendants, is a case in point. Although the set from this grave is clearly dominated by a group of four Nordic coins of exactly the same type, it also includes a Carolingian coin with a very different appearance, whose presence breaks an otherwise uniform composition. This form of combination occurs frequently. Few of the sets including more than two coins are com-



Fig.6.3. Nordic coins of different types combined in grave 943 at Birka (Cat.I:81; photograph by the author). Scale 1.5:1.

pletely uniform (but see e.g. Cat.I:71). They almost all display an element of heterogeneity of the kind found at Spangereid.

When it comes to combination, the evidence of coin-chains is very useful to supplement the burial evidence. Here too we find a division into three groups, whose distribution corresponds quite closely to that of Phase II graves. Moreover, the fact that the chains comprise more coins on average than the sets found in graves makes it easier to discern the combination patterns. Two coin-chains deserve particular attention in this regard. The first is coin-chain B from Johannishus, which combines five *Long Cross* pennies of Æthelred II with one *Pointed Helmet* penny of Cnut (Fig.6.4; App.II:5B). In this case, all the loops have been placed in the axis of the crosses, so as to arrange them geometrically. This reflects a clear aesthetic concern, a concern probably at the heart of the practice of combining identical coins in general. The second coin-chain is that from Äspinge, which combines ten pennies of Æthelred II, five of the *Long Cross* type, four of the *Last Small Cross* type and one of the *Helmet* type (App.II:9). Even though the pennies of Æthelred II are very common in Scandinavia, it is noteworthy that such a large set was formed without including non-English coins. The coins must have been recognised as having a common origin.



Fig.6.4. Chain B from Johannihus (App.II:5B; photograph: Kenneth Jonsson, NFG), with five *Long Cross* pennies of Æthelred II and one *Pointed Helmet* penny of Cnut. The coin appearing in the bottom right belongs to chain H, which was attached to coin-chain B in modern times. Scale 1:1.

The often homogeneous composition of the sets raises the question of how the coins were collected. Were the sets formed all at once by using coins already circulating together? Were they formed gradually by picking coins on several occasions according to the availability of the time? Were they formed gradually by targeting special coin-types or special coin-groups? The answer is likely to vary depending on the composition group to which the set can be assigned.

By all appearances, the homogeneous sets combining rare coins were formed under special circumstances. Being able to collect several specimens of a coin type or coin group that only appeared sporadically in the Scandinavian currency probably implied that the collector was close to a source of supply. This hypothesis is supported by the composition of the set found at Søndre Bø (Cat.I:4). In this grave, the Carolingian coins are predominantly from the West Frankish kingdom. One is from Melle, one from Dax and one from Reims, while the origin of the three others cannot be identified. This distinctive composition³¹ and the relatively large size of the find suggest that the deniers from Søndre Bø were not taken

one by one out the Scandinavian currency pool. Rather, they seem to have been selected as an existing parcel, before this parcel could be scattered (cf. Coupland 2011:115). Similarly, the two York coins from grave A13 at Sunnersta (Cat.I:91) are unlikely to have been brought together after being exported. Both coins, one of the *Saint Peter* type and one of the *Athelstan Building* type, are very uncommon outside England. They rarely occur in Scandinavian hoards and are never found together in these hoards (see Blackburn & Jonsson, K. 1981). Given these circumstances, there are good reasons to believe that the two coins travelled together from York, where they more frequently appear in the same contexts (see e.g. Williams, G. 2008:232–4).

To substantiate this interpretation, we need to turn to the evidence provided by the means of suspension (cf. Blackburn 2006). Even though the number of sets within which it is possible to compare the means of suspension attached to coins is very low, an interesting pattern can be discerned. Indeed, the identical coins worn together tend to have identical means of suspension attached, thus indicating that they were turned into pendants on one occasion with the intention of forming a set. In grave 5 at Holm (Cat.I:126), two Islamic coins minted a few decades apart are equipped with similar mounts. The mounts

31 The single-finds of Carolingian coins include many coins from the West Frankish kingdom, but also a significant number of coins from Italian mints (Coupland 2011). It is striking that the latter are not represented in this set.

are damaged, but they can both be attributed to type E, a type of suspension rarely used in the Viking Age. In this case, the homogeneity of the coin-set and that of the means of suspension give us good reasons to think that the coins were turned into pendants all at once. Very few sets composed of identical coins have been mounted with dissimilar means of suspension. One example, though, is Birka grave 184, which contained four looped coins of Malmer's class KG 5 (Cat.I:57). Three of these coins are equipped with loops of type Lr1, but the fourth is equipped with a loop of type Lr2b. We may suspect that the fourth coin was not mounted at the same time as the three others.

By contrast, the dissimilar coins worn together are almost never equipped with similar means of suspension, thus suggesting that they were turned into pendants on multiple occasions. Sets of this kind are likely to have been formed gradually. The element of heterogeneity found in sets composed of identical coins also tends to stand out when it comes to the suspension type. In grave I:1 at Galgebergsgårdet (Cat.I:134), the only non-Islamic coin is also the only to have a loop of type Lr2b attached.

6.3. Combining coin-pendants with other pendants

Very few coin-pendants seem to have been worn in isolation. In all but fifteen of the graves under investigation, they occur together with a set of beads and/or pendants. This material consists of 115 local pendants, 31 foreign pendants, five undetermined pendants and approximately 4,500 beads, material that will be further presented below. The purpose is to identify the types of ornaments more frequently combined with coin-pendants and to understand what they have in common.



Fig.6.5. Gilded pendant with Jelling-style animal found in grave 835 at Birka (Cat.I:835; photograph: Gabriel Hildebrand, SHM). Scale 1.5:1.

6.3.1. The local pendants

The local pendants most frequently worn together with coins are Scandinavian-style pendants, i.e. pendants made in one of the major Scandinavian art styles (cf. Wilson & Klindt-Jensen 1966; Graham-Campbell 2013). In total, eighteen graves with coin-pendants have yielded 32 pendants of this kind (Table 6.2). The Scandinavian-style pendants, which are extremely diverse, can be divided into three subgroups: fourteen pendants with a Jelling-style animal, thirteen local pieces of metalwork reused as pendants and five miscellaneous Scandinavian-style pendants.

The pendants with a Jelling-style animal are cast circular pendants made of copper alloy on which a Jelling-style animal appears in a backward-looking position (Fig.6.5). They all belong to Callmer's type A3 (see Callmer 1989:22–3), thus forming the most coherent of the three subgroups. The group of local pieces of metalwork reused as pendants comprises eleven mounts, eight of copper-alloy and three of gilded silver, as well as two copper-alloy fragments of a bow-fibula. These pendants cover a wide range of Viking-Age styles, including style E, Borre and Jelling styles. One of the mounts can also be assigned to the early Iron Age. The last subgroup com-

Table 6.2. The various categories of pendants combined with reused coins.

Type of pendant	Cat.I	Total
Scandinavian-style pendants		
Jellinge-style animal	44 (x3), 46, 75 (x2), 85, 103 (x2), 127 (x3), 129 (x2)	14
Reused pieces of metalwork	4, 60 (x2), 75 (x2), 76 (x2), 77, 88, 123 (x2), 134 (x2)	13
Other pendants	1 (x2), 7, 45, 48,	5
Shield-shaped pendants	54, 75, 77, 82, 83, 85, 92, 93, 100, 109, 113, 117, 133	13
Circular pendants with granulated volutes		
Disc-shaped pendants	55, 75, 81 (x2), 106, 130	6
Bowl-shaped pendants	65, 68, 87 (x2)	4
Copper alloy circular pendants with volutes or pearls	50, 60, 66, 76, 84	5
Crosses, crucifixes and pendants with cross designs	27, 39, 75, 85, 134	5
Semi-precious stones and other stones	29 (x4), 84	5
Sets of miniatures	29 (x3), 33 (x2), 41 (x3), 42 (x3)	11
Miniature weapons	75 (x2), 115, 123 (x2)	5
Sieve-shaped pendants	65, 83	2
Chair-pendants	65, 77, 85	3
Fire-steel pendant	14, 80 (x3)	4
Valkyrie	85, 95	2
Coiled snake	65, 77	2
Rider	100 (x2)	2
Other local pendants	33, 64, 65 (x2), 80 (x2), 81 (x3), 85, 114, 119, 126, 133	14
Belt mounts of oriental type	57, 58 (x2), 64, 65 (x2), 75, 78 (x2), 80, 81 (x3), 82, 87	15
Other oriental pendants	64, 65, 103 (x2), 123	5
Eastern pendants	28, 106, 114	3
Western pendants	6, 65 (x2), 77, 81, 126, 134 (x2)	8
Undetermined	48, 60, 86, 95, 131	5

prises five pendants of varying types. Two are circular pendants with a Terslev design, one is an openwork pendant with a Borre-style gripping beast, one is a circular pendant decorated with the ‘great beast’ and one is a circular pendant decorated with an unusual geometric design.

With three exceptions, all the graves combining Scandinavian-style pendants and coin-pendants can be dated to Phase IB. These graves are widely distributed throughout Scandinavia, very often away from the main concentrations of graves with coin-pendants. Only four examples are known from Birka and none from Gotland. The function of the Scandinavian-style pendants has been little discussed. Authors tend to focus on stylistic

concerns (e.g. Jansson 1969; Callmer 1989). In an Anglo-Scandinavian context, Jane Kershaw (2013) argues that Scandinavian-looking jewellery was used to negotiate cultural identity, with changes in style being implicated in social strategies. The fact that these pendants are almost all made of copper-alloy may indicate that their primary role was not to enhance status.

Also frequent are the shield-shaped pendants (Fig.6.6), which occur as single specimens in thirteen of the graves included here (Table 6.2). Shield-shaped pendants are circular pendants decorated with a whorl pattern. Almost all the pendants of this type are made of silver, but a few copper-alloy specimens are also known. They often have a suspen-

sion loop attached with a rivet (see Duczko 1989). The graves containing both shield-shaped pendants and reused coins cover a wide chronological range, from the second half of the ninth century to the second half of the eleventh century. About half of them can be dated to Phase IB. They are predominantly distributed in the Mälaren area, with a special concentration in Birka.

The shield-shaped pendants are conceptually related to a small group of miniature weapons, which appear in three graves with coin-pendants (Table 6.2). These miniature weapons consist almost exclusively of axes, the exception being a spearhead from grave 37 at Tuna (Cat.I:115). They are made of materials otherwise rarely found together with coin-pendants, i.e. slate, amber and iron. Miniature weapons, including shields, are usually interpreted as protective amulets (see e.g. Arrhenius 1961; Zeiten 1997:15–9).

The next largest group is a group of circular pendants decorated with three to four granulated volutes (Fig.6.7). In total, eight graves with coin-pendants have yielded ten pendants of this kind (Table 6.2). It is possible to distinguish between two types of circular pendants with granulated volutes: disc-shaped (see Duczko 1985:33–42) and bowl-shaped pendants (see Duczko 1985:42–8). As Władysław Duczko argues (Duczko 1985:110–1), both are local products, but they are inspired by Continental art. The combination between circular pendants with granulated volutes and coin-pendants is largely confined to tenth-century Birka. The two exceptions are grave 28 at Stavby (Cat.I:106) and an unnumbered grave at Karlevi (Cat.I:130). Some of these pendants have been tentatively interpreted as amulets (see Zeiten 1997:23–4), but their function has been the subject of very little discussion. It should be noted that the circular pendants with granulated volutes are very exclusive pieces of silver jewellery.



Fig.6.6. Shield-shaped pendant from grave 835 at Birka (Cat.I.75; photograph by the author). Scale 1.5:1.



Fig.6.7. Disc-shaped pendant with three granulated volutes from grave 943 at Birka (Cat.I.81; photograph: Gabriel Hildebrand, SHM). Scale 1.5:1.

They may have functioned as a means of enhancing the status of their owners.

Five other circular pendants can be added to this group (Table 6.2). All are of cast copper alloy, with decorations made of volutes or circles of beads (Callmer 1989:22–3). Some of them imitate the granulation work seen on silver circular pendants. Four graves combining pendants of this kind and coin-pendants are located at Birka. The fifth grave is located in Småland. This combination occurs from Phase IA to Phase IIA. The pendants of cast copper alloy may be interpreted as cheap substitutes for the circular pendants decorated with granulated volutes (cf. Callmer 1989:20).

Crosses and crucifixes sometimes occur in graves together with coin-pendants. A total of four examples are reported from across Scan-

dinavia,³² two from Birka, one from Östergötland and one from Gotland (Table 6.2). The three crosses show great typological diversity. One is a circular sheet of silver with punches from which four 8-shaped segments have been removed, one is a cast pendant with a punched cross design and one is a cast pendant with a stylised cross design. The bone crucifix from Vadstena is unique (Fig.6.8). The Christ carved on it closely resembles the one from the Jelling stone, with his strap-like arms and his face devoid of expression (cf. Wilson & Klindt-Jensen 1966:120). Only one of these pendants appears in a grave dated to Phase IIB, when Scandinavia was fully Christianised. The others appear in graves dated to Phase IB.

A further pendant from Gotland can be added to this group (Table 6.2). It is octagonal in shape but bears a cross design on one of its sides. The grave where it was found is located in the Garde churchyard and can be ascribed to Phase IIB. Moreover, several sets including both crosses and coin-pendants come from outside burial contexts. The jewellery hoard from Valbo (App.I:8), which has yielded thirteen coin-pendants, contains two crosses: a crucifix and a cross-pendant. The coin-chain from Bjerre Banke (App.II:2) has a crucifix attached to the last intermediate ring. The crucifix from Johannishus is believed to have been originally suspended to one of the many coin-chains (App.II:5). These hoard finds can all be dated to the first half of the twelfth century. Much has been written about the function of crosses in Viking-Age Scandinavia (see e.g. Wamers 1997; Staecker 1999; Gräslund 2005). It is argued that the specimens from late contexts, like those from the Gotlandic churchyards, were used as Chris-

tian markers. Because they appear in graves alongside other typical amulets, the earlier crosses tend to be viewed as having an amuletic function, even if a Christian interpretation cannot be totally dismissed.

Another small group is made up of semi-precious stones in a silver setting (Table 6.2). Four pendants combined with coin-pendants belong to this category, all from grave 1962:13:1 at Barshalder (Cat.I:29). These pendants were probably manufactured on Gotland, even if the material used – amethyst and rock-crystal – had to be imported (see Thunmark-Nylén 2006:218). Their occasional occurrence in silver hoards supports the idea that they were regarded as very exclusive pieces of jewellery. It has also been proposed that the rock-crystal pendants had a connection with baptism (Thunmark-Nylén 1989:218). A fifth pendant made of stone is known from grave 963 at Birka (Cat.I:83), but this small piece of rock looks more like a pebble.

In four graves, the coin-pendants are accompanied by small sets of copper alloy or silver miniatures (Table 6.2). Their composition is normally fixed, including a spoon-shaped, a tongue shaped and a sieve-shaped pendant, but grave 479A at Ire only contains the former two (Cat.I:33). Sets of this kind are typically Gotlandic. They almost never occur outside the island (see Thunmark-Nylén 2006:205–12). Even if their exact function is unknown, they seem to have been ascribed a symbolic value of some kind, as indicated by the fact that they appear in recurring combinations (Thunmark-Nylén 1995a:178). The four graves containing both miniatures and coin-pendants cover a wide chronological range, from the eighth century to the twelfth century. Sieve-shaped pendants like those found in graves 632 and 963 at Birka (Cat.I:65, 83) have also been interpreted as possible amulets (Zeiten 1997:23–4).

Three graves with coin-pendants contain

32 There is also a crucifix in grave 750 at Birka, but there is no evidence that it was combined with the coin-pendant. The cross was found on the floor of the burial while the coin-pendant was contained in a purse.

pendants in the form of chairs (Table 6:2). These pendants come in various forms. One is a cylindrical low seat with filigree, one is a cylindrical high seat with punch marks (Fig.6.9) and one is a cubical low seat without decoration. All three are made of silver, although other materials have sometimes been used (see Price 2002:163–5). The chair-pendants have been discussed by many authors, most of whom emphasise their association with the pre-Christian religion (e.g. Arrhenius 1961:156–7; Price 2002:163–7; Gräslund 2005:380). It is usually argued that they are a representation of Odin’s throne. The combination between chair-pendants and coin-pendants is known only from Birka and seems to be confined to Phase IB.

Another type of miniature found together with coin-pendants is the fire-steel pendant (Table 6.2). There are, in Viking-Age Scandinavia, two main types of fire-steel pendants: fire-steels attached to rings and loose fire-steels. Only the latter type is represented in the material under investigation here. The two fire-steel pendants found together with coin-pendants rare from grave 860B at Birka, which can be dated to Phase IB (Cat.I:80), and grave 222 at Leksand kyrka, which can be dated to Phase IIB (Cat.I:14). In grave 860B, two other pendants can be seen as belonging to the same group. They are built up of four intertwined fire-steels (Gräslund 2007:94). Most authors regard the fire-steel pendants as protective amulets because of their association with fire and Thor (e.g. Stenberger 1958:165; Gräslund 2007:94).

Two tenth-century Birka graves with coin-pendants are furnished with a coiled snake pendant made of silver (Fig.6.10; Table 6.2). Given the special place occupied by the snake motif in Scandinavian art and mythology, it is generally acknowledged that the coiled snake pendant had an amuletic function (Zeiten 1997:13; Gräslund 2005:381–2).



Fig.6.8. Bone crucifix from grave I:1 at Galgebergsgärdet (Cat.I:134; photograph: Lasse Norr, ÖM). Not to scale.



Fig.6.9. Chair pendant from grave 632 at Birka (Cat.I:65; drawing: Herbert Lange). Scale 1.5:1.

The combination between coiled snake pendant and coin-pendants is also present in the Hoen hoard, which can be dated to the third quarter of the ninth century (App.I:4).

Grave 28:44 at Lovö (Cat.I:100) contains two badly-damaged figures in silver, probably



Fig.6.10. Coiled snake pendant from grave 844 at Birka (Cat.I:77; photograph by the author). Scale 1.5:1.

originally worn as pendants. These figures are very similar to the riders found in Birka grave 825, sometimes interpreted as amulets (Pedersen 2009:296). Grave 28:44 at Söderby can be ascribed to Phase IA. This is consistent with the early dating of many of the pendants shaped as riders (Arwidsson 1989:57).

The remaining pendants are only known as single specimens (Table 6.2). This group includes: a pendant made of silver wire, a looped piece of silver with granulated decoration, a circular pendant with central hole, a mask pendant, a lead piece in silver net, a finger-ring, a Gotlandic bracteate, a crescent-shaped iron pendant, a bronze bell, a whetstone pendant and a circular pendant with clover motif in openwork. Many of them, such as the Gotlandic bracteate (see Gaimster 1998) or the mask pendant (Callmer 1989:25), belong to types occasionally encountered in other Viking-Age graves. Some pendants, such as the circular pendant with a clover motif in openwork, are unique finds.

Thor's hammers appear in some of the graves investigated here, but there is no evidence of them being directly combined with coin-pendants. In three cases (Cat.I:72, 81–2), a Thor's hammer was found at some distance from the coin-pendants, thus indicating that they were not part of the same set. In two cases (Cat.I:92, 100), the Thor's hammers belonged to so-called Thor's hammer rings,

a type of amulet probably made for ritual purposes (Andersson 2005a:47–8). They were not worn as dress accessories.

6.3.2. *The foreign pendants*

A total of 31 pendants combined with coin-pendants originate from outside Scandinavia. These foreign pendants, unlike the local ones, were rarely produced to be worn as such. They almost exclusively consist of pieces of metalwork whose function has been subsequently adapted. In some cases, an opening or a loop already present on the metalwork has been used to suspend it. In other cases, a loop has been added to make suspension possible.

The greater part of the foreign pendants combined with coin-pendants consists of belt mounts of Oriental type (Table 6:2; see Jansson 1986; 1988:607–14; see also Hedenstierna-Jonson & Holmquist Olausson 2006). These belt mounts show a clear link with Islamic art, but seem to have been essentially produced outside of the Islamic world. Their production is believed to have taken place in many different areas, including Rus', Volga Bulgaria and Khazaria (Jansson 1986:86–9; Hedenstierna-Jonson & Holmquist Olausson 2006:44–5). The belt mounts of Oriental type, which account for almost 50 per cent of all the foreign pendants combined with coin-pendants, can be further divided into several groups according to stylistic criteria. Although most of them display plant ornament, they can also be decorated with animal motifs (Fig.6.11) or geometric figures. The combination in graves between pendants of this kind and coin-pendants is exclusively confined to the Birka cemeteries. With one exception, the graves in which they appear can be dated to Phase IB. That it was usual to combine Oriental belt mounts and coin-pendants is further supported by the evidence of the Vårby hoard (App.I:9), in which both cat-

egories of pendants are very well represented. As Ingmar Jansson demonstrates (1986:97), the Oriental belt mounts from Vårby are probably among the few to be genuine Islamic products. The hoard dates to the middle of the tenth century.

In grave 632 at Birka (Cat.I:65), the two Oriental belt mounts were found together with a third pendant of Oriental type. This pendant is made from a fragment of silver vessel with engraved decoration to which a loop was riveted. Its provenance is uncertain, but it has been suggested that it could be Middle Eastern (Graham-Campbell 1980:45; Jansson 1988:646). Another fragment of Oriental silver vessel is known from grave 557 at Birka (Cat.I:64). This pendant, possibly decorated with a palmette, is also equipped with a riveted loop (Jansson 1988:646). Finally, an oriental pendant consisting of a ringed cowrie shell has been found at Djuped (Cat.I:123). Cowrie shells originate either in the Red Sea or in the Indian Ocean (Jansson 1988:589–2).

Only two Oriental pendants originally produced to be worn as such occur together with coin-pendants (Table 6.2). They both derive from grave 7 at Grävsta (Cat.I:103), dated to Phase IB. These circular pendants, of the exact same type, are decorated with a rosette or lotus blossom pattern enclosed in an inner circle of beads. A suspension loop in the shape of a bearded man is attached to the edge of the silver pendants. All the designs appearing on these pendants have no direct parallels in Scandinavia. They are characteristic of the late Sasanian or early Islamic art (Jansson 1988:580).

Three additional pendants can be assigned an Eastern provenance (Table 6.2). The first is a bronze pendant in the shape of a double cross, probably manufactured in Estonia (Jaanusson 1971:100–3). The pendant is converted from a pinhead used to fasten clothes as well as ornamental chains. It was found



Fig.6.11. Oriental belt mount from grave 557 at Birka (Cat.I:64; photograph: Gabriel Hildebrand, SHM). Scale 1.5:1.

in grave 49 at Bjurhovda (Cat.I:114), which can be ascribed to Phase IIA. The second is a crescent-shaped pendant with filigree decoration, probably manufactured in the Slavic world (Lundström, P. 1955:36–8). The pendant is converted from a crescent-shaped earring or temple ring. It was found in grave 28 at Stavby (Cat.I:106), which can be ascribed to Phase IIA. The third is a hemispherical silver pendant of west Russian type (Duczko 1983:340). The pendant is decorated with chevrons in granulation around a central X. It was found in 1968 in the churchyard of Garde (Cat.I:28), which can be ascribed to Phase IIB.

The group of Western pendants combined with coin-pendants is relatively small in size. It comprises eight specimens only, representing almost as many types of objects (Table 6.2). In grave 632 at Birka (Cat.I:65), the set of pendants includes two silver-gilt pendants of Western origin. One is a book mount with animal ornament (Graham-Campbell 1980:45) while the other is a strap mount with plant ornament (Arbman 1937a:149).³³ Both were most probably manufactured in Carolingian workshops. The Western pendant found

³³ The belt mount pendant is wrongly attributed to grave 542 in *Schweden und das Karolingische Reich* (Arbman 1937a:149).

in grave 844 at Birka (Cat.I:77) is converted from a silver clasp, which might derive from a book cover or a garment (Fig.6.12; Arbman 1940:318). This clasp, with a gripping-beast ornament, was regarded as Carolingian by Holger Arbman (1937a:132), but the hypothesis of an Anglo-Saxon origin is more commonly accepted (see e.g. Marstrander 1964:105–6; Wamers 1985:34). In grave I:1 at Galgebergsgärdet (Cat.I:134), two of the reused mounts have an insular origin. They are decorated with right-angled cells reminiscent of those found, for instance, on the Irish crozier head from Helgö (Holmqvist 1961:112–4; O’Meadhra & Lamm 2011). Grave 943 at Birka (Cat.I:81) contained a small glass sherd enclosed in a silver net. This glass sherd is probably from the bottom of a Carolingian beaker (Arbman 1937a:58). At Setnes (Cat.I:6), the boat-grave was furnished with no less than seven Anglo-Saxon objects, one of which was reused as a pendant. It consists of a silver seal-mount decorated in openwork (Wamers 1985:94). The Western pendant from grave 5 at Holm (Cat.I:126) is a silver bracteate with bust in profile. Bracteates of this type are believed to originate from Germany (Stenberger 1958:85; Berghaus 1994). They make use of different models, including Carolingian, Roman and German coins. In the case of Holm, the bracteate is based on a late Roman coin (Stenberger 1958:75). The graves in which the Western pendants appear together with coin-pendants are predominantly concentrated at Birka, but they also occur elsewhere in Scandinavia. They can all be dated, with the exception of grave 5 at Holm, to Phase IB.

Some of the foreign pendants listed above have been interpreted as amulets or religious symbols. It is often argued, for instance, that the cowrie shells were worn to promote fertility because of their resemblance to vulvas (see e.g. Meaney 1981:127). Similarly,

the cross-shaped pinhead from grave 49 at Bjurhovda (Cat.I:114) may have been associated with the Christian religion by its user, although the cross was not originally a Christian one (see Jaanusson 1971:102–3). Most often, however, it is not possible to attribute a particular symbolic meaning to the foreign pendants. The fact that they had a foreign origin and an exotic appearance was probably of utmost importance (e.g. Kleingärtner 2014:75; Aannestad 2015:273–4).

6.3.3. *The beads*

The approximately 4,500 beads found together with coin-pendants show great diversity in material, technique, form, decoration and colour. A case in point is grave 844 at Birka, which includes the following beads: ten glass/rounded/undecorated – two non-coloured, two orange, one dark blue, five green; eight glass/cylindrical/undecorated/non-coloured; one glass/rounded/decorated/non-coloured with eye; one glass/segmented/silver; four rock crystal/spherical; three carnelian/spherical; one agate/cylindrical. Given this diversity, it has not been possible to provide an exhaustive description of the approximately 4,500 beads listed in Catalogue I. Emphasis has instead been placed on the material used to make them.

The overwhelming majority of the beads found together with coin-pendants are glass beads. They account for about three-quarters of the material and are the dominant group in about 85 per cent of the graves. These glass beads are very diverse, more diverse than any other bead group. The reason for this is that they are coloured and decorated, whereas the beads made from other materials normally retain their natural look. Callmer (1977:35–42) identifies 24 different colours and an even greater number of designs. The question of the provenance of these beads is a complicated one. It seems that some of them

were produced locally, as is indicated by the absence of certain types outside Scandinavia (Callmer 1977:94–104) and by the presence of glass workshop remains in central places like Ribe (see Näsman 1978). Some others are believed to have been imported. Depending on the type, different origins are possible, including Western Europe, Byzantium or the Middle East (Callmer 1977:94–104). The combination between glass beads and coin-pendants is found all over Scandinavia and throughout the Viking period.

The next most common beads are the rock-crystal and the carnelian ones. They account for about twenty per cent of the material and are the dominant group in about fifteen per cent of the graves. Beads of this kind are Oriental imports. They are regarded as originating either from the Islamic world or from India (Callmer 1977:99; Jansson 1988:586). The rock-crystal and carnelian beads are very rare in the Gotlandic graves with coin-pendants.

The remaining beads only account for a few per cent of the total material. They include specimens made of the following materials: silver, bronze, white metal, quartz, agate, malachite, clay, bone, amber, chalk, sandstone, faience and amethyst. It is interesting to note that these groups, despite being relatively small in size, are represented in more than half of the graves containing beads.

The ‘silver beads’ group deserves further attention. It consists of approximately 50 beads of various kinds, many of which are decorated with granulation or filigree (Fig.6.13). These beads usually occur in graves as single specimens or in very small groups, but one of the graves at Karlevi contains fifteen of them (Cat.I:130). Their combination with coin-pendants is confined to eastern Scandinavia, with a special concentration in Birka, on Öland, on Gotland and in the Swedish province of Östergötland. On



Fig.6.12. Anglo-Saxon silver clasp from grave 844 at Birka (Cat.I:77; photograph by the author). Scale 1.5:1.



Fig.6.13. Bead with filigree decoration from grave 66 at Birka (Cat.I:55; photograph: Gabriel Hildebrand, SHM). Scale 3:1.

Öland, three of the five graves with coin-pendants are furnished with beads of this type. Beads decorated with granulation or filigree are also known from a couple of jewellery hoards, such as Hoen or Valbo (App.I:4, 8). The origin of these beads seems to be very diverse. Some of the beads, like the ball-shaped bead from grave 66 at Birka (Cat.I:55), are interpreted as being a Carolingian or Frisian product (Duczko 1985:76). Some others, like the spherical beads from grave 557 at Birka (Cat.I:64), are viewed as being of Slavic manufacture (Duczko 1985:78). Finally, some specimens can be ascribed a local origin (Stenberger 1958:209–22). The silver beads described here are exclusive pieces of jewellery. They were both rare and valuable.

Beads are primarily regarded as having an ornamental function, but several other in-

terpretations have been advanced. It is often suggested that some of the beads, especially those made of amber, were used as amulets (Fuglesang 1989:19–21; Thunmark-Nylén 1995a:173–7). Beads have also been interpreted as signs of status (e.g. Callmer 1977:157–65) and identity markers (Thedéen 2010).

6.3.4. Some observations about the sets of ornaments

The sets of ornaments combined with coin-pendants – beads and pendants – show great diversity. Some of the groups, such as glass beads or shield-shaped pendants, are relatively large, but they are accompanied by a myriad of smaller groups which together comprise a considerable share of the material. Thus, the largest group of pendants, i.e. Scandinavian-style pendants, very heterogeneous itself, only accounts for about fifteen per cent of all the pendants recorded. Despite this diversity, it is possible to identify certain tendencies in the way these ornaments are selected and distributed.³⁴

Phase IB is the period when the graves with coin-pendants comprise the largest sets of pendants. The average number of pendants per grave from this period exceeds three pieces, while this number ranges between one and two during the three other periods. For beads, the chronological distribution is different. They are most common during Phase IA, before seeing their number decrease throughout the Viking Age. This is in line with the observation made by Johan Callmer that beads ‘have a diminishing role as a display factor in the Viking period’ (Callmer 1977:162). Moreover, it is interesting to note that bead-pendants occur predominantly during Phase IB, which is the period when pendants are most common. This may indi-

cate that the bead-pendants were conceptually closer to pendants than to beads.

Birka is the place where the graves with coin-pendants comprise the largest sets of pendants. The average number of pendants per grave at Birka exceeds two pieces, while this number drops to less than one everywhere else in Scandinavia. The most notable exception is an area stretching from Östergötland to Småland, with an average of about 1.7 pendants. Birka is also above average when it comes to the number of beads per grave, but the same can be said of Uppland in general. Gotland, with its late chronological horizon, is particularly poor with regard to beads combined with coin-pendants.

Silver and gilded silver is very well represented among the pendants combined with coin-pendants, especially in Birka and in its Upplandic hinterland. In this area, about two-thirds of the material under investigation consists of silver pendants, while pendants made of copper alloy are only sporadically recorded. The absence of difference between Birka and Uppland in terms of the proportion of silver contrasts with what is usually observed (cf. Callmer 1989). In the rest of Scandinavia, silver is less frequent but still plays a significant role, with about one quarter of pendants made of this metal. Most of the silver material, though, derives from a small number of very well-furnished graves, like grave 1962:13:1 at Barsholder (Cat.I:29) or grave I:1 at Galgebergsgärdet (Cat.I:134).

The majority of the local pendants included here are circular pendants.³⁵ We can see, for instance, that the three types of local pendants most commonly combined with coin-pendants – shield-shaped pendants, pendants with granulated volutes and pendants with a Jelling animal – are either disc-

³⁴ The figures given below temporarily exclude coin-pendants.

³⁵ A circular shape is much rarer among the foreign pendants. These pendants are often converted from pieces of metalwork of varying forms.

shaped or bowl-shaped. Also striking is the fact that the circular pendants are about the same size as the coin-pendants with which they are combined, whose diameter ranges between 15 and 29mm. The shield-shaped pendants have a diameter of 17 to 28mm (Duczko 1989:9); the pendants with granulated volute have a diameter of 14 to 21mm (see Duczko 1985:35–47); and, the pendants with a Jelling-style animal have a diameter of 16 to 30mm (Callmer 1989:23–4). This recurrent combination of coin-pendants with circular pendants of the same calibre may indicate an aesthetic concern or a common conceptual ground.

The pendants combined with coin-pendants are predominantly locally produced. Local pendants account for about 75 per cent of the total material. The ratio between local pendants and foreign pendants can vary from region to region. The Birka graves included here, with their strong international dimension, have yielded more than 67 per cent of the foreign pendants. On Gotland, where it is unusual to wear non-Gotlandic ornaments, the proportion of foreign pendants does not exceed ten per cent. However, the main differences seem to appear at the individual level, with certain graves showing evidence of sustained long-distance contacts. A case in point is grave I:1 at Galgebergsgärdet (Cat.I:134), in which two of the five non-numismatic pendants have an insular origin. The grave, whose content is particularly distinctive, is the only one in the area to combine coin-pendants with foreign pendants. Many jewellery hoards, like Hoen or Vårby, show a similar pattern, with a strong foreign influence.

Not all the Viking-Age pendants seem to have fulfilled the same function, despite all having an ornamental dimension. About a quarter of them are primarily regarded as amulets. These amulets consist almost exclusively of locally manufactured miniatures.

Depending on the context, crosses can be seen as both amulets and religious markers. The rest of the material is more loosely interpreted, but it is often argued that the Viking-Age pendants could be used to express personal and collective identity or to display status (see e.g. Kershaw 2013; Kleingärtner 2014). In reality, we can probably find a little of each function – ornamental, religious, sign of status and identity marker – in each of the pendants worn in the Viking Age. The same is true for beads. The challenge is to determine which function predominates.

6.4. How to wear a coin-pendant?

In Viking-Age Scandinavia, there are many different ways of wearing pendants, coin-pendants and beads. Two main variables can be discerned: composition of the sets and mode of wearing. These two variables determine how prominently the coin-pendants were displayed.

6.4.1. *Compositional principles*

The ornamental sets within which the Viking-Age coin-pendants appear are very diverse in composition. The same configuration rarely occurs more than once. It is possible, nevertheless, to distinguish between different compositional principles:

- Type A: Five coin-pendants or more, very few or no pendants of other types.
- Type B: One to four coin-pendants, as many or more pendants of other types.
- Type C: One to four coin-pendants, no or fewer pendants of other types.

In sets of type A, the coin-pendants overwhelmingly outnumber the pendants of other types, if there are pendants of other types at all. The set from Rabækkegård (Cat.I:1), for instance, combines nine coin-pendants with two Scandinavian-style pendants, while that

from grave 222 at Leksand (Cat.I:14) combines eleven coin-pendants with one fire-steel pendant. It is worth emphasising that the few pendants with which coin-pendants are combined in these sets are all Scandinavian products.

When combined in this way, the coin-pendants stand out in sharp relief. They represent the main ornamental element within the sets and often within the graves. This role as main ornamental element must be understood in the context of 'low coin availability' in which most of the sets of type A occur. As already noted (see Ch.6.2.1), the large sets of coin-pendants are found predominantly where and when coins are otherwise uncommon. In this context, wearing coins as pendants probably had a special expressive significance.

The sets of type A usually include beads, but with considerable variation. The number of beads included ranges between eleven and 362, with an average of approximately 85. The only set of type A with no beads is that deriving from grave 10 at Långön (Cat.I:125), whose owner was probably related to the Sámi culture.

In sets of type B, the coin-pendants are outnumbered by the pendants of other types. The set from grave A5 at Storvik (Cat.I:44), for instance, combines one looped coin with three Scandinavian-style pendants, while that from grave 860B at Birka (Cat.I:80) combines four looped coins with six pendants of various forms. The degree of preponderance of the other pendants over the coin-pendants varies between sets. The ratio ranges from 1.25 (Cat.I:134) to 10 (Cat.I:65), with an average of 2.7. With few exceptions, all the sets of type B occur in graves dated to Phase IB or Phase IIA. They are especially common in tenth-century Birka.

When worn like this, the coin-pendants do not really stand out. They are just one or-

namental element among others. Of course, their prominence increases as the ratio between coin-pendants and pendants of other types gets closer to 1. A good example of this is provided by grave I:1 at Galgebergsgärdet (Cat.I:134), in which both groups are almost equally represented, with four looped coins and five pendants of various forms. However, an almost equal representation of this kind is not the norm within sets of type B. The ratio between coin-pendants and pendants of other types is usually equal to or greater than 2, meaning that the latter group plays a more important role than the former one.

The sets of type B account for approximately 75 per cent of all the pendants combined with coin-pendants. All the groups of pendants described above (see Ch.6.3.1–2) are represented to some extent, forming a wide variety of combinations. As a result, the sets of type B are often unique. One exception is provided by some ornamental sets from Gotland, which reproduce the same combination. Two Gotlandic graves (Cat.41–2) are furnished with a set comprising a Roman coin-pendant, a spoon-shaped pendant, a tongue-shaped pendant and a sieve-shaped pendant. A third Gotlandic grave (Cat.I:33) has a very similar content, but without the sieve-shaped pendant.

In sets of type C, the coin-pendants outnumber the pendants of other types, but the coin-pendants themselves form a relatively small group, with one to four specimens. The set from grave 1953:1 at Garde (Cat.I:27), for instance, combines two looped coins with an octagonal pendant bearing a cross, while that from grave 341 at Sântorp (Cat.I:111) only comprises one looped coin.

When worn in this way, the coin-pendants manifestly play a prominent role. Like in the case of type A, they represent the main ornamental element within the sets. Yet, the coin-pendants included here seem to function

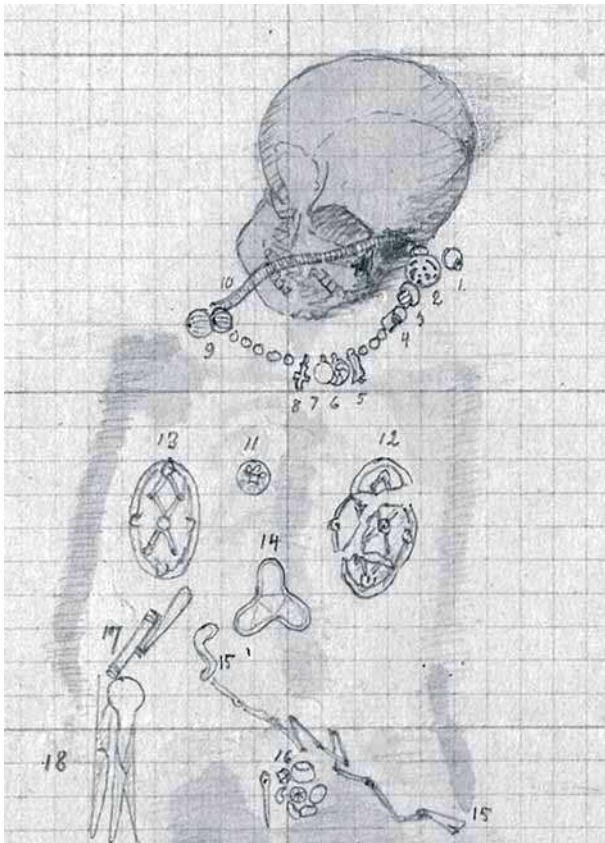


Fig.6.14. Detail from grave 968 at Birka (Cat.I:83; drawing by Hjalmar Stolpe).

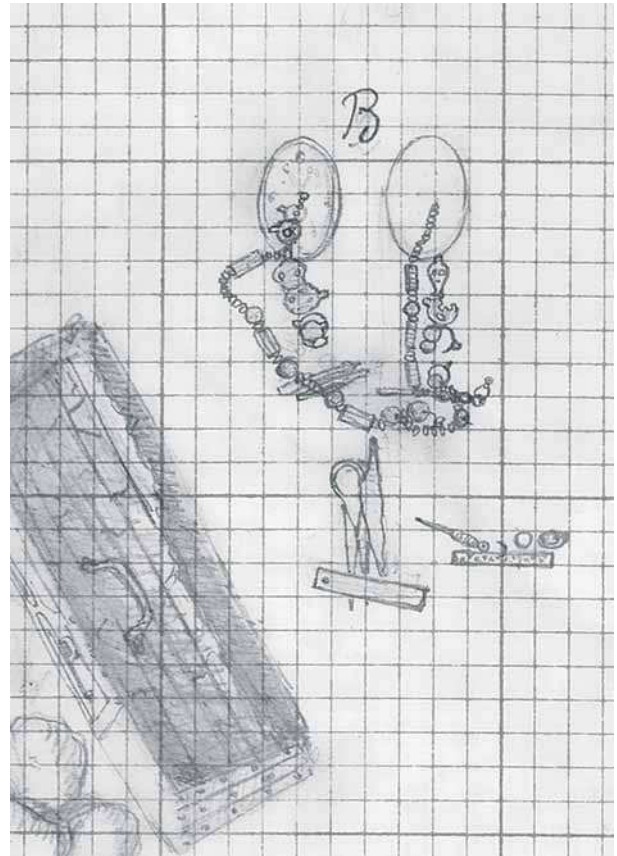


Fig.6.15. Detail from grave 860B at Birka (Cat.I:80; drawing by Hjalmar Stolpe).

in a different way, as they do not stand out to the same extent. It is interesting to note, in particular, that many of the late sets that include Christian symbols and/or are found in churchyards follow this compositional principle. In this case, the number of pendants and coin-pendants seems to matter less than their individual significance.

6.4.2. *Mode of wearing*

There are two main ways of wearing coin-pendants in Viking-Age Scandinavia. One way is to suspend them at the neck from a cord to make a necklace (Fig.6.14). The other way is to suspend them on the chest between the two oval brooches (Fig.6.15). Together, these two ways of wearing coin-pendants account for almost 75 per cent of the cases in which the functional position of the ornaments is

known. Both can include several rows of beads and pendants.

Graves with necklaces including one or several coin-pendants occur throughout the Viking Age. One of the earliest examples is provided by grave 632 at Birka (Cat.I:65), which can be dated to the turn of the tenth century. One of the latest examples is provided by grave 222 at Leksand (Cat.I:14), which can be dated to the first decades of the twelfth century. This way of wearing coin-pendants was probably fashionable all over Scandinavia, even if the geographical bias of our grave sample implies a concentration in mid-Sweden, and on Gotland and Öland.

The practice of suspending coin-pendants from oval brooches is more restricted geographically and chronologically. With one exception (Cat.I:95), all the known examples derive from tenth-century graves at

Birka (e.g. Cat.I:77, 80, 83). This extreme geographical and chronological concentration can be explained in two ways. Firstly, the practice of suspending coin-pendants from oval brooches is dependent upon the fashion for oval brooches, which declines abruptly towards the end of the tenth century (see Jansson 1985). Secondly, the practice of suspending coin-pendants from oval brooches seems to be particularly popular at a time when most of the coin-pendants found outside Birka occur in cremations, which limits the possibilities of identification.

There are several other ways of wearing coin-pendants in Viking-Age Scandinavia, including chatelaines, temple rings or waist ornaments. These ways of wearing coin-pendants are not the norm, though. They only occur sporadically and may reflect different types of influences. Temple rings, for instance, are the most characteristic item of female jewellery in the Slavic world. It is also possible that some of the coin-pendants were sewn onto the garments, but the poor state of preservation of the textiles in most Viking-Age graves makes it impossible to identify these cases positively. In grave 526A at Birka, the dispersion of the coin-pendants in several clusters may indicate that they were suspended from the garment.

When it is possible to determine how the coin-pendants were placed in relation to the other pendants of the same set, they tend to occupy a central position. A good example of this is provided by grave 968 at Birka (Fig.6.14,

Cat.I:85). In this grave, the position of all but one of the pendants – the pendant made from a Nordic coin of type KG5 – is precisely recorded. Four of the eight pendants, including a reused finger-ring and a circular pendant with Jelling-style animal, were attached to the side of the necklace. They seem to have been ascribed a secondary role. The four other pendants, by contrast, were attached to the front of the necklace: a cross-shaped pendant, a shield-shaped pendant, a pendant made from a Nordic coin of type KG7 and a Valkyrie pendant. These pendants, which are all known to have a strong symbolic significance, were thus displayed in great prominence.

Interestingly, the pierced Nordic coin was placed in the centre of this small group, with the cross pendant on one side and the shield-shaped pendant on the other. This central position may reflect a desire to give prominence to the coin-pendant, but also a desire to create a symmetrical arrangement. Indeed, the two pendants with a circular shape were suspended next to each other, flanked by the two non-circular pendants. Symmetry seems to play an important role in several other cases (e.g. Cat.I:76), but is not always sought after (see e.g. Cat.I:65).

Because of the limited number of well-documented inhumations, it is often difficult to determine how prominently the coin-pendants were originally displayed. It can be observed, though, that they tend to play a prominent role, especially in sets of type A and C.

Chapter 7. Trajectories

Hitherto, the focus has been on two particular moments in the life of the coin-pendants: production of the coin-pendants and their use as ornament. These two moments are pivotal, but they cannot be fully understood without being placed into larger sequences of events. The aim here is to reconstruct the typical trajectory of the Viking-Age reused coins in order to determine how the different events in their lives are related to each other.

7.1. Methodological considerations

Many of the events preceding the deposition of a coin-pendant in Scandinavia can be arranged in a sequence. This sequence typically looks as follows: (1) minting of the coin, (2) circulation as currency, (3) import to Scandinavia (if not Scandinavian), (4) circulation as bullion, (5) transformation into pendant, (6) use as pendant, (7) deposition. In many cases, one further event can be added before ‘deposition’, i.e. ‘return to circulation’.

The possibility of reconstructing the details of this sequence depends on three main factors: dating resolution of the life events, lifespan of the reused coins and return to circulation. These three factors need to be considered before trying to reconstruct the typical trajectory of the reused coins in Scandinavia.

7.1.1. *Dating resolution*

The only two events in the life of the reused coins that can almost always be dated with

precision are minting and deposition (see Ch.2.3.1). Date of minting is either inscribed on the coin or can be inferred from various pieces of evidence, such as epigraphy, iconography or historical circumstances. It can be ascertained to the year or within limited periods of time. Date of deposition can be inferred from the archaeological context in which the coins occur. Of course, the degree of resolution depends on the archaeological context. Coin hoards can be dated almost to the year while graves can only be dated to a period within fifty or a hundred years.

The events occurring between minting and deposition are harder to grasp chronologically, because they have rarely left physical traces that are datable. It may be possible to provide a chronological horizon for them, like in the case of ‘import to Scandinavia’, which can be connected with specific inflows of coins. Unfortunately, this often remains vague and/or hypothetical.

The transformation into pendant stands out as an exception, as this event can sometimes be intrinsically dated with precision. As shown in Chapter 4, there are some types of suspension that can be linked to specific phases of the Viking Age. The loops of type Lr2, for instance, appear to be characteristic of Phase I (see Ch.4.4.3), while those of type Lr3 appear to be characteristic of Phase II (see Ch.4.4.4). This typological dating can be used to determine when the transformation into a pendant took place. If a coin-pendant is equipped with a loop dated to Phase I, then the coin from which it is made was turned into a pendant during Phase I.

Also interesting here are the coin-pendants with loops that are made from coin fragments (see Ch.4.2.4). These coin fragments, when they are identifiable, can provide a *tpq* for the ‘transformation event’. For instance, the fact that the Abbasid dirham of 778/9 found at Børglum has a loop made from a fragment of a *Long Cross* penny (c.997–1003) of Æthelred II implies that this dirham was turned into a pendant after c.997 (Fig.7.1). This *tpq* sometimes makes it possible to date with a high level of precision when the coins were turned into ornaments.

A total of eleven loops made from coin fragments have been identified in the present study. These loops are attached to a great variety of coins and derive from a great variety of contexts, including graves, mixed hoards and jewellery hoards (Table 7.1). The earliest context in which a loop made from a coin fragment has been found is the Sundveda hoard, with a *tpq* of 843/4. The latest context in which a loop made from a coin fragment has been found is the Johannishus hoard, with a *tpq* of 1120. This type of loop seems to have been used throughout the Viking Age and all over Scandinavia. As already noted (Ch.4.3.2), cutting a coin is probably the easiest way to obtain the band of metal necessary for making a loop.

The fact that some of the means of suspension can be dated with precision offers considerable potential for reconstructing the life of the Viking-Age coin-pendants. By determining when the transformation into pendant took place, it becomes possible to better understand the preceding and following phases. How long did the coins circulate before being turned into pendants? How long were they used as pendants before being deposited or returning to circulation?

In practice, however, only few means of suspension can be dated with enough precision to provide significant chronological in-



Fig.7.1. Abbasid dirham issued in 778/9 with loop made from a fragment of a *Long Cross* penny of Æthelred II (MS FP 2030; photograph by the author). Scale 1.5:1.

formation. In the Lillsved hoard (Cat.II:65), for instance, the fact that the loop can be attributed to phase I on typological grounds is not chronologically helpful. The dating resolution of the loop is too low to determine when between 917/8 (date of minting of the reused coin) and 969/70 (*tpq* of the hoard) the coin was transformed into a pendant. It is only in special circumstances that the means of suspension can really help us to refine the chronology of the reused coins, as when the reused coins have a very long lifespan or when the loops attached to them were added shortly before a typological change.

Because they do not provide systematic evidence, the means of suspension cannot be used to reconstruct the typical trajectory of the Viking-Age coin-pendants. They can only be used as special examples. To deal with the typical, it is necessary to find methods which can be applied to larger groups of coin-pendants.

7.1.2. *Lifespan of the reused coins*

The possibility of dating the events in the life of a reused coin depends a lot on how much time has passed between the date of minting and date of deposition. As a rule, a reused coin with a long lifespan is harder to interpret than one with a short lifespan. This can be explained by the fact that the sequences of

Table 7.1. Coin-pendants with loops made from coin fragments.

Province	Parish, site	Inv nr	Reused coin	Coin fragment reused as loop	Context	Deposition date
Jutland (Dk)	Børglum, near the monastery	MS FP 2030	Abbasid dirham 777/8	English penny 997–1003	Single find	Unknown
Blekinge (Sw)	Hjortsberga, Johannishus	SHM 3491	Byzantine miliaresion 977–89	Unidentified Abbasid dirham, 833–946	Hoard	<i>tpq</i> 1120
Dalsland (Sw)	Färgelanda, Stora Ryk	SHM 21668	Volga Bulgar imitation after 909	Unidentified Islamic dirham	Female hoard	Tenth C.
Gotland (Sw)	Bro, Kvie	KMK dnr 311-961-2015	Samanid dirham 911/2	Unidentified Islamic dirham	Hoard	<i>tpq</i> 979
Gotland (Sw)	Hablingbo, Havor?	SHM 8064	English penny c.1003–9	Unidentified Western coin	Grave?	Unknown
Gotland (Sw)	Rone, Stale	SHM 25384	Byzantine miliaresion 977–89	Unidentified Western coin	Hoard	<i>tpq</i> 1036
Gotland (Sw)	Stånga, churchyard	SHM 11948	English penny c.997–1003	Unidentified Western coin	Grave	Twelfth C.
Gotland, (Sw)	Vamlingbo, Kvarna	SHM 12956	Samanid dirham 914–921	Samanid dirham 902/3	Hoard	<i>tpq</i> 994
Gästrikland (Sw)	Near Gävle?	UUM	Samanid dirham 914/5	Abbasid dirham 833–892	Single find?	Unknown
Uppland (Sw)	Odensala, Sundveda	KMK 104601	Umayyad dirham 713/4	Abbasid dirham 833–846	Hoard	<i>tpq</i> 843/4
Sweden?	Unknown	KMKs	Hiberno-Scandinavian c.997–1020	Unidentified Western coin	Unknown	Unknown

events gain in complexity as they lengthen. The longer the lifespan, the more numerous the events within the sequence and the larger the interval within which to place them.

The reused coins with a short lifespan can be easily interpreted. The different stages in their lives quickly follow each other. This can be illustrated by a German coin-pendant from Äspinge (SHM 6620), whose lifespan was approximately twenty years. This coin-pendant is made from a coin issued between 1027 and 1036, while the hoard in which it was deposited has a *tpq* of 1047. As a consequence, all the life events of the coin, like transformation into pendant or return to circulation, are concentrated within a short interval of time. It is clear that this reused coin did not circulate much in Scandinavia before being selected and that it was worn as a pendant for a very short period of time.

Pierced and looped coins with a long lifespan present a greater challenge. The pace at

which the different stages in their lives follow each other is harder to grasp. This can be illustrated by an Islamic coin-pendant from Mannegårde (SHM 11300), whose lifespan is approximately 190 years. This coin-pendant is made from a coin issued in 912/3, while the hoard in which it was deposited has a *tpq* of 1102. How long did it circulate in Scandinavia before being selected for suspension? How long was it worn as a pendant? How long before deposition was it returned to circulation? Because the means of suspension is not datable, there is no way to determine when within this large interval of time the different events occurred.

The contrast between these two examples is striking. In the case of the German coin, it is possible to get a clear chronological picture of its life. The events can be dated within twenty years, meaning that the contexts in which they occur are possible to deduce. We know, for instance, that the coin was selected

and worn as pendant at a time when German coins were highly available. In the case of the Islamic coin, it is impossible to get a clear chronological picture. The events cannot be dated closer than within 190 years, meaning that the contexts in which they occur are almost impossible to deduce. Was the coin selected and worn at a time when the Islamic coins were still highly available or did it happen at a time when the Scandinavian coin stock was dominated by English and German coins?

7.1.3. Return to circulation

The Viking-Age reused coins can follow two different trajectories before deposition: either they are deposited while still being used as pendants or they regain a currency function for some time before being deposited. These two trajectories are represented by different find contexts. The coin-pendants found in graves and jewellery hoards seem to have predominantly retained an ornamental function until burial whereas those found in mixed and coin hoards seem to have been predominantly returned to circulation at some point.

In graves and jewellery hoards, the Viking-Age coin-pendants occur in combination with the ornaments with which they were supposedly worn before burial. They form part of ornamental sets, thus supporting an ornamental interpretation. Moreover, those of the coin-pendants found in inhumations tend to occupy a functional position. They seem to have been worn by the deceased to be displayed.

Not all the coin-pendants found in Viking-Age inhumations have retained an ornamental function, though. In grave 750 at Birka (Cat.I:72), the looped Roman coin was contained in a purse, together with one and a half Islamic coins, four weights and a bronze knob. The content of the purse, with weights and hack metal, can be associated with the

bullion economy, in which precious metal is valued by weight and purity. It is likely that this coin-pendant had ceased to function as ornament at an earlier point in its life. Even if some other examples are known (e.g. Cat.I:70), the deposition in graves and jewellery hoards of coin-pendants with a currency role is clearly not the norm in Viking-Age Scandinavia.

There are good reasons to think that the coin-pendants deposited in mixed and coin hoards had usually regained a currency role before being deposited. Firstly, the hoards in which they appear almost exclusively contain economy-related objects, such as coins, ingots and hack-silver. Some complete ornaments also occur occasionally, but the fact that they are almost never made of bronze or base metal suggests that they were primarily valued as bullion. Secondly, the coin-pendants found in these hoards have frequently been fragmented to generate hack-silver. In total, about eighteen per cent of the pierced and looped coins included in the hoard sample are fragments (see Table 2.2). Thirdly, there are a number of coin-pendants from which the loops have been intentionally removed (Talvio 2000:983). These loops, which were presumably made of copper alloy, may have been removed because they were of no value after the coin-pendants had returned to circulation.

Of course, not all the coin-pendants found in mixed and coin hoards must have been intended as bullion. The inclusion of symbolic objects in hoards with an apparent economic purpose is a well-known phenomenon (see Myrberg 2009; Pedersen 2011:159–66). It shows that hoards represent the personal property of individuals, not only their wealth. The looped dirham found in Eketorp is a case in point (Cat.II:58). This coin is the oldest in the hoard and the only to have been gilded. It probably had a special value and may

have been included to form a set with the many complete ornaments also included in the Eketorp hoard. It should be emphasised, however, that the looped coin from Eketorp appears to have been an exception and that most of the coin-pendants deposited in mixed and coin hoards seem to have regained a currency role.

This additional stage in the life of the coin-pendants complicates interpretation. With their return to circulation, the pierced and looped coins are more likely to have travelled away from where they were transformed, which may involve a distortion of the geographical picture. Moreover, it becomes almost impossible to determine how long a particular coin-pendant was worn as jewellery, provided that the moment when the coin was returned to circulation is not datable.

7.2. How long did the coins circulate before reuse?

In Viking-Age Scandinavia, coins remained in circulation for considerable lengths of time. Because of the absence of *renovatio moneta* until the late eleventh century, it is not unusual to find very old coins in all kinds of contexts (see e.g. Cat.II:35, 53). This makes it particularly difficult to determine at which point a reused coin with a long lifespan was withdrawn from circulation.

7.2.1. Test marks on coins

The best way to determine systematically whether coins circulated for a long time before being turned into pendants is to investigate the test marks they carry. In Viking-Age Scandinavia, where a bullion economy was dominant, coins were often subjected to a test to check the quality of the silver. Three types of test marks have been distinguished: nicks, notches and pecks (Fig.7.2). They were all

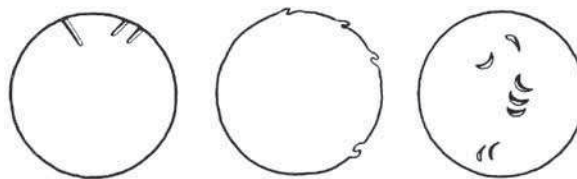


Fig.7.2. Types of test marks used in Viking-Age Scandinavia. From left to right: nicks, notches and pecks (after Hammarberg et al. 1989).

made using a sharp tool, preferably a knife.

When used in Viking-Age Scandinavia, coins could potentially acquire test marks every time they were exchanged. The presence of test marks can thus be seen as reflecting the intensity of coin circulation. As pointed out by several authors (see e.g. Metcalf 1985; Archibald 1990), the average number of pecks on a coin tends to increase with the length of time it has circulated in Scandinavia before burial. It does not seem, however, that the number of test marks is exactly correlated with the number of times coins were exchanged. Several test marks could be applied on a single occasion, as is indicated by the series of pecks which cover some of the Viking-Age coins (Malmer, B. 2000; Kilger 2006). It is also likely that not all silver was tested when large sums of money were involved.

Comparing the number of test marks on the *miliaresia* showing no signs of reuse to the number of test marks on the *miliaresia* showing signs of reuse provides interesting results. If the *miliaresia* showing signs of reuse had been selected for transformation very soon after their arrival in Scandinavia, one would expect them to be significantly less tested than the *miliaresia* showing no sign of reuse. Remarkably, this is not the case. There is little difference between the two groups (Table 7.2). The average number of test marks per piece is around 4.5 in both cases, while the proportion of untested pieces only varies within a very narrow range. This

would indicate that the two groups of miliaresia circulated as currency with almost the same intensity in Scandinavia, despite the fact that the miliaresia showing signs of reuse were presumably withdrawn from circulation for a while. A possible explanation for this is that the reused coins remained out of circulation only for a short period of time.

The problem with this comparison is that it is difficult to determine at which point in their life the Byzantine miliaresia were tested, since almost all of the known examples derive from mixed hoards in which they had regained a currency function. Were the coins tested during the circulation phase preceding the transformation into pendant or during the circulation phase following their return to circulation? It could be argued that there is no need to test silver once a coin has been pierced. The hole would make it possible to check the quality of the metal by seeing inside the coin. In fact, it seems that testing was not just a purely 'rational' economic practice. As pointed out by Christoph Kilger (2006:464), pecking and nicking may be regarded as 'repetitive practices which became part of the routine of handling large amounts of precious metal'. These practices were probably part of 'rituals' occurring in any exchange situation.

To determine at which point the reused coins were usually tested, the best solution is to focus on the grave material. Because the reused coins found in graves have never returned to circulation, there is every reason to believe that the test marks appearing on them were made before they were turned into pendants. These test marks would thus reflect the circulation phase preceding the transformation into a pendant.

7.2.2. Test marks on reused coins found in graves

It seems that a significant proportion of the pierced and looped coins deposited in Scan-

dinavian graves did not circulate much before being turned into pendants. Indeed, a total of approximately 120 coin-pendants without test marks can be found in Catalogue I, which represents more than 50 per cent of the grave material.³⁶ This low frequency of testing would indicate that many of the coins reused as pendants were withdrawn from circulation relatively soon after their arrival in Scandinavia.

A clear contrast emerges between this group of coin-pendants and the reused miliaresia investigated above. The reused miliaresia, which derive almost exclusively from hoards, have been more frequently tested for purity than the coin-pendants found in graves. This contrast supports the idea that a coin-pendant which had regained a currency function was likely to acquire test marks during this later circulation phase. It may also reflect the fact that the practice of coin testing varied in frequency throughout the Viking Age. Most of the reused miliaresia were in circulation in the eleventh century, at a time when pecking was at its height.

Concurrently, the grave evidence clearly shows that some of the coins reused as pendants in Viking-Age Scandinavia could circulate intensively before transformation. A case in point is the Byzantine coin from grave 557 at Birka (Cat.I:64), which has fourteen nicks on its surface. Another case in point is the German coin from grave 2 at Backa (Cat.I:22), which has more than 30 pecks on its surface. The number of tested coin-pendants seems to increase as the distance from the most central areas increases. The coin-pendants from Phase II tend to have fewer test marks, for instance, in Gotlandic graves (e.g. Cat.I:35–8) than in Dalecarlian ones (e.g. Cat.I:17–22). This probably depended on the quality of the

³⁶ Test marks are hard to discern on low-resolution pictures, so the number of tested coins may be slightly underestimated here.

Table 7.2. Test marks on the miliaresia from Sweden for which secondary treatment is documented (source: Hammarberg et al. 1989).

	Coins showing no signs of reuse	Coins showing signs of reuse	Total
Number of objects	279	109	388
Average number of test marks	4.4 per piece	4.7 per piece	4.5 per piece
Coins without test marks	26.9%	33.9%	28.6%

coin stock available in each part of Scandinavia. In the province of Dalarna, almost all the coins available in the Viking Age were heavily tested (see CNS 16.1), thus indicating that they were exchanged several times before reaching this remote area.

What emerges from the study of the test marks found on Viking-Age coin-pendants is a mixed picture. It seems that some of the coins reused as pendants in Scandinavia were withdrawn from circulation at a very early point while others circulated for a while before being selected. These differences in trajectory can be attributed to a wide range of factors, including local economic conditions, distance from the source of supply and personal preference for new/old coins.

7.3. How long were the coins worn as pendants?

It is possible to assess how long the reused coins from Viking-Age Scandinavia were worn as ornaments by focusing on mixed and coin hoards. The idea is to compare the coins showing signs of reuse with those showing no signs of reuse in order to see how they differ. Because the two groups have similar trajectories, except for the ‘reuse’ episode, the differences in chronology emerging are likely to reflect this episode.

7.3.1. *The Byzantine material*

The Byzantine coins found in mixed and coin hoards are best suited for a study of this kind.

This group is exhaustively published (Skaare 1976; Hammarberg et al. 1989; Horsnæs 2016) and is large enough to be statistically significant. Moreover, the Byzantine coins found in mixed and coin hoards always occur as small groups, meaning that there should be no distortion of the picture resulting from hoard size.³⁷ The three largest groups of Byzantine coins circulating in Scandinavia have been considered separately: miliaresia of Constantine VII and Romanos II (c. 945-59), miliaresia of John I (c. 969-76), and miliaresia of Basil II and Constantine VIII (c. 977-89).

Figure 7.3 shows the chronological distribution of the Byzantine coins deposited in mixed and coin hoards in Viking-Age Scandinavia. The coins showing signs of reuse are marked in red and those showing no signs of reuse are marked in blue. In all three cases, a similar pattern emerges. As expected, the Byzantine coins showing signs of reuse tend to gain in prominence as time passes. This tendency is less apparent towards the very end of the Viking Age, when the number of Byzantine coins in circulation is too low to be statistically significant. It is also clear that the Byzantine coins showing signs of reuse reach their first peak in hoards later than those showing no sign of reuse. There is a gap of about twenty years between the two groups.

Table 7.3 shows the average time after which the Byzantine coins circulating in

³⁷ With a few exceptions (see e.g. SHM 16077; SHM 16504), the Scandinavian hoards with Byzantine coins contain no more than ten of them.

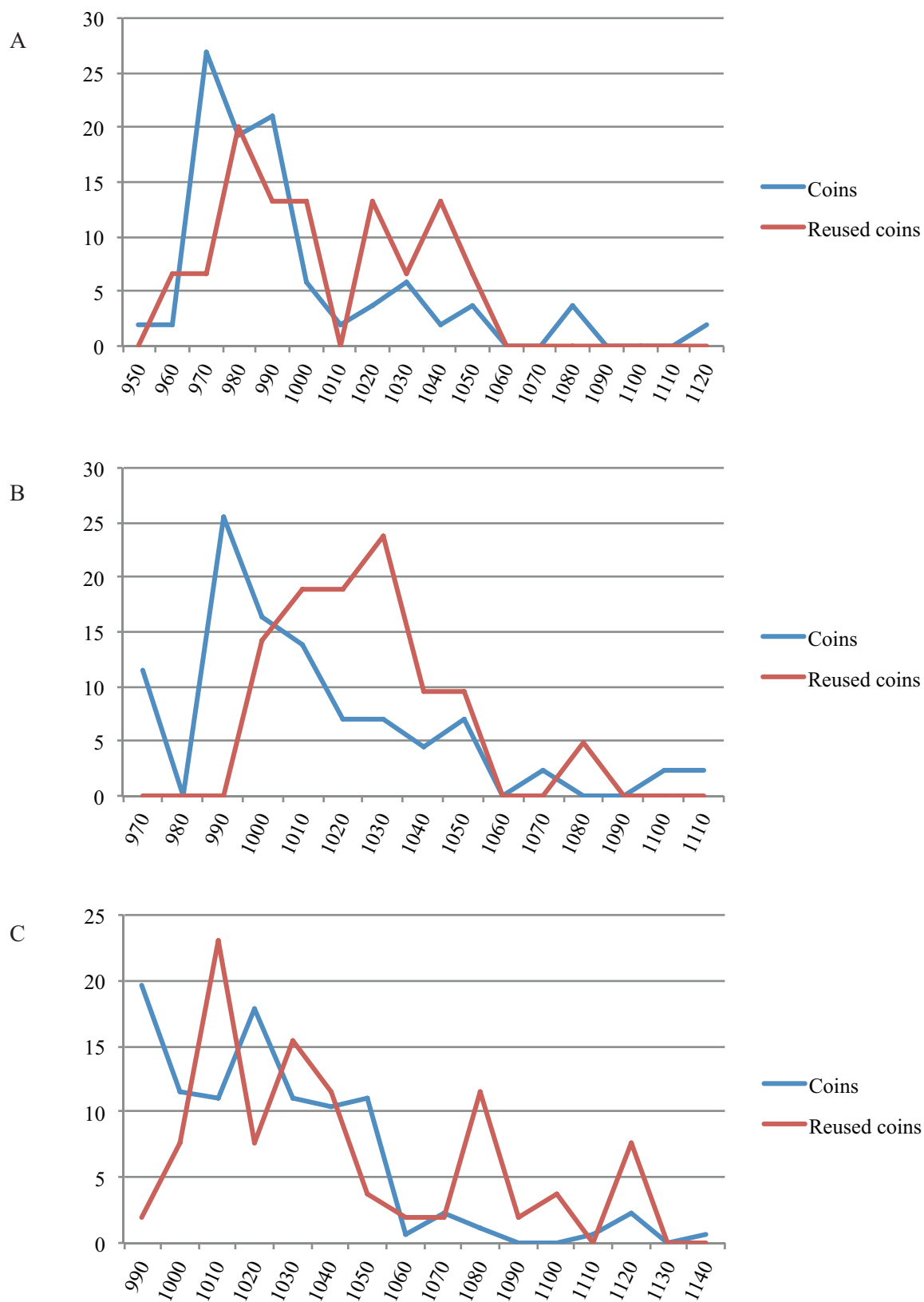


Fig.7.3. Chronological distribution of the miliaresia in mixed and coin hoards from Scandinavia showing signs of reuse and no signs of reuse: (A) miliaresia of Constantine VII and Romanos II, (B) miliaresia of John I, (C) miliaresia of Basil II and Constantine VIII (source: Skaare 1976; Hammarberg et al. 1989; Horsnæs 2015).

Table 7.3. Average time before deposition of miliaresia in mixed and coin hoards in Scandinavia based on *tpq* (source: Hammarberg et al. 1989).

	Coins	Reused coins	Difference
Constantine VII and Romanos II	39 years	49 years	10 years
John I	39 years	54 years	15 years
Basil II and Constantine VIII	39 years	58 years	19 years
Average	39 years	56 years	17 years

Scandinavia were deposited in mixed hoards. This average time is calculated based on the latest possible date of issue of each coin type: 959 for the miliaresia of Constantine VII and Romanos II, 976 for the miliaresia of John I and c.989 for the miliaresia of Basil II and Constantine VIII. Even if this method involves a chronological distortion with regard to absolute circulation time, this does not affect the validity of the comparison within each coin type.

On average, the Byzantine coins showing signs of reuse are deposited in mixed hoards from Scandinavia about fifteen years later than those showing no sign of reuse. The amount of variation among the three coin types is limited: nine years.

From this, we can conclude that the Byzantine coins reused as pendants returned to circulation soon after being turned into pendants. They were not worn as ornaments for a long period of time. This would imply that the Byzantine coin-pendants were, as a rule, *not* passed onto the next generation. They could be transmitted, but rather in the form of bullion than as jewellery. A good example of this is provided by the looped miliaresion from the List hoard (Cat.II:25), deposited in c.1000. This reused coin, issued between c.977 and c.989, had a lifespan of less than 25 years. Even if it is impossible to know exactly how long it was worn as pendant, it is almost certain that this episode in the life of the object did not exceed one generation.

This picture should be contrasted, though,

with the picture emerging from graves and jewellery hoards. Indeed, the Byzantine coin-pendants found in these contexts tend to be deposited later than those found in mixed and coin hoards, thus suggesting that they were worn as ornaments for longer periods of time. Grave 4 at Silte (Cat.I.37), for instance, can be dated to c.1200, while the Valbo hoard (App.I:8) can be dated to the first half of the twelfth century. The only exception to this rule is grave 341 at Sântorp (Cat.I.112), which has been dated to the beginning of the eleventh century. One reasonable hypothesis to explain this difference between contexts is that the coin-pendants worn for more than one generation tended to gain in symbolic value, which decreased their chances of re-turning to circulation at a later point.

7.3.2. *Intensity of use*

As emphasised above, it is difficult to determine how long the reused coins found in graves were worn as pendants. Neither of the two events which bracket this phase of life – transformation into pendant and deposition in the grave – can be dated with precision. It is possible, though, to investigate the coin-pendants themselves in order to assess ‘intensity of use’. Of course, the problem with trying to determine ‘length of use’ by focusing on ‘intensity of use’ is that the two are not necessarily correlated. A coin-pendant worn once a year will show little wear after 50 years while a coin-pendant worn every day will show much wear after a couple of years. Moreover, the degree of



Fig.7.4. Types of damage caused by long-term use as pendants: wear of the means of suspension (Cat.II:17; photograph by the author), wear around the means of suspension (Cat.I:97; photograph by the author) and replacement of a broken suspension attachment (Cat.I:34; photograph by the author). Scale 1.5:1.

wear is dependent on how the coin-pendants were suspended. With what matter were the coin-pendants in contact? Were they worn at the neck or on the chest? Despite these difficulties, the state of preservation of the coin-pendants can provide further insight into the typical trajectories they follow.

Three main types of damage can be used to determine whether a coin-pendant has been worn intensively or not (Fig.7.4): wear of the means of suspension, wear around the means of suspension and replacement of a broken suspension. The means of suspension wear down mainly because of the friction on the cord with which the coin-pendant is suspended. This type of damage is characterised by a narrowing at the bend of the loop or by a deformation of the hole. The metal around the means of suspension wears because of the hard beads with which the coins are combined. This type of damage is characterised by a flattening of the coin edge on each side. The means of suspension can break when exposed to intensive use. This type of damage leads either to a return to currency or to the addition of a new means of suspension.

The evidence of surface wear, which is often used by numismatists to draw conclusions on coin circulation (e.g. Lind 1988:99–106), is problematic here, because it is often impossible to differentiate between surface wear caused by

circulation and surface wear caused by ornamental use. It is only when one of the two sides shows more wear than the other that surface wear can be attributed to ornamental use.

Many of the coin-pendants found in Scandinavian graves from the Viking Age are affected by at least one of these kinds of damage (Table 7.4). Obvious wear of the means of suspension can be observed in at least six graves. Obvious wear around the means of suspension can be observed in at least twelve graves. Replacement of a broken suspension is less common, but can be observed in at least four graves. Interestingly, most of the reused coins listed here were already old when deposited. In grave 418 at Birka (Cat.I:60), for instance, the Carolingian coin reused as a pendant, which combines different types of damage, was minted in c.822–40, while the associated grave-goods suggest a date in the first half of the tenth century.

It seems that the coin-pendants deposited in graves were worn, on average, longer than those deposited in mixed hoards. Unfortunately, it is not possible to determine to what extent, because the grave material cannot be investigated with the same degree of precision. This observation, however, should not blind us to the fact that most of the Viking-Age coins showing signs of reuse appear to have retained an ornamental function

Table 7.4. Damage caused by long-term use on the coin-pendants found in Scandinavian graves (source: Catalogue I).

Types of damage	Catalogue number
Obvious wear of the means of suspension	31, 33, 56, 68, 72, 81
Obvious wear around the means of suspension	4, 14, 38, 43, 58, 60, 68, 83, 95, 97, 115, 125
Replacement of a broken suspension	22, 34, 41, 60

only for a short period of time, probably less than a generation.

7.4. Return to circulation

In Viking-Age Scandinavia, the majority of the coins reused as pendants appear to return to circulation at some point before burial. This is obvious when comparing the two catalogues forming the backbone of this thesis. Catalogue I, in which all the known Scandinavian graves with Viking-Age coin-pendants are listed, contains a total of 254 pierced and looped coins, while Catalogue II, in which a sample representing ten to twenty per cent of the Scandinavian hoards is collected, contains a total of 1,073 pierced and looped coins. In other words, return to circulation must be regarded as the typical trajectory for reused coins in the Viking Age.

7.4.1. *Different trajectories*

This typical trajectory seems to vary from one region to another. In southern Scandinavia, for instance, almost all the reused coins appear to return to circulation at some point before burial. This idea is supported by the quasi-absence of graves containing coin-pendants in an area stretching from the Danevirke in the south to the province of Skåne (Fig.2.10). In mid-Sweden, by contrast, many of the reused coins appear to return to circulation, but the proportion of those retaining an ornamental value until burial is significantly higher. This

can be illustrated by the Swedish province of Västmanland, which has yielded many graves with coin-pendants (Cat.I:112-22) despite the limited number of coin-pendants available locally. These regional differences may be explained, at least in part, by the existence of local burial practices in the Viking Age (see Ch.2.3.3). It has been noted, in particular, that few of the silver ornaments used in southern Scandinavia were buried together with their owners, possibly because they were regarded as family fortune (Randsborg 1980:126).

Differences in trajectories also emerge between groups of coin-pendants. This is evident when comparing the coin-pendants occurring in mixed and coin hoards to those occurring in graves (Table 7.5). In mixed and coin hoards, the ‘coin-pendant’ material is almost exclusively dominated by Islamic, German and English coins. The other coin groups account for a very small proportion of the total material. In graves, the ‘coin-pendant’ material is still dominated by Islamic, German and English coins, but with an increased proportion of coin-pendants made from smaller coin groups. Interestingly, this increase in the proportion of coin-pendants made from smaller coin groups is almost exclusively at the expense of those made from Islamic coins.

From this, it can be concluded that the Viking-Age coin-pendants tend to follow different trajectories depending on the group to which they belong. The Carolingian and the

Nordic coin-pendants, for instance, almost never return to circulation once they have been worn as jewellery. They retain their ornamental function until burial. The Islamic coin-pendants, on the other hand, appear to return to circulation more frequently than any other type of coin-pendant. They can be deposited in graves, but they are clearly under-represented in this context.

Of course, using the hoard evidence to determine which types of coin-pendants returned to circulation is problematic, because hoards are not necessarily representative of coin circulation (see Ch.2.2.2). Yet, the present picture finds considerable support in the study of the single finds from Tissø (see Jørgensen 2008). In the aristocratic site of Tissø, the coin-pendants made from Nordic and Carolingian coins are concentrated within the area of the later manor and within the cult area, which suggests that they still had an ornamental value when lost, while those made from Islamic coins also occur within the area of the market, which suggests that many of them had regained a currency role when lost.

A consistent chronological pattern emerges from this picture. During Phase II, all the coin-pendants return to circulation in about equal proportion. There is no group particularly overrepresented in graves, except perhaps for the Byzantine one.³⁸ During Phase I, by contrast, certain types of coin-pendants tend to return to circulation more often than others. There are even types that almost never return to circulation, such as those made from Nordic or Carolingian coins.

A good example of how the later trajectory of the reused coins can vary is provided by the Gotlandic material. On Gotland, there is a marked difference in trajectory between the

Table 7.5. Composition of the ‘coin-pendant’ material in graves compared to that in mixed hoards (source: Catalogues I-II).

	Graves	Mixed hoards
Byzantine	3.5%	0.5%
Carolingian (ninth century)	8%	0%
English (pre c.973)	3.5%	0%
English (post c.973)	12%	11.5%
German	16%	16%
Nordic (KG3–6)	20%	0%
Islamic	29%	69.5%
Roman	1.5%	0%
Sassanian	1%	0.5%
Scandinavian	4%	2%

pendants made from Islamic coins and those made from other coin groups. The former almost never occur in graves. They were available and probably used locally, but they seem to return to circulation systematically. The latter occur more frequently in graves, especially in churchyards. Even if many returned to circulation, it is clear that they could retain an ornamental function until burial. On Gotland, there is also a marked difference in trajectory between Phase I and Phase II. During Phase I, only three graves with coin-pendants are recorded. They all contain reused Roman coins, thus indicating a rigorous selection. During Phase II, the number of graves with coin-pendants increases significantly. These pendants are made from a wider variety of coins.

As already noted, some of these differences in trajectory can be explained by the fact that the depositional practices vary regionally and chronologically. However, it also seems that some of them reflect differences in significance among the various types of coin-pendants.

7.4.2. *Understanding the differences*

Three hypotheses can be advanced to explain why some types of coin-pendants were more likely to return to circulation than others, especially during Phase I:

1- Some coin-pendants were regarded as hav-

³⁸ The coin-pendants made from English coins also appear as slightly overrepresented, but this is due to their overrepresentation in graves from Phase I.

ing a special economic value.

2- Some coin-pendants were regarded as having a special symbolic value

3- Some coin-pendants had already returned to circulation before being imported to Scandinavia.

As already noted, the coin-pendants made from Islamic coins are particularly overrepresented in hoards. They seem to have returned to circulation more often than any other type of coin-pendant. How to explain this unique trajectory? The Islamic dirhams are the most valuable coins available in Scandinavia during Phase I. They are significantly heavier than the other coins circulating at that time (see Table 3.2). Because of this special economic value, the pendants made from Islamic coins may have been more suitable than others for returning to circulation at some point.

All the types of coin-pendants overrepresented in graves during Phase I are made from coins belonging to small coin groups, such as the Carolingian or the Roman ones. They all have a limited local availability. As shown earlier (Ch.3.3.1), rarity makes the coins more attractive for reuse as ornaments. Therefore, there are reasons to believe that these small groups of coin-pendants did not return to circulation because they were particularly valued as ornaments. It is also noticeable that the smaller coin groups in circulation during Phase I tend to be decorated with distinctive designs, including crosses and pictorial images.

The overrepresentation of the Islamic coins with hole or loop in mixed and coin hoards from Scandinavia may be due to international factors more than to local ones. Provided that the practice of wearing coins as pendants was popular all along the way from the Islamic world to Scandinavia (see Ch.9.2.1), it

is likely that many pierced and looped coins were already present among the coins imported. These coins, which were probably not worn as pendants by their Scandinavian owners, had no particular symbolic value for them. They had no reason to follow them into the grave, in contrast with the Carolingian and Nordic coins, whose transformation into and use as pendants was local.

None of these three explanations can stand alone and account for all the observed patterns. Rather, it seems that some of them are more plausible than others in certain contexts. There are good reasons to think, for instance, that a significant proportion of the reused dirhams found on Gotland were already pierced or looped upon arrival.

In summary, the typical trajectory of a reused coin in Scandinavia can be described as follows. After its arrival in Scandinavia, the coin circulates for a relatively short period of time. It is then selected for reuse and turned into a pendant, two events probably happening at the same time. The coin is not used as a pendant for a long time. It is soon returned to circulation, probably within a generation. Finally, the coin circulates as currency for a while before being deposited in a mixed hoard.

It is obvious, at the same time, that many of the reused coins from Viking-Age Scandinavia did *not* follow this typical trajectory. Some of them, for instance, seem to have circulated for a while before being selected while some others seem to have been worn much longer than the average. It is worth emphasising that the typical trajectory of the coin-pendants could vary depending on several factors, such as coin type or period of use.

Part IV

Contextualisation and recontextualisation: the meaning of
the Viking-Age coin-pendants

Chapter 8. The reuse of coins in the Viking Age: a long-term perspective

As demonstrated in Part II and Part III, there is great diversity in the practice of reusing coins as pendants in the Viking Age. The coin-pendants are made from a profusion of coin types (Ch.3), they are transformed using a wide range of techniques (Ch.4), their orientation varies from case to case (Ch.5) and they are worn in many different ways (Ch.6). In order to identify unifying principles within this diversity, it is necessary to investigate the practice over the long term as well as change and continuity. This investigation will not be limited to the Viking-Age practice, but will also be concerned with understanding its relation to pre-Viking-Age and post-Viking-Age practices.

8.1. The reuse of ancient coins in Viking-Age Scandinavia

The practice of turning coins into pendants is not an innovation of the Viking Age, but has a long history in Scandinavia.³⁹ Roman coins were already used as ornaments in the Roman Iron Age and in the Migration period (Bursche 2008:400–1; Screen 2014:357–9). The proportion of reuse was particularly high during the Migration period, with almost

twenty per cent of all the late Roman solidi showing signs of having been pierced or looped (see Fagerlie 1967:137–44). These reused solidi served as models for the Migration period gold bracteates, with their imagery being adapted to express Germanic mythological ideas (e.g. Axboe 2007).

There is, however, an apparent hiatus between the Migration period and the Viking Age. During the Merovingian period, coins almost completely disappear from circulation in Scandinavia. They reappear in small numbers after c.725, with the production of sceattas at Ribe (Metcalf 1996:400–9). Some Scandinavian bracteates are still produced on Gotland at that time, but their designs no longer resemble coins (Gaimster 1998). Under such circumstances, what can be the link between the Viking-Age practice of turning coins into pendants and the practices known from the Iron Age? If a link is established, can it help us to understand the meaning of the Viking-Age coin-pendants?

8.1.1. *Ancient coins in Viking-Age Scandinavia: an overview*

Some pendants made from ancient coins, i.e. from coins already present in Scandinavia in the Iron Age, are known from Viking-period contexts. Eleven of them can be identified, all but one of Roman origin. Of course, many other Viking-Age pendants are made from pre-Viking-Age coins, especially from Sasanian drachms and Umayyad dirhams, but these coins all arrived in Scandinavia after the beginning of the Viking Age (see Ch.3.2.1).

³⁹ This section follows the periodisation model adopted by Lotte Hedeager in *Arkeologi kort fortalt*, which makes an attempt to reconcile the different national traditions. Following this model, the Iron Age can be subdivided into four periods (Hedeager 2017:33–46): pre-Roman Iron Age (500–1 BC), Roman Iron Age (AD 1–400), Migration period (AD 400–575) and Merovingian period (AD 575–800). Hedeager's model considers the Viking Age as a distinct period following the Iron Age.

The Roman coins reused as pendants in the Viking Age comprise one rim-mounted solidus, one looped denarius and eight pierced denarii (see Table 8.1). All date from the first/second century AD, with the exception of the solidus, issued in 364-7 (Fig.8.1). The last ancient coin reused as a pendant is a looped Merovingian solidus issued between 582 and 602. This coin and the rim-mounted solidus are the only two gold coins within this group. Both derive from the Hoen hoard (App.I:4).

The first/second-century denarii and the fourth/sixth-century solidi are the two main groups of Roman coins known from Iron Age Scandinavia. They total about 12,000 and 1,000 coins respectively, with Gotland as the main repository (see Fagerlie 1967; Lind 1981; Horsnæs 2010, 2013). Some other denominations are known, including fourth-century siliquae, but they only occur sporadically. The Merovingian coin is more unusual. Despite being typologically similar to some of the fourth/sixth-century solidi, it cannot be connected with this group, the influx of which ceased c.550 (Fagerlie 1967).

In Iron Age Scandinavia, the Roman solidi were frequently reused as pendants. Their modification varied from a crudely pierced hole to an intricate border with loop attached (Fagerlie 1967:137). The loop was normally placed to display the imperial portrait the right way up, which has been interpreted as reflecting the special significance of the imperial figure in the Germanic world. These coins were probably intended to serve as symbols of prestige and power (Bursche 2001, 2008). The first/second-century denarii have much lower transformation rates. Most of the denarii reused as pendants are provided with a hole, but some have a loop attached. The transformation was more carelessly done and rarely responded to the coin designs. These denarii have been interpreted as amulets and as symbols of prestige and power (Bursche 2008).



Fig.8.1. Roman solidus with loop from the Viking-Age hoard from Hoen (App.I:4; photograph: Eirik Irgens Johnsen, KHM). Scale 1.5:1.



Fig.8.2. Looped Roman coin from the Migration period hoard from Mannerup, Denmark (photograph: Tobias Bondesson). Not to scale.

Four hypotheses can be advanced to explain the presence of ancient coins among the Viking-Age coin-pendants.

- 1- These coins were transformed following their arrival in the Iron Age and used as pendants continuously until the Viking Age.
- 2- These coins were kept in circulation for centuries after their arrival in the Iron Age and transformed in the Viking Age.
- 3- These coins were buried following their arrival in the Iron Age and rediscovered in the Viking Age.
- 4- These coins only arrived in Scandinavia in the Viking-Age.

Depending on which explanation holds, the meaning of the coin-pendants can differ significantly. Hella Eckardt and Howard Williams (2003) have shown, for instance, that Roman objects rediscovered at ancient sites – objects without a past – and Roman objects identified as Roman or transmitted without interruption – objects with a past – could be used and perceived in different ways. Determining which hypothesis holds is also es-

Table 8.1. Roman coins found in Viking-Age contexts.

Province	Parish, site	Inv nr	Context	Deposition date	Coins	Reuse
Gotland (Sw)	Hellvi, Ihre 479A	GF C 10221:132	Grave	Eighth C.	1 silver	Pierced
Buskerud (No)	Øvre Eiker, Hoen	UO C719-51	Jewellery hoard	c.852	1 solidus	Looped
Uppland (Sw)	Adelsö, Björkö Bj 750	KMK 101937	Grave	Tenth C.	1 denarius	Looped
Gotland (Sw)	Väskinde, Gällungs 12	SHM 32391	Grave	Tenth C.	1 denarius	Pierced
Gotland (Sw)	Visby, Kopparsvik 18	GF C 12675:18	Grave	Tenth C.	1 denarius	Pierced
Gotland (Sw)	Fole, Stora Tollby	SHM 6130	Jewellery hoard	Tenth C.	2 denarii	Pierced
Uppland (Sw)	Adelsö, Björkö Bj 710	KMK 101937	Grave	Tenth C.	1 denarius	Fragment
Gotland (Sw)	Vall, Kulstade	SHM 16594	Mixed hoard	934/5	1 denarius	Pierced
Gotland (Sw)	Linde, Rangsarve	SHM 16518	Mixed hoard	955	1 denarius	Pierced
Bornholm (Dk)	Vestermarie, Kongens Udmark	MS FP 224, 396	Mixed hoard	973	1 denarius	Fragment
Västmanland (Sw)	Dingtuna, Östjädra	SHM 16217	Mixed hoard	991	1 denarius	Fragment
Gotland (Sw)	Hemse, Ocksarve	SHM 33128	Mixed hoard	999	6 denarii	
Gotland (Sw)	Rone, Uggårda	SHM 27518	Coin hoard?	1050	2 denarii	
Öland (Sw)	Alböke, Stora Haglunda	SHM 18287	Mixed hoard	1085	1 solidus	
Gotland (Sw)	Linde, Smiss	SHM 19577	Mixed hoard	1090	1 denarius	
Bornholm (Dk)	Østermarie, Store Frigård	MS FP 1701	Mixed hoard	1106	1 denarius	
Gotland (Sw)	När, Halsarve	SHM 23040	Mixed hoard	1110	1 denarius	
Gotland (Sw)	Eksta, Halsarve	SHM 814	Mixed hoard	1113	2 denarii	
Gotland (Sw)	Hemse, Ocksarve	SHM 16504	Mixed hoard	1120	80 denarii	1 pierced
Gotland (Sw)	Eskelhem, Övide	KMK dnr 431-2358-12	Mixed hoard	1131	1 denarius	
Gotland (Sw)	Lummelunda, Ocksarve	SHM 29360	Mixed hoard	1143	1 denarius	

sential for understanding the link between the Viking-Age practice of reusing coins as pendants and the Iron Age practices. If the Roman coins were not already transformed when appearing in the Viking Age, then they cannot be regarded as prototypes or precursors of the Viking-Age practice.

8.1.2. When were the ancient coins transformed?

Many of the old coins reused as pendants seem to have been transformed long before the beginning of the Viking Age. In the Hoen hoard, the loop attached to the Roman solidus is an edge-mounted loop. This type of loop is typical of the Migration period (see Ch.4.2.2). In this same hoard, the loop attached to the Merovingian solidus is a Viking-Age sandwiched loop, but it seems to replace an older loop, probably rim-mounted (Blackburn 2006:185). The degree of wear of

the coin supports the idea of a long period of use as a pendant. In grave 750 at Birka, the loop attached to the Roman coin is the standard type of loop used in the Viking period (see Ch.4.2.4). Given that earlier examples are also known (Fig.8.2), a transformation during the Iron Age cannot be completely ruled out.

Even if holes are more difficult to date, there are reasons to believe that at least some of them had already been made in the Iron Age. The Roman coin from grave 18 at Kopparsvik (Cat.I:41) is provided with two holes, a broken one and a fresh one. The presence of a broken hole suggests that the coin was worn for a long time. The Roman coin from grave 479A at Ire (Cat.I:33) is so worn that it cannot be identified. Its hole is surrounded by a circular depression, which is indicative of prolonged rubbing with a string. Most of the other pierced denarii are also very worn, but

it is impossible to determine whether this damage predates or postdates the transformation.

The idea that the ancient coins reused as pendants were transformed long before the Viking Age and used over many generations is further supported by the structure of the Roman coin group. Table 8.1 shows a list of all the denarii and solidi found in Viking-Age contexts. Clearly, a radical change occurred in the second half of the tenth century. Before c.980, the denarii and solidi are all pierced or looped, with the exception of the coin fragment from grave 710 at Birka. They normally appear in special contexts, such as graves or theme hoards. Their distribution is very scattered. Only one find contains more than one Roman coin. After c.980, the Roman coins are no longer reused as pendants. They are all deposited in mixed hoards, where they seem to have had an economic function. Their distribution is less scattered, with four hoards containing more than one denarius. The Ocksarve hoard, buried after 1120, alone contains 80 of them.

How can this radical change be explained? Why were the Roman coins reused as pendants during Phase I but not during Phase II? The evidence suggests that the supply of Roman coins in the Viking Age came from two sources, each perceived very differently. The early source of Roman coins was regarded as particularly valuable from a symbolic point of view while the late one was not.

The Roman coins available before c.980 were probably directly transmitted from the past. Many of them show signs of having been used continuously since they were transformed in the Iron Age. They are often very worn and equipped with old means of suspension. The occasional presence of Roman coins in Merovingian period contexts (see e.g. Lind 1981:nr172) confirms that at least some specimens continued to circulate

long after their arrival in Scandinavia.

The Roman coins available after c.980 probably derive from the discovery of an ancient hoard of denarii. They show no particular signs of continuous use and tend to appear in hoards as small concentrations. Particularly striking is the presence of two hoards with Roman coins on the same Gotlandic farm, i.e. Ocksarve. The first hoard, deposited after 999, contained six second-century denarii. The second, deposited after 1120, is the largest concentration of Roman coins in a Viking-Age context. It contained 80 denarii. This large stock of denarii may indicate that an old hoard of Roman coins was rediscovered in the vicinity some time before 999. It is possible that this discovery brought a new influx of Roman coins into Viking-Age Scandinavia. Interestingly, a third hoard found on the Ocksarve farm, the deposition of which can be dated to c.845, completely lacked Roman coins.

8.1.3. The reuse of ancient coins as a link to the past

The difference in meaning between the two groups of Roman coins casts new light on the practice of reusing coins as pendants in the Viking Age. It demonstrates that the history of the coins had an influence on their symbolic value. The Roman coins were particularly appreciated when they were inherited from the past, but not when they were rediscovered at ancient sites. Rarity in itself was not sufficient to make them desirable.

The importance of the past is also reflected in the condition of many of the reused Roman coins found in Viking contexts. With few exceptions, these coins are very worn and damaged. A case in point is the pierced coin from grave 479A at Ire (Cat.I:33). This coin is so worn that it cannot be identified. It looks almost like an undecorated piece of silver. From this, it can be assumed that the

coin was not worn because it was beautiful or because it was Roman. Its value probably derived from its history and from its age.

In the Viking Age, there seems to be a general and lasting interest in the past. It was common practice, for instance, to be buried in graves dating to the Bronze Age or to the Iron Age (Cat.I:36; Pedersen 2006). It was also relatively common to wear small items with a long life history, such as the fragment of gold berlok illustrated in Figure 8.3. This small pendant can be dated to the second century AD, while the grave in which it was deposited is dated to the early tenth century. The pendant was thus more than 800 years old when buried (Arwill-Nordbladh 2013:417). The fact that it was damaged, fragmented and re-adapted reinforces the impression that the value of the object partly derived from its age.

The presence of ancient coin-pendants in Viking-Age Scandinavia also shows that the practice of reusing coins as ornaments was not completely forgotten after the import of Roman coins had ceased. This practice survived until the Viking Age, at least in some way. The Iron Age and the Viking-Age practices of reusing coins as pendants can therefore be regarded as forming part of the same tradition.

This idea of continuity is further illuminated by the fact that some of the Roman coin-pendants found in Viking-Age contexts are combined with Gotlandic bracteates. In grave 479A at Ire (Cat.I:33), a gilded bracteate of type E was lying at the waist level, some distance away from the other pendants. This type of bracteate can be dated to the Merovingian period (Gaimster 1998). In the Stora Tollby hoard (App. I:6), the two Roman coins were found together with a gold plate and five gold bracteates, three of type E and two of type H. The bracteates of type H can be dated to the first half of the Viking Age (Sten-



Fig.8.3. Fragment of Iron Age gold berlok from Birka grave 606 (SHM 34000; photograph: Gabriel Hildebrand, SHM). Scale 3:1.

berger 1958). The combination between reused Roman coins and bracteates is typical of the Migration period. Both appear together in a large number of hoards, such as the Gudme hoard (Horsnæs 2010:94–105) or the Fuglesangsager hoard (Horsnæs 2002:134–6). It is significant that the tradition of combining reused Roman coins and bracteates was still alive in the Viking Age, although these types of pendants had become much rarer (cf. Kilger 2008a:330).

Admittedly, the link between the Iron Age and the Viking-Age practices of reusing coins as pendants remains tenuous. The number of pendants made from ancient coins is very limited compared to the number of pendants made from newly imported coins, and their distribution is almost exclusively restricted to Gotland. Moreover, the pendants made from ancient coins never occur together with those made from newly imported coins, except in the Hoen hoard. Nevertheless, the existence of this link with the past is important for understanding the emergence of the practice in the Viking Age and the special meaning ascribed to objects with a long history.

8.2. The reuse of coins in the Viking Age: between change and continuity

The practice of reusing coins as pendants underwent many changes in the Viking Age, especially in its later phase. During Phase II, the number of pendants combined with coin-pendants (Ch.6.4.1) and the number of grave goods accompanying their owners (Ch.2.3.3) decreased significantly. New types of suspension were also introduced at that time, such as the loops of type Lr3 (Ch.4.4.4) and the rings of type R3A (Ch.4.4.5). Finally, the coins selected for reuse show increased diversity after c.980, when the inflow of Islamic coins was replaced by that of English and German coins (Ch.3.4.1). Most of these developments can be illustrated by considering the Byzantine coin-pendants found in graves.

8.2.1. The reuse of Byzantine coins from a long-term perspective

The oldest graves with Byzantine coin-pendants were excavated in the Birka cemeteries. Birka grave 632 (Cat.I:65), which contained a miliaresion of Theophilos with a loop of type Lr2bA, can be dated to the late ninth century or early tenth century. Birka grave 557 (Cat.I:64), which contained a miliaresion of Michael III with a hole of type H1, can be dated to the early tenth century. Both chambers were provided with a wide range of grave goods, including brooches, beads and vessels. In grave 632, the Byzantine coin was associated with a series of pendants, most of which had been imported from abroad. These pendants originated in England, Khazaria, Byzantium, the Islamic world and the Carolingian empire, thus representing a microcosm of the Viking sphere of contacts. Some of the local pendants, like the snake or the miniature chair, have also been interpreted as amulets (see Ch.6.3.1).

The grave from Styrnäs, Ångermanland

can also be dated to the tenth century, but probably to its second half (Cat.I:123). It has yielded two Byzantine bronze coins, one with a loop of type Lr1A and one with a rivet. Various artefacts derive from this possible chamber, including two oval brooches, an equal-armed brooch and a knife. The two Byzantine folles of Theophilos were worn in combination with beads and pendants. Some of them, such as the cowrie shell with loop, may have had an amuletic function (see Ch.6.3.1).

Around the year 1000, a Byzantine miliaresion with a loop of type Lr5B was placed in grave 341 at Sântorp, Västergötland (Cat.I:111). The aristocratic nature of this inhumation is strong, supported by the presence of several gold artefacts, such as a finger-ring and a number of gold foils. The looped miliaresion of Basil II and Constantine VIII was the only pendant deposited in the grave. Only ten beads were worn in combination with it. It has been argued that grave 341 belonged to the Christian part of the cemetery, situated apart from the pre-Christian one (Lundström, I. & Theliander 2004).

Grave 238 at Ire, which can be dated to the eleventh century, contained a corroded miliaresion of Basil II and Constantine VIII as well as various small utensils (Cat.I:32). This inhumation was oriented east/west and was covered by a cairn with a stone kerb. One of the kerbstones consisted of a reused picture stone depicting a spiral and two horses. It has been argued that the reuse of picture stones within burial monuments of the period was a reaction to the advent of Christianity (see e.g. Rundkvist 2012). The miliaresion had a loop of type Lr1B and a ring of type R3A attached. It was found alone, without being combined with other pendants or other beads. Judging from the disturbed position of the bones, it seems that the grave was plundered.

In 1902, several graves were discovered at Stånga when a lightning rod was installed in

connection with the church (Cat.I:40). A wide range of artefacts were unearthed, including brooches, pendants, and beads as well as a miliaresion of Nikephoros II with a loop of type Lr1B. Although nothing is known about the grave in which this coin-pendant was found, it is worth noting that it derives from a churchyard, not a pagan cemetery. Without any doubt, the context here is Christian, even if many of the artefacts worn in combination with the miliaresion still belong to the traditional Gotlandic dress.

At Silte, about 40 graves, mostly located along the western wall of the church, were excavated in the 1970s (Cat.I:37). The graves were not furnished with grave-goods, except for grave 3, which contained a miliaresion of Basil II and Constantine VIII with a loop of type Lr2bA. This coin-pendant was discovered under the chin of the skeleton, thus suggesting that it functioned as a pious medallion. Grave 3 is one of the earliest in the churchyard, most probably established in the second half of the twelfth century (Trotzig 1972:87).

The extent of these changes can be better appreciated by comparing the earliest and the latest graves containing Byzantine coin-pendants. Within less than 300 years, there is a movement from pre-Christian cemetery to Christian churchyard, from well-furnished grave to almost unfurnished grave and from complex sets of pendants to singly worn coin-pendants. Clearly, the contexts in which the Byzantine coin-pendants appear changed in the course of the Viking Age.

At the same time, the Byzantine coin-pendants and the graves in which they appear show some degree of continuity. Particularly striking is the exclusive character of most of these graves despite the gradual disappearance of the practice of grave-furnishing. The presence of chamber graves, of gold artefacts and of special burial treatments suggests that the

owners of Byzantine coin-pendants belonged to the upper social strata. Also noteworthy is the unchanging orientation of the cross throughout the period. With the exception of Stånga (Cat.I:40), all the means of suspension are placed in the axis of the vertical arm of the cross, thus displaying it either the right way up or upside down.

Many of the changes observed in the graves with coin-pendants can be connected to the profound changes occurring during the Viking Age, and especially to the Christianisation process. Unsurprisingly, the owners of coin-pendants were increasingly influenced by the Christian religion. By the end of the period, those wearing coin-pendants can all be regarded as genuine Christians. Does it necessarily mean, however, that the coin-pendants become Christian ornaments? To what extent is the practice of reusing coins as pendants influenced by the Christianisation of Scandinavia?

8.2.2. Coin-pendants and the Christianisation of Scandinavia

During Phase I, the practice of reusing coins as pendants has very little to do with Christianity. The overwhelming majority of the coin-pendants are made from Islamic dirhams (see Ch.3.3), coins bearing only epigraphical design in Kufic writing. The Christian religion itself had a limited importance in Scandinavia at the time (see Bagge & Nordeide 2007:129–35; Blomkvist et al. 2007:176–9; Gelting 2007:77–80). Early contacts with the Christian world are numerous, but all the attempts made to establish Christianity locally failed in the medium term, such as the missions led by Ansgar in the course of the ninth century. It was not until the last third of the tenth century that Christianity began to gain wide acceptance. The frequent presence of Christian objects in Scandinavian graves before this breakthrough can often be interpreted-

ed as a sign of religious syncretism (see e.g. Gräslund 1985).

It has been suggested that the few coin-pendants of Phase I featuring Christian symbols, such as those made from Carolingian or Byzantine coins, had a special religious significance to their owners. According to Anne-Sofie Gräslund (2005), the pierced and looped coins with crosses on them could function as equivalents to cross-pendants or crucifixes. She maintains that they were used as Christian amulets, often in combination with pre-Christian ones. Jens Christian Moesgaard (2004) argues that the Carolingian coins of the temple type were brought to Scandinavia by Frankish missionaries. He interprets them as baptismal gifts worn as Christian markers by the newly converted.

While it is true that the coins with Christian symbols were particularly sought after during Phase I, it is more difficult to determine their exact religious significance. In Birka, for instance, many of the Carolingian coins are oriented to show either the cross or the temple, but the contexts in which they appear are apparently pre-Christian. Four of the graves with Carolingian coins are cremations and they are all richly furnished. As Ildar Garipzanov argues (2014:152–6), the Christian message of these coins must have been regarded as secondary, even if their symbolism is likely to have been understood, if only vaguely, by their Scandinavian wearers.

With the massive arrival of German and English coins at the beginning of Phase II, the imagery of the coin-pendants changes radically (Ch.3.3). From that moment on, almost all the coins reused as pendants feature Christian symbols. Crosses are particularly prevalent. They vary in form and in size, but they appear on the overwhelming majority of the coin types of Phase II. English coins struck after the reform of Edgar, for instance, always feature a cross on the reverse, with

the exception of the *Agnus Dei* and *Hand* types (see Naismith 2017).

This change in the nature of the coin imagery coincides with the rapid breakthrough of Christianity in Scandinavia (see Bagge & Nordeide 2007:135–41; Blomkvist et al. 2007:179–89; Gelting 2007:80–7). Denmark's official conversion occurred in c.965 with the baptism of King Harald Bluetooth. In Norway and in Sweden, Christianity made considerable progress around the year 1000, at the instigation of Christian kings such as Olav Tryggvason (995–1000) and Olof Skötkonung (c.995–1022). Of course, the Christianisation of Scandinavia cannot be reduced to these political initiatives. It was a gradual process, which implied the long coexistence of Christian and pagan communities (Nordeide 2012).

The massive arrival of coins featuring Christian symbols and the conversion of Scandinavia are probably not coincidental events. As emphasised recently, 'there is an obvious connection between this change in the economic conditions affecting the rather populous social strata that were involved in wide-ranging travel and the quick breakthrough of Christianity that was to follow around the Baltic' (Blomkvist et al. 2007:179).

Understanding the relation between Christianity and the reuse of coins featuring Christian symbols is a complicated task since Christianity is difficult to trace archaeologically in the Viking Age (Gräslund 1987; Nordeide 2012:302–5). During the transition period, it is often impossible to determine with certainty whether a burial is Christian or not. Churchyards are the only contexts for which we can be confident that those owning coin-pendants were Christians.

At least fourteen graves with Viking-Age coin-pendants are known from Scandinavian churchyards (Table 8.2). Six of them are located in the churchyard at Kyrkudden

Table 8.2. Graves with Viking-Age coin-pendants located in Scandinavian churchyards (source: Catalogue I).

Cat.I	Province	Parish, site	Coins	Christian symbols	Other pendants
12	Dalarna (Sw)	Leksand, Kyrkudden 138	2	Partly oriented	x
13	Dalarna (Sw)	Leksand, Kyrkudden 156	2	Oriented	x
14	Dalarna (Sw)	Leksand, Kyrkudden 222	11	Partly oriented	Fire-steel pendant
15	Dalarna (Sw)	Leksand, Kyrkudden 248	1	Not oriented	x
16	Dalarna (Sw)	Leksand, Kyrkudden 249	1	Oriented	Miniature scythe
17	Dalarna (Sw)	Leksand, Kyrkudden 252	2	Not oriented	x
25	Gotland (Sw)	Fröjel, Ridanäs 32	1	Oriented	x
26	Gotland (Sw)	Garde, Churchyard 1951	1	Oriented	x
27	Gotland (Sw)	Garde, Churchyard 1953:1	2	Undetermined	Pendant with cross
28	Gotland (Sw)	Garde, Churchyard 1968	2	Oriented	Hemispherical pendant
37	Gotland (Sw)	Silte, Churchyard 3	1	Oriented	x
38	Gotland (Sw)	Silte, Churchyard	1	Oriented	x
39	Gotland (Sw)	Stånga, Churchyard 4	4	Partly oriented	Cross-shaped pendant
40	Gotland (Sw)	Stånga, Churchyard	4	Partly oriented	Unknown

and eight or more occur in various Gotlandic churchyards. The graves in question contain a total of 35 coin-pendants.

In about half of the graves (Table 8.2), the coin-pendants seem to have functioned as explicit Christian markers. They feature unambiguous Christian symbols, all displayed correctly. Moreover, the coin-pendants were worn either alone (Cat.I:13, 25–6, 37–8) or in combination with a few pendants (Cat.I:16, 28), thus emphasising their significance. A good example of this is the grave excavated at Garde in 1951 (Cat.I:26), where the long cross on the reverse of the coin obviously played a prominent role (Fig.8.4). This pendant with an explicitly Christian symbol was the only pendant in the grave.

In the remaining graves (Cat.I:12, 14–5, 17, 39–40), the function of the coin-pendants is more ambiguous. All the coin-pendants feature some kind of Christian symbol, but there are reasons to think that these Christian symbols only played a secondary role. The looped coin from grave 248 at Kyrkudden (Cat.I:15), for instance, is oriented to display the standing figure with a banner on the ob-

verse of the coin, while the small crosses on the reverse appear at an angle. In grave 222 at Kyrkudden (Cat.I:14), only about half of the coins respond to the Christian imagery. All the others are either too worn to be read or show no consideration for the orientation of the designs.

Also intriguing is grave 4 at Stånga (Cat.I:39), where the set of coin-pendants delivers a mixed message. In this grave, three of the coins are looped to display a long cross correctly, which suggests that they fulfilled a Christian function. However, the fourth coin prefers to orient the bust on the obverse, while the church on the reverse is pierced at an angle. There is no obvious Christian message in that case. This mixed set raises the question of whether the three coins with a long cross were primarily worn because they carried a Christian symbol or whether these crosses were merely a secondary feature. The question is particularly pertinent given the presence of a cross-shaped pendant in the same grave, which makes the message of the coins redundant. Why wear coin-pendants with crosses when already wearing an explicit Christian symbol like the cross-shaped pendant? In grave

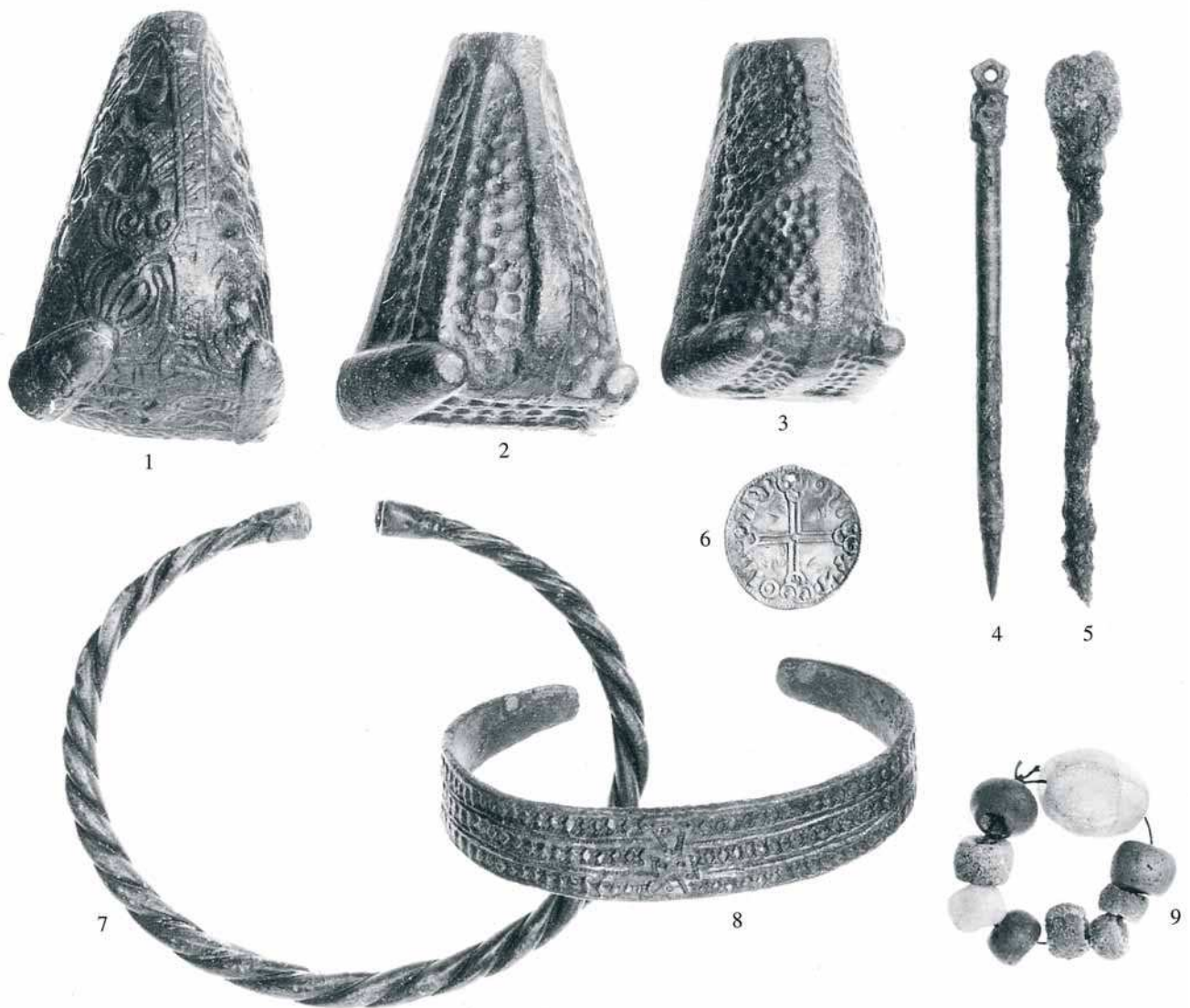


Figure 8.4. Ornaments from the grave excavated in 1951 at Garde (Cat.I:26; Thunmark-Nylén 1995b). Scale 1:1.

4 at Stånga, it seems that the coin-pendants were not exact equivalents to the cross-shaped pendant. They probably conveyed important messages beyond the Christian one.

That all the coins worn by Christians were not primarily intended as Christian markers clearly demonstrates that the practice of wearing coin-pendants was not completely Christianised during Phase II. The crosses appearing on coin-pendants were essential to some of their owners, but they played a secondary role in other cases. This suggests a certain continuity in the way coins are reused as pendants in the Viking Age: throughout the period, the object 'coin' itself was often as important, if not more important, than what appeared on it.

8.3. The practice of wearing coin-pendants in early medieval Scandinavia

The practice of reusing coins as pendants declines abruptly with the transition towards a coin economy at the end of the Viking period. In Norway, almost no coin-pendants occur later than the last quarter of the eleventh century (see Skaare 1976; Eikje Ramberg 2017). In Denmark and in mainland Sweden, almost none occur later than the first quarter of the twelfth century (see Jensen, J.S. 1992). On Gotland, there are almost none from later than the second quarter of the twelfth century (see Myrberg 2008). This period of abrupt decline

corresponds roughly, in each region, with the deposition date of the latest mixed hoards typical of the Viking Age (see Ch.2.1.2).

Despite this abrupt decline at the very end of the Viking Age, a small number of coin-pendants still appear to circulate at the beginning of the Medieval period. Indeed, the practice of reusing coins had not entirely disappeared with the transition towards a coin economy. The coin-pendants found in early medieval contexts fall into three categories: (1) Viking-Age coin-pendants kept in use after the end of the Viking Age; (2) coin-pendants made from early medieval coins; (3) Viking-Age coins turned into pendants after the end of the Viking Age. It is not always easy to distinguish between group 1 and group 3 when the coin-pendants are equipped with types of suspension that are not datable with precision.

8.3.1. The use of Viking-Age coin-pendants in medieval contexts

A total of 21 coin-pendants from the Viking Age have been found in medieval contexts (Table 8.3). These finds consist of the following: several fragments of coin-chains from the Södvik hoard, a fragment of coin-chain from the Slängs hoard, two looped coins from the churchyard at Silte, one looped coin from the Mære church, one looped coin from Vesle Hjerkin and one looped coin from Sigtuna. Most of the contexts in which these coin-pendants appear can be dated to the period between c.1150 and c.1250.

Two other finds have been added to this list, even if their interpretation is more doubtful: the looped coin from the Harndrup Skov hoard and the pierced coin from the Badeboda hoard. In the case of Harndrup Skov, it is uncertain whether the hoard should be ascribed to the late Viking Age or to the early Medieval period. The presence of brooches with typically medieval loops attached sup-

ports the latter hypothesis (cf. Ch.8.3.3). In the case of Badeboda, it is uncertain whether the pierced coin was transformed in the Viking Age or later. The fact that many Byzantine imitations of the same kind were used as pendants in the Viking Age supports the former hypothesis.

The Viking-Age coin-pendants found in medieval contexts are made from a wide variety of coins (Table 8.3): eleven English, four Danish, one Norwegian, one German, one Islamic and one Byzantine. There are also two pendants made from Byzantine imitations possibly struck in Finland (Talvio 1994). The composition of this group differs significantly from that of the coin-pendants circulating towards the end of the Viking Age. The English and the Danish group are particularly overrepresented here. Together, they account for more than two-thirds of the material. This may reflect, to some extent, the predominance of these two groups among the coins attached to coin-chains.

All these coins are likely to have been turned into pendants before the end of the Viking Age. Indeed, the loops attached to many of them are type Lr3 (Table 8.3), which is characteristic of Phase II. There are also several coin-chains that were produced between c.1020 and c.1120. A couple of features, such as the extensive use of gilding, are less consistent with a Viking-Age hypothesis, but there are reasons to think that some of the Viking-Age coin-pendants were actually reworked in the Medieval period. In the Södvik hoard, for instance, three coins equipped with Viking-Age loops are attached to a zigzag-shaped rod (Fig.8.5). No zigzag-shaped rods of this kind are known to have been combined with coin-pendants in the Viking-Age. It may be a secondary addition.

It seems that at least some of the Viking-Age coin-pendants had not ceased to function as ornaments in the Medieval pe-

Table 8.3. Viking-Age coin-pendants found in medieval contexts.

Province	Parish, site	Inv nr	Origin	Issuing date	Suspension type	Special treatment	Deposition date
Fyn (Dk)	Harndrup, Harndrup Skov	NM D31-4	Scandinavian	11th c.	Lr3B	Gilded	Twelfth C.
Gotland (Sw)	Lärbro, Slängs	SHM 2821	English	c.997–1003	Lr3A, Lr3B	Chain, gilt	c.1150–1200
Gotland (Sw)	Lärbro, Slängs	SHM 2821	English	c.997–1003	Lr3A, Lr3A	Chain, gilt	c.1150–1200
Gotland (Sw)	Silte, Churchyard 4	GF C	Byzantine	c.977–89	Lr2bA	x	c.1150–1200
Gotland (Sw)	Silte, Churchyard	GF C	English	c.997–1003	Lr-	Graffiti	c.1150–1200
Trøndelag (No)	Mære, Church	UMK FC 1129	Norwegian	c.1065-80	Lr3B	x	Thirteenth C.
Öland (Sw)	Persnäs, Södvik	SHM 900	Danish	1018–35	Lr2bA, Lr1B	x	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	Danish	1047–74	Lr1B, Lr-	x	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	Danish	1047–74	Lr3A, Lr1B	Chain	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.997–1003	Lr1B, Lr1B	Chain	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.997–1003	Lr1B, Lr1B	Chain	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.1009–17	Lr1B, Lr1A	x	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.1009–17	Lr1B, Lr1B	x	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.1023–9	Lr-, H1	x	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.1040–2	Lr1B	x	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.1050–3	Lr1B, Lr1B	Chain	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	English	c.1050–3	Lr3B, H1	Chain	c.1200
Öland (Sw)	Persnäs, Södvik	SHM 900	German	1024–39	Lr1B, Lr1B	Chain	c.1200
Oppland (No)	Dovre, Vesle Hjerkin	UMK FC 1247	Danish	1047–74	Lr1A	x	Twelfth C.
Småland (Sw)	Åseda, Badeboda	SHM 8285	Scandinavian	11th c.	H1	Gilded	Fourteenth C.
Uppland (Sw)	Sigtuna, Kv. Trädgårdsmästaren	Fnr 16634	Islamic	908–14	Lr3B	Gilded	1200–30

riod. The looped coin from grave 3 at Silte was found under the chin of the skeleton. It was probably worn by its owner at the time of burial. The looped coins from Mære church, Vesle Hjerkin and Sigtuna are all single finds. Even if it is impossible to determine how they were used when lost, ancient coins of this kind are unlikely to have had an economic function in a regulated coin economy. Finally, it is striking that all the Viking-Age coins found in the Södvik hoard and the Slängs hoard were reused as pendants. These coins form ornamental sets, which supports an ornamental interpretation.

The overwhelming majority of these coin-pendants are made from coins issued in the eleventh century. The only exceptions are the looped coins from Sigtuna and Silte, which can be dated respectively to 908–14 and 977–89. The coin-pendants found in medieval contexts thus derive from the last

Viking-Age phase of ‘coin-pendant’ production, as can also be seen from the types of loops attached to them.

The Viking-Age coin-pendants continue to serve well into the Medieval period. They still occur in hoards as late as the fourteenth century, as is illustrated by the Badeboda hoard (Table 8.3). This extended use led these ornaments to have long and complex biographies, thus accumulating histories and meanings. An example of this is provided by the coin-pendant from the Trädgårdsmästaren block at Sigtuna. This coin-pendant is made from a Samanid coin issued between 908 and 914. The loop attached to it is type Lr3B, which indicates a transformation in the eleventh century.⁴⁰ However, the coin-pendant

40 Another Samanid coin with a very similar loop is known from Sigtuna. Unfortunately, there is no information on the context in which it was found.



Fig.8.5. Viking-Age coin-pendants from the medieval hoard discovered at Södsvik (SHM 900; photograph: ATA). Not to scale.

was not deposited/lost before the beginning of the thirteenth century, at least 100–150 years later. Without a doubt, wearing an old dirham as an ornament in thirteenth-century Sigtuna must have had a special significance.

8.3.2. *The medieval coin-pendants made from medieval coins*

In Scandinavia, very few coins seem to have been turned into pendants in the decades following the transition towards a coin economy. One reason for this may be that the number of foreign coins available for reuse in Scandinavia decreases significantly at that time. In Norway, for instance, the hoards deposited between c.1080 and c.1194 contain less than seven per cent foreign coins (Gullbekk 2009:46). These foreign coins, which were particularly appreciated as pendants, are replaced by locally minted coins, whose quality is often significantly lower. Another reason may be that the adoption of coinage in Scandinavia involved a change of attitude towards coins. In a coin economy, a coin with

a hole or loop is definitely demonetised and thus loses value. This change in economic conditions is likely to have affected the way the object ‘coin’ was perceived. The high fluidity existing between the different types of economies in the Viking Age could no longer apply in the Medieval period (see Ch.1.1.3).

One coin group, though, clearly stands out: a group composed of twelfth-century Islamic dinars (Fig.8.6). These gold coins, which display a high proportion of reuse, may have been ascribed a special symbolic value. They seem to have been particularly appreciated, perhaps because of their high value and golden appearance.

A total of nine genuine Islamic dinars minted in the twelfth century are known from Scandinavia (Linder Welin 1964; Brisholm 1986). These coins all originated in the Western part of the Islamic world, i.e. Spain or North Africa. They were issued between the 1120s and the 1160s. An Arab-Christian dinar of Alfonso VIII can also be added to the list. This coin bears a Christian inscription, but



Fig.8.6. Coin-pendants and coin-like pendants from the medieval hoard discovered at Dune (SHM 6849; photograph: Gunnel Jansson, SHM). Not to scale.

written in Kufic script. It was minted in Toledo in the last quarter of the twelfth century, probably the 1170s (Golabiewski Lannby & Rispling 2006:62). All the coins from this small group of twelfth-century dinars have been found on the island of Gotland. Half of them derive from the Dune hoard (SHM 6849), which was deposited after c.1351.

Out of these ten twelfth-century dinars, at least seven were turned into ornaments. One of them was obviously meant to serve as a brooch, while the six others were probably meant to serve as pendants. In the early Medieval period, it is not always easy to distinguish between brooches and pendants, given that both types of ornaments could be provided with loops. Some of the coin-ornaments interpreted as pendants here may in fact be brooches where the pin has fallen off.⁴¹

The Dune hoard, the source of most of the twelfth-century dinars, also contains a large collection of bracteates meant to serve as ornaments (Fig.8.6). These coin-like ornaments fall into two main groups: eleven bracteates imitating twelfth-century Almojarid dinars and two bracteates imitating twelfth-century German coins. They are predominantly made from gilded silver, but gold was employed in four cases. It has been suggested that the bracteates imitating twelfth-century Almojarid dinars were produced locally (see Linder Welin 1964; Golabiewski Lannby & Rispling 2006:62). The hypothesis is based on the fact that bracteates of this type occur almost exclusively on Gotland and on the fact that there are many die-links within the Dune hoard. If this hypothesis is correct, we must assume that the Islamic coins still had a very special significance at that time.

⁴¹ A close inspection of the back side of these ornaments should provide a definitive answer to this question. Unfortunately, the pictures available for study usually show the front side only.

8.3.3. *The medieval coin-pendants made from Viking-Age coins*

The transformation of Viking-Age coins into pendants is clearly not the norm in the early Medieval period. The only example known to the author is that of a looped Islamic dirham deposited in the Slängs hoard, Gotland (Fig.8.7; SHM 2821). This hoard can be dated, on typological grounds, to the second half of the twelfth century. It contains, for instance, dragon-head terminals of a type unlikely to have been introduced before 1150 (Holmqvist 1963:56–63). It also contains a group of bracteates imitating twelfth-century Almoravid dinars, the production of which can probably be ascribed to the second half of the twelfth century.

The Viking-Age coin-pendant deposited in this early medieval hoard is made from a Samanid dirham minted in al-Shash in 910/1. This dirham is gilded and has a loop with a lily-like ornament attached. Loops of this type never occur in Viking-Age contexts (Thunmark-Nylén 1986:42). They have not been dated with precision, but it is clear that they belong to the Medieval period. Several loops of this type are attached to the Islamic dinars found in the Dune hoard. Given the date of issue of the Dune coins, the loops attached to them cannot possibly have been made before the middle of the twelfth century.

That the dirham from Slängs was provided with a loop of this type is evidence that it was turned into a pendant in medieval times, probably in the second half of the twelfth century. The biography of this dirham prior to transformation cannot be reconstructed with precision, but it does not seem that it was used as a pendant before the Medieval period. There is no evidence to suggest that an older suspension was replaced by the medieval one.

This implies that the dirham from Slängs was selected for reuse after the end of the Vi-



Fig.8.7. Tenth-century dirham with medieval loop attached from the Slängs hoard (SHM 2821; photograph: ATA). Not to scale.

king Age, more than 200 years after its manufacture in 910/1. The fact that the dirham was old, rare and unusual is likely to have played a role in the decision to reuse it as a pendant at that time. However, there are good reasons to think that this decision to reuse it as pendant was, at the same time, a reference to the Viking-Age practice of wearing coin-pendants. Indeed the Slängs hoard also contains two fragments of a Viking-Age coin-chain.

Many of the ornaments deposited in the Slängs hoard are either made from coins or inspired by coins. These ornaments include: the aforementioned Islamic coin-pendant, two fragments of a Viking-Age coin-chain, thirteen bracteates imitating west-Islamic dirhams in floral Kufic and six pendants with a cross design inspired by coins. The Slängs hoard thus provides a special insight into how the practice of wearing coin-pendants continues and mutates in the Medieval period.

The early medieval practice of wearing coin-pendants differs significantly from the Viking-Age custom. In the early Medieval period, many of the coins worn as pendants are gold coins or gilded coins, while this modification was not common in the Viking Age. These coin-pendants are also frequently equipped with a type of loop unknown previously, i.e. the lily-shaped loop. It is in-

teresting to note, finally, that the proportion of coin-like pendants and coin-brooches increases significantly in the early Medieval period.

However, the early medieval practice can be clearly linked to the Viking-Age one. Firstly, many of the coin-pendants worn in medieval times are in fact Viking-Age coin-pendants maintained in use for generations. They have kept a symbolic value in this new context. Secondly, the coin types reused as pendants in the Medieval period evoke those reused as pendants in the Viking Age. It is particularly remarkable that the largest group of coin-pendants in twelfth-century Scandinavia consists of Islamic dinars, despite the very small number of coins of this type available locally.

This continuity provides an interesting glimpse into how the Viking-Age past was

perceived in the Medieval period, but this issue falls beyond the scope of the present thesis. At the same time, it casts a new light on the Viking-Age practice of reusing coins as pendants by revealing some long-term trends. Interestingly, the coin-pendants used in medieval times seem to have only a loose connection with Christianity. Only two of them occur in obvious Christian contexts (Cat.I:37–8), while those bearing Kufic inscriptions appear to be particularly sought after. It is also striking that the two pendants made from *Long Cross* pennies in the Slängs hoard are only gilded on the bust side.

The role of the coin-pendants used in medieval times is not clear, but it seems that they are part of a long-term tradition in which coins served as status and identity markers. In Scandinavia, this tradition can be traced back to the Roman Iron Age.

Chapter 9. Using coins as pendants in the light of Viking-Age material culture

To understand how they functioned as symbols, the Viking-Age coin-pendants need to be situated within the wider context of Viking-Age material culture. Three main themes deserve special attention: how the coin designs relate to local Scandinavian iconography, how the coin-pendants relate to other Scandinavian ornaments and how the practice of reusing coins as pendants relates to that of producing coin-like pendants.

9.1. Coin designs and Viking-Age iconography

As shown previously (Ch.3.3.4 & 5.2.1), the coin designs play an important role in the practice of reusing coin as pendants. Some link can be established between type of coin design and coin selection as well as between type of coin design and coin orientation. These links do not explain, though, how the coin designs were understood and why they were significant.

9.1.1. *Design familiarity*

Three main factors have been identified as contributing to design orientation when reusing coins as pendants (see Ch.5.4): capacity to recognise the images or inscriptions they bear, aesthetic concerns regarding their display and significance of the designs in a Scandinavian context. While the aesthetic display of the coin-pendants can be achieved without any deeper understanding of the designs they feature, the two other factors

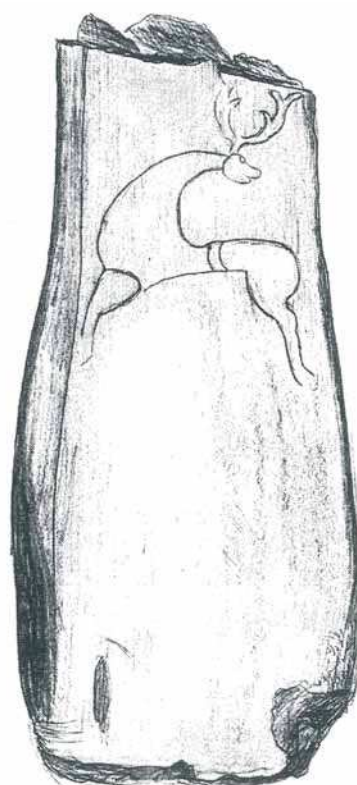


Fig.9.1. Carved whetstone from trench 5 at Adelsö (SHM 35240; drawing: Mikael Vendel). Not to scale.

require a certain familiarity with their content. Is it possible to establish a correlation between correctly-orientated designs and degree of familiarity?

The most accurately orientated design group is the one labelled 'other pictorial' images, with more than 75 per cent of correct orientation (see Ch.5.2.1). This group predominantly consists of Nordic coins of type KG3–6, i.e. coins minted in Scandinavia at the beginning of the Viking Age (see

Ch.3.2.3). The peculiarity of these coins is that they bear, unlike the later Scandinavian coinages, images rooted in the local iconographic tradition. The ship design, for instance, despite possibly deriving from a Carolingian issue (Malmer, B. 1966:60–3), shares similarities with ships depicted in all kinds of contexts, including picture stones, runestones and everyday implements (Varenius 1994:188). Similarly, the deer seems to have been a widespread motif in the Viking Age. Images of deer appear on picture stones, but closer parallels are provided by a pendant from Grävsta (SHM 19464:3) or a carved whetstone from Adelsö (Fig.9.1). Clearly, these coins ‘expose an active Nordic symbolism’ (Varenius 1994:190) and were iconographically familiar within the Scandinavian cultural framework.

The fact that many of the designs featuring inscriptions were horizontally orientated (see Ch.5.2.1) involves a certain familiarity with the concept of writing. This knowledge was definitely available in Viking-Age Scandinavia, where the runic script had already been in use for centuries. Even if runic inscriptions are often visually arranged to form pictorial designs, especially on runestones, the runic script follow a horizontal axis, either from left to right or right to left (Spurkland 2005:8–9). Horizontally-orientated runic inscriptions are particularly common on small objects, as is reflected by the pseudo-runic graffito scratched on the English looped coin from Silte (Cat.I.38).

Crosses are also frequently orientated correctly (see Ch.5.2.1), especially during the later part of the Viking Age (see Ch.5.4.2). The cross symbol seems to have arrived in Scandinavia long before the local establishment of Christianity, as is illustrated by the occasional appearance of crosses in the sixth-century iconography (DuBois 1999:152; Staecker 2002:465). At the beginning of the Viking

Age, the Carolingian missions in Scandinavia and the Viking expansion to Christian areas are likely to have resulted in increased familiarity with the cross symbol, but these contacts have left little material evidence,⁴² except perhaps for Tating-ware jugs (Staecker 2002:466–7). It is interesting to note, in particular, that none of the Birka graves with cross-shaped pendants can be dated to the ninth century, the heyday of the Carolingian missions (Gräslund 1984:114–5). It was not until the tenth century – and particularly its later part – that this symbol began to play a major role in Scandinavian iconography. In c.975, the first Scandinavian coins featuring a cross were issued by Harald Bluetooth in Denmark (see Ch.3.2.3). The majority of coins issued thereafter retain this imagery. The tenth and eleventh centuries also saw the introduction of many types of cross-shaped pendants in Scandinavia (Staecker 1999:197–9, 2002:473–8), as well as the appearance of cross-symbols on runestones (see Lager 2000).

The fact that busts are less precisely orientated is consistent with their rarity in Scandinavian iconography until the later part of the Viking Age. As pointed out by Aleksander Bursche (2008:400), portraiture was normally avoided within Germanic societies. In the Migration period, some bracteates imitating the portraits of Roman emperors were produced (see Axboe & Kromann 1992), but these portraits were soon replaced by Scandinavian motifs, such as masks and animals (see Axboe 2007:29–40; Åkerström-Hougen 2010). They later developed into abstract images (see Gaimster 1998). At the beginning of the Viking Age, busts occur on only a few coins imported from the Carolingian or the

42 As pointed out by DuBois (1999:156), the Carolingian missionaries ‘show little of the devotion to the cross that so inspired the missionary saints of the British Isles’.

Byzantine Empire. They were first incorporated into the local material culture at the turn of the millennium, when they are used on Scandinavian coins imitating English prototypes (Malmer, B. 1997:21–3). Busts then come to play an increasing role in the Scandinavian iconographical repertoire.

In the Viking Age, buildings appear in Scandinavian iconography in the form of halls or boat-shaped houses. Examples of this motif are known from picture stones, from the Sparlösa runestone and from hogback-related monuments (see Williams, H. 2016b). This motif also appears on a small number of Nordic coins of type KG3. The other types of buildings depicted on coins, such as churches or altars, are alien to the Scandinavian iconographic tradition. The first local representations of churches are those depicted on Gotlandic coins in the middle of the twelfth century (see Myrberg 2008:118–21). Several coins featuring a castle are issued more or less at that time in Denmark (see Andrén 1995). All these representations, as well as those occasionally occurring in churches, postdate the Viking Age. Interestingly, the only coins with building that are systematically orientated when reused as pendants are the Nordic coins bearing a boat-shaped house.

There seems to be a correlation between correctly-orientated coin designs and prevalence of these designs in a Viking-Age context. The more familiar/popular the design, the better its orientation. Ships, deer, inscriptions and crosses, which tend to be displayed correctly, were all designs that played an important role in Viking-Age Scandinavia. On the other hand, busts and buildings, to which owners of coin-pendants more rarely respond, seem to have been less familiar. The fact that many busts and buildings were conventionally depicted is likely to have accentuated this tendency.



Fig.9.2. Indian coin from the Skedstad hoard. Note that the coin is numismatically orientated to facilitate the reading of its design (Cat.II.77; photograph: Kenneth Jonsson, NFG). Scale 1.5:1.

9.1.2. *A Scandinavian reinterpretation of the designs?*

It has been argued that many of the designs appearing on the Viking-Age coin-pendants were recognised and understood in some way by those using them (Ch.5.4.1). The question arises, however, as to *how* these coin designs were understood in concrete terms (see also Introduction). With the exception of some of the Nordic coins, all the coins circulating in Scandinavia bear images and symbols which are alien to the local culture, even if many of them gradually become integrated in the course of the Viking Age. How large was the gap between the meaning intended by the issuer of the coins and the interpretation made by those wearing them?

A good example of a coin whose designs are very unlikely to have been interpreted correctly by their Scandinavian users is that of the Indian coin found in the Skedstad hoard (Cat.II:77). This coin, which was issued in what is now northern Pakistan between c.980 and c.1000, features designs connected with the Hindu culture: a horseman carrying a long spear on one side and a reclining bull on the other (Fig.9.2; Jonsson, E. 2013:26; see also Goron et al. 2001; Flood 2009:25–6). It was almost certainly brought to Scandinavia via the Russian rivers, following the same route as the Islamic coins.

The distance between India and Scandinavia, and the fact that this coin may have passed from hand to hand on its way to Öland, makes it very unlikely that the knowledge necessary for understanding its designs was also transmitted. Despite this, it is striking that the Indian coins with horseman and bull seem to have been particularly appreciated in the Viking world. In a jewellery hoard found close to Lake Ilmen, for instance, three such coins are looped for suspension. Is it possible that the design of the horseman carrying a long spear was reinterpreted with reference to Odin, who is sometimes depicted on a horse with a spear in his hand⁴³ (see Hultgård 2007:778–80)? The similarity between the two figures is intriguing, but it should be noted that almost none of the designs in question are correctly orientated, thus suggesting that the selection of these Indian coins was not primarily contingent upon their iconography.

This example of possible reinterpretation is intended to show that the same design can potentially be viewed in very different ways depending on the background of the user. Of course, not all coin designs are likely to trigger radical reinterpretations of this kind. Some of them, especially those already familiar in Scandinavia, leave less room for alternative views. However, the fact that most of the coins used as pendants in Scandinavia are foreign coins almost necessarily involves a gap in knowledge between the issuer and the user. It could be argued that this gap in knowledge is inherent to any author/reader interaction, but the recontextualisation of the coins through their import to Scandinavia clearly widens it (e.g. Ekengren 2009).

Even the cross symbol, which seems to have been well understood in Scandinavia at an early stage, is likely to have been reinterpreted to some extent when reused locally.

Many Byzantine coins, for instance, feature a cross-crosslet on a few steps, sometimes accompanied by the bust of an emperor (see Cat.I:37, 111). The Byzantine image of the cross on steps has been interpreted as representing the gold cross erected on Golgotha by Theodosius II at the beginning of the fifth century. This image first appeared on Byzantine coins in the late sixth century and remained the main type on *miliaresia* down to the late eleventh century (Grierson 1973:75). While the issuers of these coins may well have linked the cross on steps with a special place and a special act of devotion, it can be speculated that their Scandinavian users did not fully embrace its symbolism, probably simply viewing the elements as emblems of Christianity. This difference in meaning was probably even wider at the beginning of the Viking Age, when crosses are more likely to have been worn as amulets than as insignia of Christianity or objects of devotion (see e.g. Staecker 1999:339–44; Gräslund 2005). The cross seems to have been recognised as a Christian symbol by its users, but its messages were adapted to the local way of understanding and practising religion. In grave 632 at Birka (Cat.I:65), the Byzantine coin with cross on steps was combined with a wide range of pre-Christian amulets, such as a coiled-snake pendant, a miniature chair or a sieve-shaped pendant (see Ch.6.3.1).

It can thus be assumed that a difference in meaning existed between those issuing coins and those reusing them in Scandinavia. The coin designs were not understood in the same way in these two cultural contexts. Some sense of the magnitude of this recontextualisation has been gained by studying how the coin designs relate to the Scandinavian iconographic tradition, but this remains vague. To get a better insight, it is worth investigating how these designs were imitated in Scandinavia.

43 I am indebted to Nanouschka Myrberg Burström for pointing this out to me.

A group of Scandinavian imitations of Byzantine coins deserves particular attention (see Malmer, B. 1981; Androshchuk 2016b). These approximately 60 anonymous coins, most of which seem to have been minted in Sigtuna at the beginning of the eleventh century, have different prototypes. They are predominantly based on miliaresia of Basil II and Constantine VIII, but miliaresia of Constantine VII and Romanos II, Nikephoros II and John I have also occasionally been used. Fedir Androshchuk (2016b:105) suggests that some of these imitations are themselves based on other imitations of Byzantine coins.

The Byzantine coins on which these anonymous imitations are modelled include three main design elements: crosses, busts and inscriptions. These imitated elements are variously rendered. Some of them are reproduced with minor changes while others are reshaped significantly (see Androshchuk 2016b:97–105). Three main types of change can be distinguished.

Firstly, there are imitations that fail to reproduce some of the design elements, thus omitting details without which they cannot be fully understood. Of particular interest here is the fact that the symbol ‘cross-crosslet on steps’ is often misrepresented. In twelve cases (Androshchuk types IX, X and XII), the horizontal arm of the cross completely disappears, which suggests that the symbolic value of this symbol was not necessarily recognised (Fig.9.3). In eight cases (Androshchuk type VI), the steps below the cross are not rendered at all, which confirms that the reference to the gold cross erected on Golgotha by Theodosius II was out of reach for Scandinavian users (see above). It should be noted that, despite these changes, all the anonymous imitations still feature Christian symbols of some kind.

Secondly, some of the anonymous imitations of Byzantine coins substitute Byzantine



Fig.9.3. Scandinavian imitation of a Byzantine coin found on Gotland (KMK; photograph: Fedir Androshchuk). Scale 1.5:1.



Fig.9.4. Scandinavian imitation of a Byzantine coin from the Östra Byrummet hoard (SHM 4126; photograph: Fedir Androshchuk). Scale 1.5:1.

iconographical elements with non-Byzantine ones. A case in point is the imitation found in the Östra Byrummet hoard (Fig.9.4; SHM 4126), on which two masks can be observed on either side of the cross in place of the two imperial busts. Given that the bust was an unfamiliar motif in Viking-Age Scandinavia, this process may reflect a desire to turn a foreign element into a local one. Also interesting is the fact that the Greek inscriptions – both circular and central ones – were often replaced by anglicised ones (Androshchuk 2016b:48). That one script could be replaced by another clearly indicates that the inscriptions were recognised as being inscriptions, even if the moneyers were probably not able to write at all. In one case (Fig.9.4), the reproduced inscription takes the form of an ornamental pattern with pseudo-letters. The ornamental character of the pattern is demonstrated by



Fig.9.5. Scandinavian imitation of a Byzantine coin from the Hejlsunds hoard. The coin is numismatically orientated to facilitate the reading of its design (App.I:7; photograph: Brita Malmer). Scale 1.5:1.

the symmetrical arrangement of the letters, which are orientated around a central O. This type of arrangement remains the exception.

Thirdly, one anonymous imitation is known to combine four Byzantine miliaresia (Fig.9.5).

- 1- The cross – cross-crosslet on steps – is taken from a coin of Constantine VII and Romanos II.
- 2- The busts/masks on each side of the cross make reference to coins of Basil II and Constantine VIII.
- 3- The triple border, with eight equally spaced globules, is characteristic of coins of Nikephoros II and John I.
- 4- The five-line inscription begins with the name IWANN, i.e. John I.

This intriguing phenomenon, through which new Byzantine objects are created, even though they usually incorporate many local elements, is commonly found in Finland and in Denmark, where local imitations often copied one Byzantine coin on the obverse and another on the reverse. This emphasises the fact that the moneyer combining different Byzantine coins was definitely able to recognise their common origin.

Of course, it is very difficult to generalise from this study. The present observations are not applicable to all the cases where Byzantine coins are worn as pendants. They only

provide an insight into the perception of the Scandinavian die cutter(s). Moreover, some other factors may have influenced the work of the die cutter(s), such as ideological inclinations and technical constraints. All the differences between prototypes and imitations do not necessarily reflect the die cutter's understanding.

However, studying these differences gives us a good idea of how a relatively educated craftsperson from the cosmopolitan town of Sigtuna could understand a Byzantine coin at the beginning of the eleventh century. Some of the present observations deserve particular notice, such as the capacity to recognise the common origin of different Byzantine coins or the inability to systematically recognise a cross-crosslet.

Another striking feature of the Byzantine imitations issued in Viking-Age Scandinavia is that, although reinterpreting some of the iconographical details of the prototypes, they tend to retain their original compositional scheme. This is an indication that the coin designs had a deeper level of meaning to the perceivers, which derived from the general appearance of the coins rather than from their iconography.

9.1.3. *The design qualities*

Beyond the symbolic content of their iconography, the importance of which has already been stressed, the coin designs were obviously associated with different types of ideas in Viking-Age Scandinavia. Two of these ideas seem to have played a particularly prominent role in the practice of reusing coins as pendants: that of value and that of foreignness.

The conceptual link between coin design and standardised value/weight appears to have been clearly understood in Viking-Age Scandinavia. This is shown by the use of coin designs on a series of weight-calibrated objects made in Scandinavia, including a group of

Viking-Age arm-rings from Gotland. These arm-rings bear punched cross motifs reminiscent of the designs occurring on contemporary Scandinavian and Western European coins, whose presence may be seen as a means of conferring authority on the manufactured ring (Söderberg 2011). As argued by Anders Söderberg (2011:25), ‘there seem to have been certain traditions of providing credibility by the transferred use of coin symbols’. Another example is provided by a series of oblate-spheroid weights with designs imitating the Arabic script carried on Abbasid dirhams. Although mainly illegible, the pseudo-Kufic inscriptions on them still contain the Arabic word *bakh*, a phrase that can be translated as ‘of good quality’ (Kilger 2008c:309).

Throughout the Viking Age, it seems that the coin designs were perceived as guaranteeing value, even though the foreign coins bearing them were not accepted at nominal value in a Scandinavian context. By choosing to wear coins, their owners were choosing objects whose quality was guaranteed and unmistakable, ‘like wearing a designer watch’, to borrow an analogy coined in reference to rings by Gareth Williams (2007:182). In this spirit, the coin-pendants can be seen as a form of bullion jewellery.

Another idea associated with coin designs in the Viking Age seems to be that of foreignness. Among the many coin groups circulating in Scandinavia, only one has designs that are deeply rooted in the local tradition: the Nordic coins of type KG3–6 (see Ch.3.2.3). All the others, including the Anglo-Scandinavian coins and the later national coinages, carry images and symbols that are alien to the local iconographic tradition.

That the owners of coin-pendants could have some notion of where the coins came from is supported by the way in which coin-pendants are sometimes combined. As

already observed (Ch.6.2.2), there are sets that are composed of various coins with a common origin, thus suggesting that this common origin was recognised. A set containing ten English coins belonging to several types, such as the coin-chain from Äspinge (App.II:9), was not formed randomly. The different coin types were regarded as related to each other despite displaying significant differences in design.

It is more difficult to ascertain whether the owners of reused coins were able to identify their geographical origins, but there are cases where the area of minting seems to have been particularly meaningful. This is well illustrated by a grave find from Søndre Bø (Cat.I:4). The grave, which has been dated to the second half of the ninth century, was furnished with seven reused coins. Six of them are Carolingian deniers and one is an Anglo-Saxon penny. According to Simon Coupland, the fact that the Carolingian coins at Søndre Bø are predominantly from the West Frankish kingdom, which is an unusual feature in Scandinavia, suggests that they were brought directly from this region as existing parcels. In the 830s and 840s, the coast of Aquitaine is known to have been plagued by Viking raids (Coupland 2011:115). It seems plausible that the memory of these events was still vivid when the coins from Søndre Bø were transformed and worn as pendants sometime in the second half of the ninth century.

That this foreignness was significant is indicated by the difference in treatment between imported coins and Scandinavian imitations of these coins. It is striking, for example, that the proportion of Byzantine miliaresia reused as pendants is around 30 per cent in Scandinavia, while the proportion of anonymous imitations reused as pendants does not exceed ten per cent (Audy 2016:164).

Obviously, coin designs had a meaning beyond their iconographical content. They were

associated with a number of ideas, such as those of value and foreignness. This different level of meaning may explain why some coin designs were not orientated. It was not necessary to display the coins correctly to evoke these more general ideas. The presence of the designs was sufficient.

9.2. Wearing coin-ornaments in the form of pendants

Coin-pendants are almost the only type of coin-ornament known from Viking-Age Scandinavia. Some coin-brooches and coin-like brooches also occur sporadically, but they represent a very small proportion of all the coin-ornaments in use in the Viking Age. Why were coins preferably turned into pendants? How do these coin-pendants relate to the other types of pendants known from Viking-Age Scandinavia?

9.2.1. Pendants and brooches

That almost all the Viking-Age coin-ornaments known from Scandinavia take the form of pendants is worth investigating, especially in light of the fact that both coin-pendants/coin-like pendants and coin-brooches/coin-like brooches were fashionable at that time in the neighbouring cultural areas. The aim of this section is to understand why coin-pendants/coin-like pendants dominate so much in Scandinavia.

Outside Scandinavia, coin-ornaments and coin-like ornaments have a very different distribution depending on whether they are brooches or pendants. Two main areas can be distinguished: an Eastern one, where coin-pendants predominate, and a Western one, where coin-brooches predominate.

In the East, coin-brooches and coin-like brooches are not the norm. Few examples seem to occur in the literature. Coin-pendants

and coin-like pendants are, on the other hand, particularly common in several cultural areas. They are very much appreciated among the Rus', whose practice cannot really be dissociated from the Scandinavian one (see Ch.4.4.3). They are also much appreciated among the Finnish, Slavic and Hungarian tribes (see e.g. Belyakov 1990; Talvio 2000). A good example of this is provided by the cemetery of Pleshkovo, which belonged to the Finnish Meryan tribe. Out of about 60 barrows excavated in the cemetery, fifteen contained coin-pendants or coin-like pendants (see Belyakov 1990).

Further south, the use of coin-pendants and coin-like pendants was particularly popular in Byzantium, as suggested by a letter sent by Michael Italikos (†1157) to an official of the school of medicine in Constantinople. This letter describes a mounted gold coin with apotropaic powers – a so-called *konstantinaton* – decorated on the obverse with Constantine and Helena holding a cross and on the reverse with a seated figure of Christ (see Laurent 1940; Perassi 2005). Even though the exact type *konstantinaton* described by Michael Italikos is hard to identify, many other Byzantine objects – coin-pendants, pseudo coin-pendants or medals – can be related to this amuletic tradition (see Bendall & Morrisson 2011). The use of coin-pendants also seems to have been popular in the Islamic world (see al-Jadir et al. 1989).

In the West, the practice of wearing coin-pendants and coin-like pendants is occasionally observed during the Viking period.⁴⁴ Some graves with ninth-century pierced coins, for instance, have been discovered in the northern part of the Carolingian Empire (Schulze-Dörrlamm 2010:361). However, most of the coin-ornaments and coin-like

44 It is interesting to note that several of these coins have been connected to the Viking diaspora (see e.g. Coupland 2007; Screen 2014, s 352).

ornaments of the time occur in the form of brooches. Several cultural areas are known to have produced these brooches:

In the Carolingian world, a small number of coin-brooches bearing the name of the emperor Louis the Pious can be dated to the first half of the ninth century. They are all concentrated in the northern part of the Empire (see Schulze-Dörrlamm 1999). These ornaments stand at the head of a long tradition of producing coin-like brooches in the Rhine valley, especially in Mainz (see Berghaus 1994) and in Frisia (see Schulze-Dörrlamm 1999:276–80; Frick 1993). There is evidence of sustained production of coin-like brooches in this area until the eleventh century.

In Anglo-Saxon England, the use of coin-brooches and coin-like brooches is fashionable during most of the Viking Age, but with some variations. In the tenth century, coin-like brooches are particularly popular. Their designs imitate various types of coins, including Roman denarii (Leahy 2006:277–8), Kufic dirhams (Archibald 2007) and Anglo-Saxon coins (Leahy 2006:279). Some genuine coins are also mounted at the time, but in very small numbers. In the eleventh century, the production of coin-like brooches is largely replaced by that of coin-brooches, with a new style of coin-brooches being introduced in c.1050. These coin-brooches are all made from Anglo-Saxon coins (Williams, G. 2001).

These differences in distribution between coin-pendants/coin-like pendants and coin-brooches/coin-like brooches can also be observed within Scandinavia, even if the patterns are more diffuse. The few finds of coin-brooches/coin-like brooches are mostly concentrated in southern Scandinavia while those of coin-pendants/coin-like pendants show a marked eastern bias.

Coin-brooches are very rare in Scandina-

via (see Audy 2016).⁴⁵ Three have been found on Gotland, all of them made from Byzantine coins. Two have also been found in Hedeby, one made from a Byzantine coin and the other from a Carolingian imitation. Interestingly, four of these five brooches are mounted with gold coins, thus contrasting strongly in composition with the coin stock in circulation at the time.

The coin-like brooches known from Viking-Age Scandinavia show a similar distribution pattern. Most of them are concentrated in southern Scandinavia, over an area extending from the province of Skåne to the Danevirke. There is also a small cluster of finds on the island of Gotland. In southern Scandinavia, two main groups of coin-like brooches can be distinguished: a group of ninth-century brooches imitating Carolingian coins of Louis the Pious and a group of eleventh-century brooches imitating various coins. The brooches of the earliest group seem to derive from the Rhine valley, especially Frisia (see Frick 1993). Some of them may have been produced in Hedeby, but no firm evidence of this has yet been reported (Hilberg 2006:219). The brooches of the late group, on the other hand, are all local products. They can be attributed to several Danish mints, and particularly Lund and Roskilde (Jensen, J.S. 1995a, 1995b; Carelli 2001). A group of about ten brooches also derives from Gotlandic hoards. All seem to have been produced in the Rhine valley in Ottonian times (see Stenberger 1958; Berghaus 1994). They imitate either Roman or German coins.

The Scandinavian distribution of the Viking-Age coin-brooches/coin-like brooches contrasts significantly with that of the Viking-Age coin-pendants. As already pointed out, there is a marked eastern bias in the

45 This rarity may be slightly overstated due to the difficulty of identifying these ornaments when the soldered pin has fallen off.

Viking-Age practice of turning coins into pendants, even if this practice has a more pan-Scandinavian character. The largest concentration of graves with coin-pendants occurs in an area stretching from Västmanland to Uppland, as well as in the provinces of Dalarna and Gotland (Ch.2.3.3). It is also in these areas that we find the hoards with the highest proportion of reuse as ornaments (Ch.2.3.2).

The fact that the practice of wearing coins as pendants spread more widely across Viking-Age Scandinavia and became more firmly entrenched in the different Scandinavian regions than that of wearing coins as brooches may be explained in several ways, and these ways are not mutually exclusive.

Firstly, the long Scandinavian tradition of wearing coin-pendants and coin-like pendants, such as gold bracteates, probably created favourable conditions for the development of the Viking-Age fashion. As pointed out above (Ch.8.1), Roman coins were already used as pendants in Scandinavia in the Roman Iron Age and in the Migration period. Some of these coin-pendants seem to have been kept in circulation until the Viking Age, thus providing a bridge between the two practices.

Secondly, the technical requirements for producing pendants are completely different than they are for brooches. Turning a coin into a pendant is relatively easy, especially when the coin is simply pierced. Loops and rings are more demanding from a technical point of view, but not all types require skilled labour (see Ch.4.3). Coin brooches, on the other hand, had to be made by craft specialists, who knew how to produce the fastening mechanism and how to attach it (cf. Jansson 1985). This difference in quality is further supported by the fact that almost all the coin-brooches recorded in Viking-Age Scandinavia are made from gold coins.

Thirdly, the Scandinavian ways of dressing were strongly influenced by Eastern fashions, most notably by those from Byzantium and the Islamic caliphates (see e.g. Jansson 1988; Hedeager Krag 2009). This Eastern influence is more pronounced in the eastern part of Scandinavia, but is not limited to this region. Hägg (2016) has even suggested that some of the silk caftans discovered at Birka were remnants of Byzantine-style court dress. In her opinion, this imitative fashion reflects ‘aspirations for a political hierarchy along the lines of the Byzantine model’ (Hägg 2016: 301). Accordingly, the fact that the practice of using coins as pendants was popular in Byzantium, in the Islamic world and along the Varangian route may have stimulated the Scandinavian fashion.

That coins were worn in the form of pendants rather than in the form of brooches in Viking-Age Scandinavia can be explained with plausible assumptions. However, these explanations are not sufficient for understanding the implications in terms of meaning. Wearing a coin as a pendant is not the same thing as wearing a coin as a brooch. The two types of ornaments relate differently to their owners and to the rest of their costume.

9.2.2. Pendants as personal ornaments

Compared with sets of pendants, the sets of brooches used by Scandinavian women in the Viking Age have a rigid composition. Complete sets normally include four brooches (see e.g. Hägg 1974; Jansson 1985): a small brooch to fasten the neck opening of the under-dress, a pair of larger ‘side’ brooches to hold together the straps of the over-dress and a ‘middle’ brooch to fasten the outer garment. Of course, not all female graves are furnished with complete sets of this kind. The composition of the sets greatly depends on the social status of their owners. In many modest graves, only one or two brooches have been

deposited (see e.g. Cat.I:54, 91). It also depends on geographical and chronological contexts. In Denmark, for instance, the use of ‘side’ brooches had already declined by the beginning of the tenth century, i.e. much earlier than in the rest of Scandinavia. Despite these variations, the complete set described above, with four brooches serving different purposes, can be regarded as the archetypal set in Viking-Age Scandinavia.

The pair of brooches used to fasten the over-dress consists almost invariably of oval brooches in mainland Scandinavia and Iceland (Jansson 1985) and animal-head brooches on Gotland (Carlsson, A. 1983; Thunmark-Nylén 2006:31–50). There are exceptions, but they are few. An example of an exception is provided by an Icelandic grave at Kornsa (Eldjárn 2000:313), where two tongue-shaped brooches were found in place of the typical oval brooches.

The two other brooches, and especially the one used to fasten the outer garment, include a wider range of forms, with the most common being as follows: equal-armed brooches (Aagård 1984; Callmer 1999), round brooches (Jansson 1984a, 1984b), trefoil brooches (Hårdh 1984; Maixner 2005), bow brooches (Arrhenius 1984), disc-on-bow brooches (Thunmark-Nylén 2006:51–63), penannular brooches (Graham-Campbell 1984; Carlsson, A. 1988), tongue-shaped brooches (Wamers 1984) and box brooches (Thunmark-Nylén 1983). A few other types occur occasionally, including coin-like brooches (see Ch.9.2.1) and reused pieces of metalwork mounted with a pin (Aannestad 2015). It should be noted that box-brooches are typically Gotlandic, while the other forms have a wider distribution.

Sets of brooches offer limited possibilities for expressing personal identity. Of course, differences in size and quality appear to enhance social status, but they can hardly con-

vey a profound image of the person. There is too little room for variability within this rigid ornamental framework. It has been shown that ‘middle’ brooches, with their wider range of forms, could be used to reflect more directly the tastes and values of those wearing them (Burstrom 2015). Particularly striking is how ‘middle’ brooches occur in jewellery hoards together with other ‘things of quality’. However, even this ornamental element tends to be bounded within a limited horizon. It is thus very common to find the same sets of brooches in many different graves. The combination ‘equal-armed brooch/oval brooches’ is known, for instance, from ten graves listed in Catalogue I (Cat.I:9, 45, 62, 66–7, 86, 95, 123–4, 134).

These sets of brooches seem to play an important role as expressions of collective identity. They are typically Scandinavian and serve as markers of Scandinavian cultural affiliation (Graham-Campbell 2001:33; Kershaw 2013). For this reason, brooches are among the main diagnostic artefacts of the Viking diaspora. Oval brooches, in particular, have been used to trace Scandinavian presence and settlement in Eastern Europe (Jansson 1992a; Androschuk 2013:40–3). Their rarity in Anglo-Saxon England, on the other hand, has been interpreted as an indication that the ‘foreign’ unfamiliar identity they expressed was rapidly abandoned in order to facilitate cultural assimilation (Thomas 2000:252; see also Kershaw 2013:225).

By contrast, the sets of pendants found in Viking-Age graves are very diverse. Several types of sets can be discerned (see Ch.6.4.1), with each of them covering a wide range of possible combinations. It is striking that the 134 graves listed in Catalogue I rarely contain identical sets of pendants. These sets vary in composition, number and position. Admittedly, some of the sets show pronounced similarities. Three graves, for instance, contain an Is-



Fig.9.6. Reconstruction of the necklace from grave 632 at Birka (Cat.I:65; photograph: Ola Myrin, SHM). Not to scale.

lamic coin-pendant together with two to three circular pendants decorated with Jelling-style animal (Cat.I:44, 127, 129). There is also a certain homogeneity on Gotland (e.g. Cat.I:41–2). However, these similarities get very rare as soon as the number of pendants combined together exceeds three.

Even though pendants can display a sense of collective affiliation (see Ch.6.3.1), it is clear that the sets they form are more directly linked to personal identity than the sets of brooches. Almost every set of pendants has a different composition in Viking-Age Scandinavia, especially when taking into account the various beads with which they are frequently combined. This unique composition sheds important light on the life history, social network and status of its owner.

An example of a unique set is provided by grave 632 at Birka (Cat.I:65). This set, which

consists of 58 beads, five bead-pendants and ten pendants (Fig.9.6), has no exact parallel in Scandinavia, even if it has been linked to the Hoen hoard (Kilger 2008a:332–3). The ten pendants are particularly diverse, including both miniatures and reused pieces of metalwork. They originated in Scandinavia, Khazaria, Byzantium, the Islamic world and the Carolingian Empire, thus representing a microcosm of the Viking sphere of contacts (see e.g. Graham-Campbell 1980:45; Jansson 1996:18). This does not mean that the individual buried in grave 632 visited all these places. Rather, this set should be regarded as a form of narrative, emphasising simultaneously social status, religious orientation, cultural affiliation and personal history. It conveys a clear sense of individuality.

The Viking-Age coin-pendants fit into this scheme very well. They are objects with com-

plex biographies (see Ch.1.2.4; see also Gosden & Marshall 1999; Joy 2009), developed over long distances (Ch.3.2) and sometimes over long periods (Ch.7). During their life, they go through several stages of production. They also change hands and contexts many times, thus accumulating histories. From this point of view, the coins reused as pendants convey a clear sense of individuality, despite originally being a mass-produced object. This individual dimension of the coin-pendants manifests itself in many Viking-Age graves. Indeed, graves often contain coin-pendants which were old and damaged when deposited, sometimes to the point of having lost their ornamental value. In grave 418 at Birka (Cat.I:60), for instance, a worn Carolingian coin of Louis the Pious with a hole was found together with various grave goods. This coin has two notches on the edge – remains of former holes – which suggests a long biography. The idea of a long biography is further supported by the dating of the grave to the second quarter of the tenth century (see Ambrosiani 2006), i.e. about one hundred years after the coin was issued. Consequently, there are good reasons to think that the coin-pendant deposited in grave 418 was worn over a long period of time and transmitted from generation to generation, thus accumulating new and very personal meanings.

The fact that coins were worn in the form of pendants sheds new light on how these objects functioned as symbols. Obviously, there is a very personal relationship between a coin-pendant and its owners. This personal relationship seems to be inherent in the object ‘pendant’, which can be combined in complex sets, but is further strengthened by the nature of the object ‘coin’.

9.2.3. *Amulets and other pendants*

Coin-pendants have often been interpreted as amulets, both within (see e.g. Kyhl-

berg 1973:29–31; Hatz, G. 1974:137–141; Gräslund 2005; Audy 2012) and outside the Viking world (see e.g. Meaney 1981:213–22; Pera 1993; Fulghum 2001). This interpretation is primarily based on a small number of written sources of diverse origins, such as:

- A fourth-century discourse by John Chrysostom, where the Church Father complains about the use of coins of Alexander the Great as a protection against evil (*Ad illuminandos catechesis*, II.5).
- A sixth-century vita written in Francia, where Saint Genevieve is given a pierced coin bearing a cross by Saint Germanus (*Vita Sanctae Genovefae*, 6).
- A twelfth-century letter sent by a Byzantine official, where the author lists the supernatural properties of a gold coin of Constantine and Helena mounted as a pendant (cited in Laurent 1940).

In these documents, the coin-pendants are described either as pagan or Christian amulets, which indicates that coins could be ascribed a protective function in both religious cultures. The amuletic interpretation also relies heavily on the ‘almost universal’ idea that coins possess magical properties of various kinds (see e.g. Veit 1982; Maguire 1997). These magical properties have been linked with the distinctive – often religious – images they feature, but also with the supernatural power ascribed to precious metals or with the mystery surrounding the phenomenal attraction money can exert on people.

The hypothesis that coins could be used as protective amulets in the Viking Age is supported by different types of material evidence. Firstly, the coins reused as pendants very often *occur* together with pendants themselves interpreted as amulets, including miniature weapons, coiled snakes or crosses (see Ch.6.3.1). As argued by Audrey L. Meaney (1981:28), a pendant combined with an amulet is likely to have been used for this

very purpose. Secondly, many of the *images* appearing on coin-pendants are believed to have had protective properties of some kind in the Viking Age. Examples include crosses, inscriptions, masks or snakes. These images are known from various pendants credited with magical powers (see e.g. Fuglesang 1989; Zeiten 1997; Gräslund 2005; Jensen, B. 2010). Thirdly, coins are sometimes used as *raw material* to produce Viking-Age amulets, such as cross-shaped pendants (Staecker 1999:96) or shield-shaped pendants (Trotzig 2004:200). This may be due to practical considerations, since coins provide a silver flan ready for use (see Ch.4.3.2), but this can also indicate a desire to transfer the supernatural properties of the coins to the amulets from which they are made.

In this context, the function of the cross deserves further attention. Indeed, there is no clear distinction between a cross used as an amulet and a cross used as an insignia of Christianity. This distinction depends on the degree to which the owner is instructed in the Christian religion and on the way he/she understands the cross symbol or the cross-shaped object itself. In Viking-Age Scandinavia, there seems to be a gradual shift from ‘crosses as Christian amulets’ to ‘crosses as Christian insignia’ (see Staecker 1999:334–44). It is worth noting, though, that crosses can still play an amuletic role even in a fully Christianised context (Staecker 1999:335). The same question arises regarding coin-pendants bearing a cross symbol. How to discern between those used as amulets and those used as Christian insignia? Early contexts suggest that they primarily had an amuletic function. The pierced and looped Carolingian coins, for instance, are often combined with miniature shields (e.g. Cat.I:83, 100) and/or found in cremation graves (e.g. Cat.I:87, 100, 132). Some late coin-pendants bearing crosses, on the other hand, may have been assigned the

role of Christian insignia. They occur singly in churchyard graves (e.g. Cat.I:25, 37). There is no clear distinction between these two phases, but a gradual shift (see Ch.8.2.1).

Coin-pendants also have much in common with a group of pendants made from reused valuables (see Kleingärtner 2014; Aannestad 2015; see also Ch.6.3). This group, which has been recently brought to light, shows considerable diversity. It includes all kinds of pieces of metalwork with decoration, such as vessel fragments, belt elements or book-mounts. Both local and foreign valuables can be associated with this group, but the latter seem to be more common (see Table 6.2).

All these pendants share two important features. Firstly, even if most of them originally had an ornamental function, they were not intended to be worn as pendants. They were only converted in a second phase. Secondly, these valuables were mounted by using simple techniques, most often by adding a riveted loop. In some cases, especially with belt mounts, it was possible to reuse a loop designed for a different purpose. Arguably, the coins reused as pendants also consist of recontextualised and repurposed metal valuables. They fit perfectly into this group.

This category of pendants has been recently discussed by Hanne Lovise Aannestad (2015; 2016) in her thesis on the reuse of foreign objects in Viking-Age Norway. Because Aannestad is primarily concerned with cultural interaction, she leaves aside the practice of transforming local objects, even if these two forms of reuse are not clearly separated from a material point of view. In grave I:1 at Galgebergsgärdet (Cat.I:134), for instance, two insular and two local pieces of metalwork are combined. They were probably all regarded as belonging to the same group by their owner, as is indicated by the use of similar loops to convert them or the similarity in shape/size (Fig.9.7).



Fig.9.7. Looped pieces of metalwork from the British Isles and Scandinavia found in grave I:1 at Galgebergsgårdet (Cat.I:132; photograph: Lasse Norr, ÖM). Not to scale.



Fig.9.8. Set of beads and coin-like pendants from grave 75 at Tuna (Nylén & Schönback 1994a; drawing: Janis Cirulis). Scale 1:1.5.

Aannestad argues that the foreign valuables reused in Scandinavia functioned as both cultural and social markers. In her view, the display of these valuables served as a way of negotiating identity and status in a society where international connections played a key role and where increased social mobility led to increased social competition (Aannestad 2015:273). A similar conclusion is reached by Sunhild Kleingärtner (2014:75), who maintains that the reuse of foreign valuables is meant 'to express an independent Viking-Age identity' and to underline 'social standing'.

The reuse of coins as pendants can easily be interpreted within this framework. It is no coincidence that both Aannestad and Kleingärtner include the Viking-Age coin-pendants in their studies. As foreign objects, coins clearly have a social and cultural significance in Scandinavia. Particularly striking is the fact that most of the coin groups frequently reused as pendants originated in cultural areas endowed with a certain prestige in the Viking world, such as Byzantium (Audy 2016) or the Carolingian Empire (Garipzanov 2008). Also striking is the presence of many foreign valuables among the pendants with which coins are combined (Ch.6.3.2). In some cases, these sets of pendants and coin-pendants can even be viewed as a microcosm of the Viking sphere of contacts (Ch.9.2.2). The idea that coins had a special social significance is further supported by their occasional gilding (see e.g. Cat.I:77, 86).

The different interpretations proposed here are not mutually exclusive. The same coin-pendant can be worn simultaneously as an amulet, a Christian insignia and a social/identity marker, even if some of these meanings probably took precedence over others in certain contexts. This is consistent with the observation that pendants are often designed to accumulate several functions, usu-

ally in order to express both religious ideas and social status. An example of this multifunctionality is provided by the mounted coin of Constantine and Helena described by Michael Italikos in his letter (Perassi 2005). In addition to its supernatural powers, the Byzantine author mentions the fact that the mounted coin had adorned imperial breasts, thus emphasising its exclusive character and its special life history.

9.3. Coin-pendants and coin-like pendants

In Viking-Age Scandinavia, coin-like pendants form a very small group compared with the pendants made from coins originally intended as means of payment. However, this small group can cast new light on the practice of reusing coins as ornaments. Because coin-like pendants clearly make reference to coin-pendants, much information can be obtained from comparing the two groups and from determining which features of the coin-pendants are retained by those producing coin-like pendants.

Coin-like pendants only appear occasionally in Viking-Age Scandinavia, but not randomly. Two main groups can be distinguished: an early group with a distribution in mid-Scandinavia and a late group with a distribution in southern Scandinavia. These two groups can be attributed to Scandinavian craftspeople. Even if there are exceptions (see e.g. Berga 2007:172), very few coin-like pendants appear to have been imported to Scandinavia during the Viking Age.

9.3.1. *The coin-like pendants from the early Viking Age*

The earliest group consists of c.25 pendants made using Islamic dirhams as dies (Fig.9.8). Although poorly preserved, they all seem to have been produced in the same way (see

Nylén & Schönback 1994a: 59–60). First, the Kufic design was imprinted on a thin silver foil. Then, the silver foil was placed over a rigid plate of either bronze or leather. In almost all cases, the silver foil also comprised a beaded border to which the loop was attached. This loop normally formed an integral part of the pendant, but there are some examples of loops that were subsequently riveted. It is unclear whether these rivets were attached from the outset or added to repair the loop.

The approximately 25 pendants of this group are distributed among three finds:⁴⁶ grave 75 at Tuna in the Swedish province of Västmanland (VLM 27866–920, 28001–10), a grave at Norrö Västergård in the Swedish province of Östergötland (ÖM 3556) and a grave at Reine in the Norwegian province of Buskerud (C 8791). It is likely, given the fragility and the poor state of conservation of the silver foils bearing the designs, that some pendants of this kind are no longer identifiable today and have gone unnoticed in the Scandinavian collections. A good example of doubtful identification is provided by the Norrö Västergård grave. It is impossible, in this case, to determine whether the three corroded bronze pendants accompanying the three coin-like pendants were originally covered with coin-imprinted silver foils. The fact that the two other sets of this kind are exclusively composed of coin-like pendants makes this very probable.

Even though we do not know exactly where they come from, the distribution of the pendants of Callmer's type V:45, to which the coin-like pendants of this kind are affiliated, suggests

an origin in mid-Scandinavia.⁴⁷ They are not recorded on Gotland and in southern Scandinavia. Interestingly, the three sets of coin-like pendants listed here are characterised by marked homogeneity. They all use very early coins as dies, all orientate the Kufic designs upside-down, all reproduce the obverse of the dirhams and all seem to include a beaded border. This probably means that these coin-like pendants were produced in the same workshop or by the same wandering craftsman. The absence of a die-link between the different sets supports the hypothesis of a wandering craftsman, who would have made them on different occasions.

In total, four of the coins used to make these pendants can be identified. Twelve pendants from grave 75 at Tuna bear the imprint of an Umayyad dirham minted at Wasit in 742/3. Eight pendants from the Reine grave bear that of an Umayyad dirham minted at Karma in 710/1. Two pendants from grave 75 at Tuna bear that of an Umayyad dirham minted at Wasit in 731/2. One pendant from the Norrö Västergård grave bears that of an unidentified Abbasid coin minted during the period 750–833. The two other coin-like pendants from the Norrö Västergård grave are too damaged to be identified, but they both bear traces of Kufic text.

The graves containing these coin-like pendants have been attributed by Callmer to the period between c.875 and c.935.⁴⁸ It seems, nevertheless, that the pendants themselves were produced sometime earlier, probably by the first half of the ninth century. Two obser-

⁴⁶ Callmer's type V:45, to which the coin-like pendants of this kind are affiliated, is defined in his thesis as follows: 'circular flat pendants with unbroken profile and with a loop; no ornamentation but may carry or have carried a covering stamped silversheet' (Callmer 1977:70). The pendants of type V:45 can be imprinted with various designs, including coin designs, but they are often too corroded to be interpreted.

⁴⁷ Six finds with pendants of Callmer's type V:45 are known from Uppland, three from Gästrikland, three from Södermanland, two from Västmanland, two from Småland, one from Östergötland, one from Hedmark and one from Buskerud. Only two of the Upplandic finds derive from Birka.

⁴⁸ Grave 75 at Tuna has been dated by Callmer (1977) to BP III/IV (c.875–905) while the Reine and the Norrö Västergård graves have been dated to BP VII (c.905–35).

variations support this hypothesis. Firstly, it is well established that the proportion of pre-750 dirhams in the Scandinavian coin stock decreases gradually throughout the ninth century, reaching about five per cent in the third quarter of the ninth century and one per cent in the first quarter of the tenth century (see Metcalf 1997:313–5; see also Callmer 1976). There is a high probability that the coins used as dies were selected at a time when these coins still represented a significant proportion of the Scandinavian coin stock. Secondly, the practice of wearing five coin-pendants or more seems to have been particularly fashionable at the beginning of the Viking Age (see Ch.6.2.1). Four sets found in Norwegian and Swedish graves have the following *tpq*: 779/80 (Cat.I:119), 784/5 (Cat.I:90), c.825 (Cat.I:9) and c.840 (Cat.I:4). As already pointed out, *tpq* have a very limited dating potential in graves (Ch.2.3.1). However, in the case of these sets comprising between five and nine coins, they provide interesting information on when the sets were formed.

It is striking that the coin-like pendants described here were produced at a time when access to coins was still limited in Scandinavia. During most of Phase IA, coins seem to have been available in very small quantities in most Scandinavian areas (see Kilger 2008b:211–35; see also Fig.2.7). This leads to the hypothesis that the coin-like pendants produced in the ninth century were meant to compensate for the shortage of coins available for reuse. As argued by Callmer (1977:170), ‘it is probable that these pendants generally may be regarded as substitutes for true coin pendants’. This hypothesis is further substantiated by the fact that the coin-like pendants of this type occur in relatively remote areas. They are unknown from the areas with the main concentrations of coins, such as the provinces of Gotland and Uppland. They are also unknown from the large trading centres.

That the coins taken as dies were Islamic dirhams deserves special attention. Islamic dirhams were frequently turned into pendants during Phase IA (see e.g. Cat.II.4, 66), but they were not the coins selected in preference. Some other coin groups, such as the Nordic and Carolingian ones, were obviously more desirable (Table 3.2). This preference for Western coin groups was not restricted to central places like Birka or Tissø. Many sets found in more remote areas also include Carolingian and Nordic coins (see e.g. Cat.I:3, 9, 124).

This choice of using Islamic dirhams as dies may have been dictated more by practical considerations than by actual preference. Indeed, the Islamic dirhams were available in larger numbers in early Viking-Age Scandinavia than any other coin group (see Table 3.2). At the same time, this choice provides further evidence in favour of the idea that the coin type did not play a prominent role in large sets of coin-pendants. Any coin could fit the purpose.

Also interesting is the orientation of the Kufic designs appearing on these coin-like pendants. Without exception, all the coin-like pendants for which orientation can be determined display the Kufic inscriptions horizontally, with the text upside down. This feature clearly echoes the orientation pattern of the Islamic dirhams turned into pendants, to which most of the owners seem to respond (see Ch.5.2). It also confirms that those producing coin-pendants and coin-like pendants in early Viking-Age Scandinavia often had a vague idea of the direction in which texts were written, but were not able to distinguish between upright and inverted Kufic script (see Ch.9.1.1).

The practice of wearing these coin-like pendants may be regarded as intimately linked with that of wearing coin-pendants. As shown above, there are many similarities

in the ways the two categories of ornaments are designed and displayed in the early Viking Age: (a) same types of coins selected; (b) geometrical orientation of the Kufic inscriptions; and (c) combination into large sets. Furthermore, there are good reasons to think that these coin-like pendants acted as substitutes for coin-pendants at the time when coins were not easily available. The techniques used made it possible to produce a whole set of coin-like pendants by using very little silver – a few coins at most. Clearly, the practice of wearing coin-like pendants makes reference to that of wearing coin-pendants.

This intimate link between the two practices is further supported by the evidence from the Tuna cemetery, where both coin-pendants and coin-like pendants occur. Grave 37 contains a German coin with a loop (Cat.I:115), grave 75 fourteen pendants made using Islamic dirhams as dies (VLM 27866–920, 28001–10), grave 76 an English coin with rivet (Cat.I:116) and grave 84 a German coin with a loop (Cat.I:117). Another pendant made from a German coin was found in a disturbed context, but probably derives from a grave (Cat.I:118). There is a clear chronological gap between the grave containing coin-like pendants and the graves containing coin-pendants. The former can be dated to the beginning of the Viking Age, probably to Phase IA, while the latter can all be dated to Phase IIA. However, a general impression of continuity can be sketched in Tuna.

Graves 75, 76 and 84 are all boat graves, a type of grave interpreted as belonging to members of the elite. As already pointed out (see Ch.2.3.3), graves of this kind are infrequent in the Viking Age and cluster around distinctive places. In mid-Sweden, for example, they tend to appear in localities believed to have functioned as regional centres (see e.g. Nylén & Schönback 1994a:132–142; Ljungkvist 2006:150–5). It has been observed that the



Fig.9.9. Coin-like pendant from eleventh-century Denmark (LUHM; photograph: Gitte Ingvardson). Scale 1.5:1.

mid-Swedish cemeteries with boat-graves often follow the same chronological pattern: there is one boat grave per generation, thus suggesting that only the head of the family was buried in this way (Arwidsson 1983:82; Schönback 1983:127). This would mean that, in Tuna, both coin-pendants and coin-like pendants were worn within the same family line, despite an interruption during the tenth century.

It is important to note, though, that the practice changed significantly between the ninth and the eleventh century. While in the ninth century status was enhanced in Tuna by wearing a large set of beads and coin-like pendants, this conspicuous display of wealth was no longer necessary in the eleventh century.

9.3.2. *The coin-like pendants from the late Viking Age*

The latest group of coin-like pendants consists of a small number of pendants modelled on both local and foreign coins (Fig.9.9; see Jensen, J.S. 1994, 1995a:102–3; Carelli 2001:328–30). These pendants, which show considerable diversity, were produced either by striking or casting, with a distinct preference for the former technique. They were usually in base metal, such as copper and brass, but silver was also used occasionally. Probably to avoid the accusation of counterfeiting, the silversmiths made sure their prod-



Fig.9.10. Brooch probably made in Denmark imitating a histamenon of Michael IV (private collection; photograph: Frédéric Elfver). Scale 1.5:1.

ucts could not be confused with genuine local coins (Jensen, J.S. 1995a:102). This may be why many of them were gilded, oversized and one-sided.

In the case of these coin-like pendants, the loop is not an integral part of the object. It is usually riveted to the flan, meaning that it was added in a second phase. There is every reason to think that this riveting happened in the workshop (cf. Ch.4.3.2). From a technical point of view, these coin-like pendants are thus a clear citation of the Viking-Age coin-pendants, which almost always have riveted loops. The fact that some coin-pendants seem to have been produced in the same workshops as the coin-like pendants may explain such a link (see Ch.4.4.5).

This group of coin-like pendants falls within a larger group of coin-like ornaments also including brooches and bracteates (Fig.9.10). They can be attributed, in most cases, to the Danish mints of Lund and Roskilde. Their attribution is largely unproblematic, given that many bear inscriptions mentioning the mint names and/or the moneyer's names. A metal sheet with coin-like impressions found in Selsø suggests that production could also take place outside mints. These coin-like ornaments have been dated to the second half of the eleventh century and to the first half of the twelfth century (see Galster 1950, Carelli 2001). According to Jørgen Steen Jensen (1995a:102), their production started at Lund shortly before

1050. A total of c.40 coin-like ornaments of this type were listed by Peter Carelli in 2001, but some additional finds seem to have been made recently by metal detectorists.

These coin-like ornaments are predominantly modelled on local coins, including coins of Sven Estridsen, Harald Hen, Nils and Erik Emune (see Galster 1950; Jensen, J.S. 1995b; Elfver 2003). However, there are examples of coin-like ornaments clearly imitating foreign coins, such as two brooches with Islamic design found in Lund. In many cases, it is not easy to determine whether the prototypes are foreign or local, since the Danish coins were themselves often modelled on foreign coins (see Ch.3.2.3). For instance, we can wonder whether the coin-like ornaments imitating miliaresia of Basil II and Constantine VIII were modelled on the Byzantine originals or on the copies minted by Harthacnut (1035–1042) and Sven Estridsen (1047–1074).

The Byzantine designs are particularly well represented in this group, especially during the reign of Sven Estridsen (see Roslund 1997; Elfver 2003). The prototype most commonly imitated is probably the miliaresion of Basil II and Constantine VIII, whose reproduction often is not very accurate. This preference for Byzantine coins echoes the observation that Byzantine coins played a special role in the practice of reusing coins as pendants (Table 3.2). The presence of coin-like ornaments imitating Kufic dirhams is also worth mentioning. Coins of this type were much appreciated as pendants in the eleventh century (see Ch.3.4.1).

Concretely, these different designs include various types of crosses and human figures, as well as some inscriptions and buildings. Because the dies are made by skilled moneyers, the prototypes tend to be faithfully reproduced, but cruder imitations also occur. In some cases, it is clear that the die-maker was more concerned with compositional scheme

than with accurate rendering.

The coin designs appearing on these coin-like ornaments help to put the ranking previously established into perspective (see Ch.5.2.2). Do coin-pendants and coin-like ornaments display the same types of designs? There are many similarities between the two groups. Buildings, for instance, which were the least appreciated of all the designs represented on coin-pendants, almost never appear on coin-like ornaments. The only exception can be dated to the beginning of the twelfth century, when this iconography is first incorporated into the local material culture (see Ch.9.1.1). It is also notable that some of the coin-like ornaments studied here are decorated with pseudo-inscriptions imitating either Byzantine or Kufic types. As pointed out earlier, inscriptions seem to play an important role in the practice of reusing coins as pendants. The presence of pseudo-inscriptions on coin-like ornaments supports the idea that the owners of coin-pendants could sometimes prefer aniconic to pictorial designs (see Ch.5.2.2).

One difference, though, is that human figures and busts are more often displayed on coin-like ornaments than on coin-pendants (cf. Ch.5.2.2). This is due, to a significant extent, to a change in the iconography of coin-like ornaments at the beginning of the twelfth century, with the introduction of portraiture (see Galster 1950). Before that time, most of the human figures appearing on coin-like ornaments are standing emperors copied from Byzantine coins (see Elfver 2003). Another difference is the absence on coin-like ornaments of designs belonging to the category 'other pictorial types'. We can note, in particular, that the *Agnus Dei* coinage, despite being the most sought after for reuse as pendants (see Ch.3.3.4), has not been used as a prototype for coin-like ornaments in southern Scandinavia.

All the designs appearing on coin-like ornaments are displayed correctly, without the slightest deviation. Georg Galster (1950:43) observed that many coin-like ornaments have loops attached below the images they bear, thus apparently displaying them upside down. In fact, it seems that most of those ornaments were brooches and that the loops were meant to suspend additional items. This regular pattern of orientation is consistent with the conclusion that there is a correlation between correct display and context of production (see Ch.5.4). Obviously, the moneyers producing coin-like ornaments in southern Scandinavia, who were skilled craftspeople with a good iconographical knowledge, had no difficulty understanding the coin designs. Even the most stylised and simplified of these designs were orientated correctly, which suggests that they were not perceived very differently from their prototypes.

As already emphasised (see Ch.3.2.3), there were many coins – including foreign coins – in circulation in Denmark in the middle of the eleventh century when the fashion for coin-like ornaments was first adopted there. So why introduce these coin-like ornaments, the production of which required more time and skill than adapting a coin into a pendant? Two main explanations can be advanced.

Firstly, there is a clear association between the introduction of regal coinages in Denmark and the introduction of coin-like jewellery. From a monetary point of view, the middle of the eleventh century is a period of consolidation, which saw the gradual establishment of a fully-developed coin economy (Ch.1.1.3). Towards the end of the reign of Sven Estridsen (1047–1074), most of the Danish hoards only contain Danish coins. Within this new framework, secondary treatment became synonymous with damage and final demonetisation. The production of coin-like ornaments

can thus be interpreted as a way to continue using coin-looking ornaments while adapting to the new economic conditions. These changes, however, did not cause a sudden break with the past, as is indicated by the fact that some coin-pendants were still produced in Denmark at that time (see Ch.4.4).

Secondly, it seems that these coin-like pendants were meant to compensate for the shortage in eleventh-century Denmark of some coin types that were popular as ornaments. Indeed, many of the coins used as models were hard to access at the time, especially if one wanted to avoid demonetising locally issued coins. A good example of this is provided by the 'Basil II and Constantine VIII' coin design. This design was available both on Byzantine miliaresia imported to Scandinavia and on Danish coins imitating these miliaresia. The problem is that the former coins were very rare in Scandinavia in the eleventh century (see Horsnæs 2015; Jankowiak 2016) and that the latter had a value in Denmark. To be able to wear this coin design, it may have been more advantageous to produce a coin-like ornament decorated with it. The two coin-like ornaments with pseudo-Kufic designs also deserve some attention. As demonstrated in this work, Islamic coins were particularly popular as pendants in the late Viking Age. Their proportion of reuse was equivalent to that of Byzantine coins at that time (Ch.3.4.1) and they were used in very special contexts (cf. Ch.8.3). Unfortunately, these coins had become difficult to access, hence ornaments

imitating their designs were produced instead.

The reasons why coin-like jewellery did not catch on as a fashion in the rest of Scandinavia are unclear. They may include the relatively rapid success of the regal Danish coinage, the special local taste for coin-pendants in the eleventh century and the role of official mints in this production. It is also likely that the Danish practice of producing coin-like ornaments was influenced by Continental fashions, especially those from Germany (see Ch.9.2.1).

To sum up, the coin-like ornaments produced in Viking-Age Scandinavia clearly make reference to the coin-pendants of the time. They show similar patterns of selection, orientation and display, even though differences linked to the contexts of production appear. The practice of wearing coin-like ornaments, and the similarities in the ways coin-pendants and coin-like pendants were designed, confirm that coins, and especially coin designs, had a special significance in the Viking Age. Coins were not worn just because they were easily available. They had a deeper symbolic meaning, which led to the production of substitutes when they could not be accessed. These substitutes retain most of the features of the coins, with two exceptions. They are made from base metals, such as brass and bronze, which explains why they are never found in hoards. Moreover, they can feature stylised and simplified designs, thus indicating that it was the general appearance of the object that mattered.

Chapter 10. Case studies: from foreign coins to Scandinavian pendants

In the following, I present three case studies that depart from the results gained through the analyses of Chapter 8 and Chapter 9: grave 963 at Birka, the jewellery hoard of Vårby and an *Agnus Dei* coin-pendant found in the mixed hoard of Johannishus. The purpose is to examine in more detail the individual biographies of these special finds in order to piece together a more complete picture of the ‘coin-pendant’ phenomenon.

10.1. Grave 963 at Birka

The trading centre of Birka has yielded a total of 34 graves with coin-pendants. One of those is grave 963, in which a unique set of pendants, including three coins, was found between the two oval brooches (Cat.I:83). This grave, without external marking, was excavated in 1881 by Hjalmar Stolpe. It is located east of the settlement area within the town wall and belongs to the largest of the Birka cemeteries, i.e. Hemlanden.

10.1.1. The content of grave 963

Grave 963 is a well-furnished chamber grave (Fig.10.1). It is not one of the richest in Birka (see Ringstedt 1997), but several grave-goods are indicative of a high social status, such as the textile band with brocaded pattern found in contact with the skull (see Geijer 1938:75–6). Also indicative of high social status is the form taken by the burial. In Viking-Age Scandinavia, chamber graves can be associated with the most prominent social groups. They tend

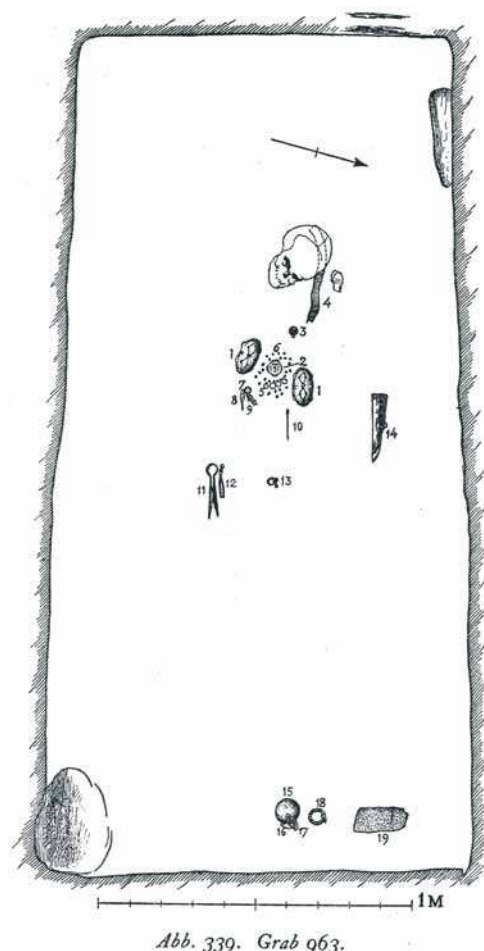


Fig.10.1. Grave 963 at Birka (Cat.I:83; after Arbman 1940).

to cluster around distinctive places like proto-towns (see Stylegar 2005; Price 2008:263–6) or centres of power (see Nylén & Schönback 1994a; Ljungkvist 2006:133–47). Moreover, the grave goods they contain are often abundant and elaborate (see Ringstedt 1997; Nylén & Schönback 1994a:18–35). It remains uncertain, as noted by Gräslund (1980:78), whether these groups were ‘distinguished by ethnic, economic, political or other factors, or indeed a combination of several of these’.

The grave-goods deposited in this female grave are typical of tenth-century eastern Scandinavia. They include two bronze oval brooches, two disc brooches, a set of beads and pendants, a weight, some box remains, as well as a collection of domestic implements. The three coin-pendants were found between the oval brooches, together with 29 beads and a shield-shaped pendant (Fig.10.2). It is not clear how this set was originally attached to the garment, as the beads seem to form an odd circle around one of the disc brooches, but all were presumably once strung together on a cord. The deposition of grave-goods in grave 963, especially the chest found at the foot, is to be considered a pre-Christian custom, even if grave-goods of this kind can also occur in Christian graves from the transition period (see Gräslund 2001:47–9).

Grave 963 has a *tpq* of c.921. This *tpq*, combined with the fact that Birka was abandoned in c.975 (Jansson 1985:182–6; see also Ambrosiani 2008:98) indicates that the owner of the coin-pendants was buried between the second and third quarters of the tenth century. The presence of P51 oval brooches in the grave is consistent with this tenth-century dating (see Jansson 1985). The set of beads found together with the coin-pendants has been attributed by Callmer to the period c.965–90. As this appears to be somewhat late for the Birka cemeteries, it is safer to broadly date grave 963 to the third quarter of the tenth century.

10.1.2. A unique set of coin-pendants

The set from grave 963 consists of three coins, all equipped with different means of suspension: a Carolingian coin with a hole, an Anglo-Viking coin with a bronze loop and a Nordic coin with a silver loop. The Carolingian coin was originally equipped with a loop

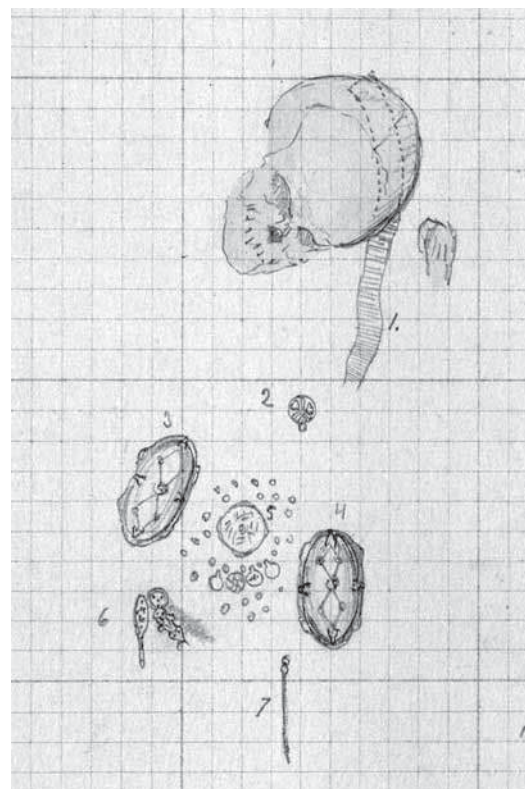


Fig.10.2. Detail of grave 963 at Birka showing the set of ornaments (Cat.I:83; drawing: Hjalmar Stolpe).

as well,⁴⁹ but this loop was already lost when Holger Arbman published his volumes on the Birka cemeteries (see Arbman 1940, 1943).

In grave 963, the three coins reused as pendants are all very rare (Fig.10.3). The Carolingian coin is a ‘Christiana Religio’ denier of Louis the Pious, issued between c.822 and 840. In Scandinavia, deniers of this type total approximately 170 according to the most recent estimates (Garipzanov 2008; Moesgaard MS). The Nordic coin belongs to Malmer’s type KG5, dated to c.850. A total of 40 coins of this type were recently listed by Brita Malmer (MS). The Anglo-Norse coin is a ‘St Peter’ penny from York, probably issued between c.921 and c.927. Only a few other coins of this type are known from Scandinavia, including one from grave A13 at Sunnersta (Cat.I:91) and one from the Terslev hoard (MS FP 1233).

⁴⁹ In the drawing made by Hjalmar Stolpe, we can clearly see that the three coins have a loop attached.



Fig.10.3. Coin-pendants from grave 963 at Birka. From top to bottom: Carolingian coin of Louis the Pious; Nordic coin of type KG5; Anglo-Viking coin of the St Peter type (Cat.I:83; photograph by the author). Scale 1.5:1.

The rarity of these types in Scandinavia clearly shows that the set from grave 963 was not randomly assembled. The coins included were carefully selected, probably because of their striking appearance. Indeed, while being relatively small in size and light in weight, they all feature distinctive images, such as crosses, masks, snakes, a sword or a deer. Their rarity is also likely to have made them more attractive (see Ch.3.3.1).

That these coins were in limited supply in Scandinavia implies that they were not available just anywhere. Their circulation was largely restricted to trading and elite sites, such as Tissø, Uppåkra or Kaupang. Of course, they could occasionally circulate away from these sites, but the chances of collecting three coins of this kind in remote areas were exceedingly low. This further supports the idea

that the owner of the coin-pendants from grave 963 belonged to a social group active in central places and engaged in some kind of exchange activities. It is likely, given the function of Birka, that these exchange activities were of a commercial nature.

Wearing these rare coins can be regarded as a way for their owner to distinguish herself socially. Not everyone was in a position to access and collect coins of this kind. In the context of Birka, it seems that social status was not expressed through the combination of many coin-pendants, as was the case in remote areas, but through the combination of hardly available ones (see Ch.6.2.1). Wearing these rare coins was also a way for their owner to distinguish herself as an individual. A set consisting of rare coins was very likely to be unique (see Ch.9.2.2).

The set of coin-pendants from grave 963 is chronologically heterogeneous (Fig.10.4). One of the reused coins was minted in the first half of the ninth century, one in the middle of the ninth century and one in the first half of the tenth century. A chronological heterogeneity of this kind is not exceptional within a set of coin-pendants (see e.g. Cat.I:14, 81, 125), but raises questions as to the history of its components. When were the coins turned into pendants and when were they brought together?

There is no way to determine exactly how much time has passed between the minting of these coins and their transformation into pendants. Means of suspension from Phase I, in general, cannot be dated with enough precision. However, the use of two – possibly three – distinct loop types (Fig.10.4) suggests that the coins were turned into pendants on different occasions. This hypothesis is confirmed by the differences in wear between the three coins. Both the Carolingian and the Nordic coins are, on the one hand, significantly worn. They show many faint design

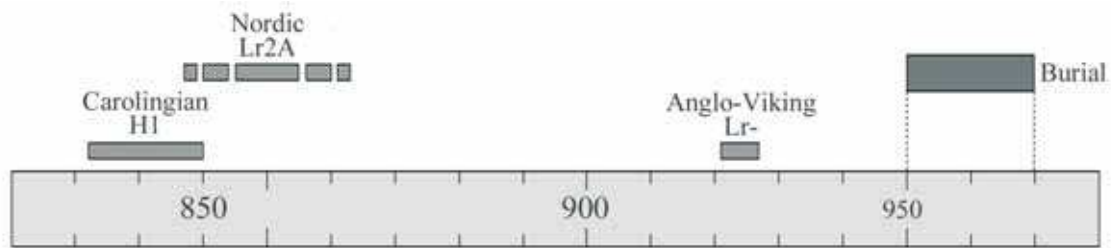


Fig.10.4. Chronology of the coins deposited in grave 963 at Birka (Cat.I:83).

Table 10.1. Condition and dating of the Carolingian coins found in the Birka cemeteries (source: Catalogue I).

Cat.I Grave	Coin type	Date of issue	Condition	Deposition date
55 Bj 66	Charlemagne, Portrait	c.812–4	Good	800–50
56 Bj 168	Louis the Pious, Cross-Temple	c.822–40	Discarded hole, fire damages	901–40
60 Bj 418	Louis the Pious, Cross-Temple	c.822–40	Two discarded holes, worn	901–40
64 Bj 557	Charles the Bald, Cross-Temple	c.840–64	Fragmented	901–40
83 Bj 963	Louis the Pious, Cross-Temple	c.822–40	Worn	941–80
86 Bj 978	Louis the Pious, Cross-Temple	c.822–40	Refilled hole	941–80
87 Seton VI	Louis the Pious, Cross-Temple	c.822–40	Good	901–40

elements. The Anglo-Viking coin, on the other hand, is in good condition. It shows very little damage from circulation. It should be noted that the Carolingian coin is not worn to the same degree on both sides, the side with the temple being much more damaged than the side with the cross. This difference in wear indicates that the cross on the obverse was meant to be displayed.

From this, it can be concluded that the two oldest coins were turned into pendants and brought together at an early stage, while the third one was only added much later. The addition of the shield-shaped pendant cannot be dated at all, but it is worth noting that shield-shaped pendants and coin-pendants occur together in graves already in the ninth century (see Cat.I:93, 100). This gradual formation of the set contradicts Callmer's claim that 'dress ornaments including beads were acquired at one occasion' (Callmer 1977:171).

Because of this long lifespan, there are good reasons to think that the coin-pendants from grave 963 were transmitted over several generations, thus accumulating new meanings along the way. They were probably regarded as family heirlooms and personal memorabilia. In Birka, many of the coin-pendants can be interpreted in this way. The coin-pendants tend to be significantly older than the contexts in which they appear and they exhibit wear marks. A case in point is provided by the seven Carolingian coins reused as pendants from the Birka cemeteries (Table.10.1). These coins, aside from occasionally being damaged by fire, have often suffered from intensive use. Three of them are fitted with discarded means of suspension and two of them are heavily worn. Remarkably, the majority of Carolingian coins from Birka were already ancient when buried. With two exceptions, they circulated between 80 and 150 years before their deposition.

It is most likely, consequently, that the meaning ascribed to the coins from grave 963 changed dramatically as the time distance from their original contexts increased. This is particularly obvious in the case of the Carolingian coin, whose meaning can be understood only in relation to the history of the Carolingian Empire (see Moesgaard 2004; Garipzanov 2008). In the first half of the ninth century, the Carolingian Empire was still in its heyday, with a direct political and religious influence in Scandinavia. This influence was particularly felt at Birka, where several Carolingian missions are known to have taken place (see *Vita sancti Anskarii*). At that time, the coin-pendant could be understood in the light of these circumstances. In the second half of the tenth century, on the other hand, the Carolingian Empire had already completely collapsed. It seems that Christianity still had a role at Birka, but little missionary activity is recorded for that period.⁵⁰ At that time, the Carolingian coins could no longer be associated with the same ideas. They had certainly gained new meanings related to biographical experiences.

10.1.3. *The sword, the mask and the deer*

There can be no doubt that the distinctive images appearing on the coins from grave 963 played a role in their use as ornaments. All three coins were orientated to display at least one of their two sides correctly (Fig.10.3). The orientation of the Carolingian coin respects both the cross and the temple. That of the Nordic coin respects the mask surrounded by snakes on the reverse. That of the Anglo-Norse coin respects both the cross and the sword.

The significance of the coin images in grave 963 is further evidenced by the fact that

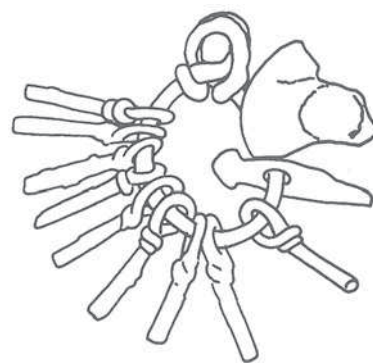


Fig.10.5. Staff-ring with miniature shield and miniature sword from the Black Earth at Birka (SHM 5208; after Price 2002). Not to scale.

they all have parallels among the pendants deposited in the Birka cemeteries (see Arbman 1940, 1943). Mask-shaped pendants occur in graves 642, 649, 860B and 865. Coiled-snake pendants occur in grave 632 and 844. Cross-shaped pendants occur in graves 51, 480, 501, 517, 703, 750, 835, 968 and 983. No sword-shaped pendant is known from the Birka cemeteries, but a staff-ring comprising a sword amulet was found in the settlement area (Fig.10.5).

Anne-Sofie Gräslund (2005:387–90) argues that the images displayed on coin-pendants could act as substitutes for pendants with similar shapes. She bases her argument on the occurrence in the Birka cemeteries of fixed sets of amulets related to pre-Christian beliefs. These sets include at least two of the following: a shield-shaped pendant, a cross-shaped pendant, a chair pendant, a mask-shaped pendant, a coiled snake pendant, a Valkyrie or a fire-steel pendant. Grave 963 contains a set of this kind, the only difference being that the mask-shaped pendant and the cross-shaped pendant have been replaced by coin-pendants bearing these images, thus demonstrating the idea that coin images could play the same symbolic role as locally-made pendants. According to Gräslund (2005:390), the owners of these special sets may well

⁵⁰ The only mission known to have taken place in Birka in the tenth century is that led by Unni in 936 (*Gesta Hammaburgensis ecclesiae pontificum*, I:6).

have had a function in the pre-Christian cult. Grave 660, one of the ten graves she singles out, is even furnished with a staff of a kind that has been related to sorcery (see Price 2002:128–31).

Whether or not the owner of the set from grave 963 had a function in the pre-Christian cult is disputable. There is nothing else in the grave which seems to support this hypothesis. This said, it is clear that the coins from grave 963 have images that were endowed with magical and apotropaic properties in the Viking Age. The cross and the mask can be associated with Christ and Odin respectively, while the sword falls into the category ‘miniature weapons’ (see e.g. Zeiten 1997; Gräslund 2005). In these cases, the power ascribed to the images was probably mingled with the power ascribed to the object itself.

The sword depicted on the Anglo-Viking coin deserves particular attention here, because it seems to have been completely reinterpreted by its wearer. Originally, this sword is thought to have represented the ‘sword of Carolus’, a trophy prized by the Vikings of Dublin in the tenth century (Grierson & Blackburn 1986:323). Although there is always a chance that the owner of the set from grave 963 had heard of this legendary sword, its image was obviously ascribed a completely different meaning in this new context.

In the Viking Age, miniature swords are believed to have functioned as protective amulets. They tend to appear together with other miniatures interpreted as amulets, such as spears, staffs or fire-steels (see Arrhenius 1961). In grave 963, the combination of the sword image with the shield-shaped pendant is particularly remarkable. It evokes an amulet ring found in the Black Earth at Birka, to which both a miniature shield and a miniature sword are attached (Fig.10.5; see Arrhenius 1961:142; Gräslund 2007:93–4). More strikingly, the two weapons appear as perfectly

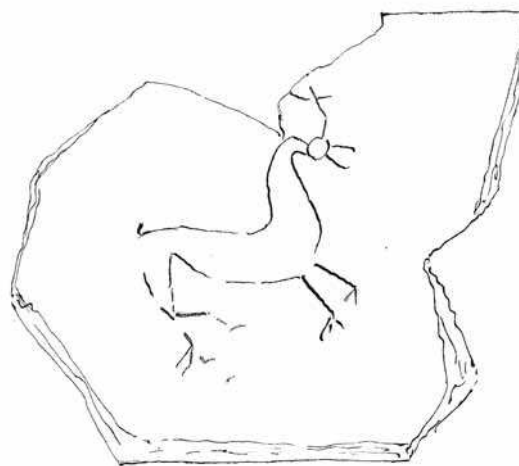


Fig.10.6. Urn fragment with a deer-shaped graffito (SHM 18212; after Arbman 1929). Not to scale.

complementary in view of a symbolic fight. The wearer of this set was thus metaphorically equipped with both a defensive and an offensive weapon.

That these coin images had an apotropaic role in life does not necessarily mean that they had the exact same role in death. It seems that the coin-pendants deposited in graves were carefully selected partly because the images on these coins had a special resonance in a burial context (see Ch.7.4.2). Particularly striking is the fact that almost all the Nordic coins reused as pendants derive from graves. Indeed, these coins are decorated with images that are associated with the world of the dead, such as ships, halls or cockerels. The ship is definitely the most powerful of these symbols. As emphasised by Anders Andrén (1993:43), ‘ships and ship symbols are intimately connected with burials in prehistoric Scandinavia’. This connection is manifested archaeologically in the form of boat graves and ship-like stone settings, but also allusively in mythology (see Schjødt 1995) and iconography (see Andrén 1993). One reason for this connection may be that ships were regarded as means of transport to the world of the dead.

In grave 963, the Nordic coin is decorated with a deer, another significant symbol in a burial context. A deer is engraved, for instance, inside a funerary urn found in the Swedish province of Södermanland (SHM 18212; Fig.10.6). There can be little doubt that this graffito was scratched in connection with the burial.⁵¹ Deer also occur frequently in graves in the form of textiles. In Birka, three graves contain embroideries depicting a backward-looking deer whose shape is very similar to that of the Nordic coin from grave 963 (Geijer 1938:125; Fig.10.7). Deer may have been associated with rebirth, based on their ability to grow new antlers every year. Moreover, it is possible that the deer from grave 963, on which the antlers are hardly visible (Fig.10.3), was interpreted as representing a horse, whose association with death is well established (see Shenk 2002). A Christian interpretation of the deer motif has sometimes been suggested (Malmer, B. 2004; Trotzig 2004), but it is unlikely that the individual buried in grave 963 understood it this way since she preferred the mask referring to Odin appearing on the other side of the coin.

Interestingly, the deer image was not orientated to be displayed when the Nordic coin from grave 963 was worn in life. It seems that it was ignored in favour of the mask (Fig.10.3). Yet, this image is likely to have gained a new significance after the death of its wearer. A parallel can be drawn here with grave 508 (Cat.I:62), where two coin-pendants with deer were found some distance away from the other ornaments. In this case, the two coin-pendants were probably placed on the body at the time of burial, which suggests that they played a special role in death.



Fig.10.7. Deer-shaped embroidery from grave 832 at Birka (SHM 34000; photograph: Ola Myrin, SHM). Scale 1.5:1.

10.2. The Vårby hoard

In the Viking Age, Vårby was an important settlement on the southern shore of Lake Mälaren. Several cemeteries, which include mounds of unusually large size, still survive today (Jansson 1996:49). This settlement has yielded one of the most splendid hoards from the mid-Swedish area (App. 1:9). The hoard, with a precious metal component weighing 1.4kg, was found in 1871 by a fourteen-year-old boy. It was hidden under a stone in the forest close to the lake.

10.2.1. *The content of the hoard*

The Vårby hoard contained a large collection of gilt-bronze, silver and gilt-silver ornaments: a large disc brooch, two 'ball type' penannular brooches, a series of nineteen square-shaped mounts, nine pendants with openwork zoomorphic ornament, four heart-shaped mounts with loop attached, one tongue-shaped mount with loop attached, 41 silver beads and six looped coins. This hoard, with its large collection of complete ornaments (Fig.10.8), is a classic representative of the Viking-Age jewellery hoards (see Ch.2.2.2).

51 It is worth emphasising that the outside of this urn is decorated with a cockerel reminiscent of those appearing on Nordic coins of type KG4.



Fig.10.8. The Vårby hoard (App.I:9; photograph: Sören Hallgren, SHM). Not to scale.

Three brooches were found in the Vårby hoard, two of which are silver penannular brooches with ball-shaped terminals. Both of these ornaments belong to a small group of exclusive brooches known in six examples from Sweden, Russia and Denmark (Stenberger 1959; Graham-Campbell 2007b).⁵² This group has been interpreted as originating in Scandinavia, probably in the eastern Swedish area, even if the prototypes are from the British Isles. The third brooch is also of fine quality. It is a silver-gilt disc brooch decorated with Borre-style ornament. Brooches of this type are of Scandinavian manufacture (Jansson 1996:49; Graham-Campbell 2013:90).

The nineteen square-shaped mounts with plant ornament originally belonged to a belt commonly worn 'in aristocratic circles in Rus' and Scandinavia' (Jansson 1996:49). A belt of this kind is known from grave 716 at Birka, where the approximately 50 mounts were found *in situ* (Jansson 1986:98–101, 1988:594–6). The square-shaped mounts from Vårby show a clear Oriental influence, but were manufactured outside the Islamic world, possibly in the Kiev area (Arbman 1962:162–3; see also Jansson 1986:96–7).

Nine of the ornaments from Vårby consist of bronze-gilt or silver-gilt pendants with openwork zoomorphic ornament (see e.g. Graham-Campbell 1980:47, 2013:90). They are predominantly decorated in the Borre style, but some introduce elements of the Jelling style. According to David H. Wilson and Ole Klindt-Jensen (1966:93), who note the existence of Kievan parallels, 'these objects were almost certainly made in the Viking colonies of Russia'. James Graham-Campbell (1980:47) sees no particular reason to suppose that they were made outside Scandinavia.

Five further pendants are made from

Oriental belt mounts with plant ornament. The four heart-shaped ones, decorated with niello inlay, seem to have been manufactured in the Islamic world (Jansson 1986:97). The tongue-shaped mount, with a gilded surface, probably comes from the same area (Jansson 1986:97), but a Hungarian origin has also been suggested (Arbman 1962:163; Hedenstierna-Jonson 2012:39–40).

The Vårby hoard also contained 41 spherical beads, all made of silver. They are richly decorated with filigree and granulation. Two different areas of production can be distinguished: the Slavic area and Scandinavia (Jansson 1992b; Lamm & Nyman 2006:71). The beads produced in Scandinavia show a pronounced Western influence.

The Vårby hoard is often interpreted as containing two sets of ornaments: a male one and a female one (Jansson 1996:49; Lamm & Nyman 2006:71). Indeed, the two penannular brooches and the square-shaped belt mounts are typically associated with male garments whereas all the other ornaments are typically associated with female garments. According to this hypothesis, the Vårby hoard should be regarded as a 'family hoard' combining the belongings of two or more individuals. An alternative hypothesis is that the two sets of ornaments were not meant to be used separately. It is striking, for instance, that the number of square-shaped belt mounts equals almost exactly the number of pendants, thus leaving open the possibility that the latter were suspended from the former (Arbman 1962:163).

Based on the minting date of its latest coin, i.e. 937/8, the Vårby hoard is often assumed to have been buried c.940 (see e.g. Graham-Campbell 1980; Wilson 2008:329). This makes it the earliest coin-dated hoard to contain Jelling-style ornaments. The problem with this dating is that it relies on a sample of six coins. Small samples of this kind do not provide reliable *tpqs* (see Ch.2.3.1).

⁵² A seventh example from Ukraine could be added to the list, but some typological differences are apparent (see Graham-Campbell 2007).

Moreover, all the coins in the Vårby hoard are turned into pendants, which is likely to involve a chronological distortion. It is therefore safer to broadly date the hoard to the middle of the tenth century.

In summary, the Vårby hoard contains a collection of very exclusive ornaments with a strong Eastern flavour. It has been suggested by Wilson and Klindt-Jensen (1966:93) that the whole hoard had a Russian origin. The hypothesis is hardly tenable in view of the evidence, but underlines the importance of this area in the formation of the hoard. As noted by Władysław Duczko (2004:183), the Vårby hoard 'is good proof of the existence of personal contacts between the Lake Mälaren area and Rus'. Another important observation is that the ornaments from Vårby seem to have been collected and used over a very short period of time, most probably over one generation. No marked chronological differences can be distinguished.

10.2.2. A homogeneous set of coin-pendants

The coins from the Vårby hoard can be divided into two groups (Fig.10.9). On the one hand, there are two genuine Islamic coins, one struck in Andarabah in 916/7 and one struck in Shiraz in 937/8. On the other hand, there are four coins closely imitating Islamic dirhams, but with a small cross symbol on each side below the partly defective Kufic inscriptions. This latter group has generated considerable interest among numismatists. Gert Rispling (1987), who wrote the most comprehensive study on the subject, suggests that these anonymous imitations were issued in Kiev in the second quarter of the tenth century. Kiev was exposed to both Islamic and Byzantine influences, hence the addition of a cross to the dirham prototype. Roman Kovalev (2015), while providing further support for the Kiev hypothesis, argues that the pointed-rhomboid cross was introduced from the

Carolingian world rather than from the Byzantine one.

The four imitations from the Vårby hoard are very unusual. Only nineteen coins of this type are known to date, predominantly from Swedish finds (Rispling 1987:77; Kovalev 2015:169–70). They all imitate a coin from Andarabah minted between 915/6 and 919/20, but the mint-name is perhaps derived from a Samarkand coin. With few exceptions, these anonymous imitations were struck from the same pair of dies, which implies a very limited output (see Rispling 1987:75–6). In the Vårby hoard, the four specimens are all die-identical. Therefore, there is little doubt that they have remained together since they left the mint and that they were selected as an existing parcel.

The two genuine Islamic coins also stand out in a Scandinavian context. They both belong to a subgroup of dirhams struck on large flans exceeding about 30mm in size and 4–5g in weight. This subgroup, though consisting of regular coinages,⁵³ is relatively rare in Scandinavia. According to Bengt Hovén (1984:41), only 0.61 per cent of the Islamic dirhams deriving from Scandinavian hoards weigh more than 4.46g, which corresponds to 50 per cent overweight. Given this rarity, we can suspect that the two genuine dirhams struck on large flans were carefully selected because they were of the same size as the four Islamic imitations. Clearly, the owner's intention was to form a visually coherent set. This impression of coherence is reinforced by the fact that the four imitations from this set are combined with a dirham struck in Andarabah, which is the coin type identified as their prototype.

It is very likely that all these coins were

⁵³ The coin struck in Andarabah in 916/7 is a Samanid coin. Samanid coins struck on large flans began to be minted in the early tenth century. The coin struck in Shiraz in 937/8 is a Buyid coin. All Buyid coins are struck on large flans.



Fig.10.9. Set of coin-pendants from the Vårby hoard (App.I:9; photograph: Christer Åhlin, SHM). Not to scale.

turned into pendants on the same occasion. They are all fitted with loops of type Lr2b, all gilded and all orientated in the exact same way. The production of these coin-pendants clearly required a high level of craftsmanship. Gilding, in particular, is impossible without specialised skills (Trotzig 2014:246–8). This special quality of the coin-pendants is further reflected in the position of the loops, which are all attached exactly below one of the two sides of the coin, without any deviation. As already emphasised (Ch.5.4.1), there is a clear correlation in the Viking Age between correct orientation and high quality of craftsmanship.

Given its composition, there are good reasons to think that this set was formed somewhere along the Varangian route, perhaps in the Kiev area. It would have been very hard – if not impossible – to assemble all of these coins in Scandinavia. This Eastern interpretation is consistent with the overall composition of the Vårby hoard, in which most of the objects have an Eastern origin.

The place of transformation itself cannot be located with precision. All these coins are equipped with loops of type Lr2,⁵⁴ which had

an area of production extending from Kiev to eastern Scandinavia (see Ch.4.4.3; Fig.4.20). It is likely, however, that the coins were turned into pendants along the Varangian route, perhaps in the Kiev area. This area has been plausibly identified as the area where the set of coins was formed. Since the set seems to have been assembled in order to serve as pendants, the chances are high that the coins were adapted soon after their selection.

10.2.3. *An identity statement?*

There is no doubt that the ornaments deposited in the Vårby hoard made a strong impression on those seeing them. They had a lavish appearance, enhanced by the use of distinctive techniques, such as gilding, niello or filigree. Some also appear to have been unusually large or heavy, as is illustrated by the two ‘ball type’ penannular brooches, whose diameters exceed 10cm. Obviously, wearing these ornaments was a conspicuous way of displaying status and wealth.

The six coin-pendants from the hoard must be interpreted in the same light. They were probably meant to impress the beholder and to convey a message of prestige. Particularly noteworthy is the fact that they were all gilded – an unusual feature among coin-pendants. Gilding implied a significant change in the status of the reused coins. It gave them an exclusively symbolic function, since they were no longer suitable to be exchanged in the silver-based economy of the Viking Age. At the same time, the gold-like appearance of the coins made them enter into a different social sphere. It is generally accepted that gold and silver were not used in the same way in Vi-

tached to the imitations from Vårby differs markedly from the others in that it only has grooves on each side of the rivet. That there are significant differences between loops probably made on the same occasion suggests that the grooves were not made using a die. This also provides an idea of the amount of variation that was acceptable within types.

54 It is interesting to note that one of the loops at-

king-Age Scandinavia (e.g. Hårdh 1996:132; Zachrisson, T. 1998:85). Gold was considered a more prestigious metal than silver. It was more firmly associated with the status economy than with the trading one. Consequently, it is not surprising that the golden and gilded coin-pendants tend to occur in very special contexts, such as the Hoen hoard (App.I:4), the Eketorp hoard (Cat.II:58) or Birka grave 750 (Cat.I:72). By being gilded, the coin-pendants from the Vårby hoard were clearly ascribed a prestige value.

The large size of the coin-pendants further contributes to the visual impact they made. As emphasised above, the coins selected are significantly larger than almost all the coins circulating in Scandinavia at the time. Because of this, they probably appeared as especially valuable. They were rare and contained more silver. Moreover, their unusually large flans of c.30mm made them comparable in size to the other circular pendants from the hoard, the diameters of which range between 28 and 45mm. Smaller coins would have had a more limited visual impact within the set.

Despite this, it is worth emphasising that the coin-pendants from Vårby were not particularly prominent within the hoard. They were originally worn, if we accept the hypothesis that the two penannular brooches and the nineteen square-shaped belt mounts belonged to another individual, together with fourteen other pendants and with 41 silver beads. Under these circumstances, the six coin-pendants were somehow lost in the mass (see Ch.6.4.1). They only had a relatively limited role as display elements.

It is clear that the owners of the Vårby hoard were much attracted by the exotic. Even if the hoard contains a small collection of Scandinavian-style pendants, the ornaments manufactured abroad or evoking foreign styles largely predominate. These international allusions range from the British Isles

in the West to Kiev and the Islamic world in the East. They cover the larger part of the Viking world. The owners of the Vårby hoard were particularly eager to show their connections with the Varangian route, which they did by assembling a large collection of Oriental ornaments.

All the ornaments from the collection probably had different evocative potentials. The Slavic provenance of some of the beads, for instance, is unlikely to have been obvious, as they were mixed with a set of similar beads of Western type. Some other ornaments, however, may have been recognisable enough to evoke the Eastern world, such as those decorated with plant motifs. The six coin-pendants from Vårby undoubtedly belong to the latter category. Through the Kufic or pseudo-Kufic inscriptions they bear, they could easily be associated with the Islamic world.

In the case of the Vårby hoard, we can even suppose that the owner of the coin-pendants actually visited some of the areas from which the various ornaments derived. As pointed out above, many of these ornaments appear to have the same Oriental origin, possibly in the Kiev area. It seems likely, given their rarity, that they were put together by a single individual before being brought to Scandinavia. The Scandinavian-style and Western-style ornaments may have been added subsequently. If this hypothesis is valid, then these ornaments can be regarded as a collection of memorabilia, which would remind the owner of specific travels and activities.

That the Kufic inscriptions were orientated horizontally supports the idea that they had a certain significance for the owner of the coin-pendants. As is often the case, these inscriptions were displayed upside-down, which reflects a limited knowledge of the Kufic writing system. Whether or not the small crosses on the anonymous imitations were considered significant elements is hard

to determine. Their correct orientation may be a side effect of the crosses being aligned with the inscriptions. Furthermore, no crosses of this type – x-shaped pointed-rhomboid crosses – are known from Viking-Age Scandinavia. It is uncertain whether they could be recognised as Christian, especially since no other Christian symbol occurs in the Vårby hoard.

10.3. The *Agnus Dei* coin from the Johannishus hoard

The Johannishus hoard, discovered in 1865 in the province of Blekinge, is one of the largest Viking-Age hoards known in southern Scandinavia. It contained more than 4,000 coins, 106 pieces of jewellery and hack-silver, as well as an exceptional collection of coin-pendants. Johannishus seems to have been a regional centre from the Iron Age onwards. The nearby cult area of Västra Vång, which predates the Viking period, has yielded a unique collection of distinctive artefacts, including so-called ‘guldgubbar’, a Roman bust and Celtic bronze masks (see Henriksson & Nilsson 2016).

10.3.1. The coin biography

Agnus Dei coins are English coins issued during the reign of Æthelred II (978–1016). They were produced in small quantity, probably over a very short period of time. To date, only 21 specimens have been discovered, most in Scandinavia or around the Baltic (Keynes & Naismith 2011). Unlike other English coins of the time, the *Agnus Dei* pennies are not adorned with the king’s portrait or a cross. They feature, instead, two distinctive Christian symbols: the Lamb of God and the Holy Dove. This unusual design, and the strong Christian meaning attached to it, has frequently been invoked to explain why so



Fig.10.10. *Agnus Dei* coin-pendant from the Johannishus hoard (SHM 3491; photograph: Kenneth Jonsson, NFG). Scale 1.5:1.

many *Agnus Dei* coins were turned into ornaments (see e.g. Dolley & Talvio 1979:124; Keynes & Naismith 2011:206–8). Out of the seventeen specimens recorded outside England, ten have been pierced or looped. This represents almost 60 per cent of them, while less than two per cent of the other English coins have been turned into pendants (Table 3.2).

The *Agnus Dei* coin investigated here is much corroded, so that its designs are hard to recognise (Fig.10.10). We can only discern some iconographical details, such as the haloed head of the lamb or the wings of the dove. This coin is equipped with a loop of type Lr1B made from a rod and with a ring of type R3A. The loop covers almost completely a small hole of type H1, which probably represents an earlier stage of transformation. A hole of type H4 is located next to two other means of suspension. It is unclear whether this hole was intended to function as a means of suspension on its own or whether it represents the remains of a broken loop.

From the different pieces of evidence available, it is possible to identify four main events in the life of the coin, two of which can be precisely dated (Fig.10.11). The coin began its life in c.1009 in Malmesbury, England. At a later stage, it was pierced once or

twice. Then, a loop of type Lr1B and ring of type R3A were added. This way of suspending coins seems to be restricted to the period between c.1000 and c.1120 and to have an origin in southern Scandinavia. Finally, the coin-pendant ended its prehistoric life in c.1120, when it was buried in the Johannishus hoard.

Extrapolating from these events, we can postulate that:

- 1- The coin circulated for some time in England before it was transformed.
- 2- The coin was brought to Scandinavia at some point, most probably shortly after its striking.
- 3- the coin was, at least for a short time, worn as a pendant after it was pierced and after it was looped.
- 4- given its 120 years lifespan, the coin was passed down from generation to generation. Of course, this timeline remains highly hypothetical. It is possible, for instance, that the coin was pierced before its owner left England or that it was transmitted several times before being transformed. The hypothetical sequence proposed here is merely intended to reflect the complexity of the coin-pendant biography.

That this coin had a complex biography seems to have played an important role in how it was used and perceived. Particularly remarkable is the fact that the coin was still worn as an ornament despite its poor state of preservation. By the end of its prehistoric life, it was badly worn and pierced several times. Moreover, there is a remarkable sense of continuity over time. The two holes and the loop were placed next to each other or on top of each other, thus limiting the degree of change involved by the successive transformations. This continuity may reflect the considerable value attached to the past of the object.

The fact that the coin came from England was probably of some significance. This is

suggested by the difference in treatment between the English *Agnus Dei* coins and their Scandinavian imitations. The transformation rate of the English specimens is around 60 per cent while the transformation rate of their Scandinavian counterparts is much lower, between five and twenty per cent (see Malmer, B. 1997:229–30). It is possible that the coin from Johannishus was associated by its first owner with activities in which he/she was engaged in England, but this remains conjecture.

10.3.2. *The Agnus Dei coinage*

The *Agnus Dei* coinage (Fig.10.12) has been thoroughly studied by numismatists and historians (see e.g. Dolley 1971; Keynes & Naismith 2011, 2015). As a result, we know much about the context in which the coins were produced, about the motivation behind the adoption of this fresh type and about the meaning ascribed by the issuer to the coin design. Understanding these aspects is a key step for understanding why the coin was subsequently transformed.

As mentioned earlier, the coin is believed to have been minted in 1009, possibly in the late summer or autumn. The dating has been established on independent numismatic grounds, based on two main arguments (see Keynes & Naismith 2011:179–80). Firstly, a list of the moneyers appearing on the *Agnus Dei* coinage shows that it fits perfectly between the *Helmet* type, issued from c.1003 to c.1009, and the *Last Small Cross* type, issued from c.1009 to c.1016. Secondly, the existence of two mules combining an *Agnus Dei* obverse and a *Last Small Cross* reverse reinforces the idea of a link between these two coinages (Keynes & Naismith 2015). Finally, and perhaps most importantly, this chronology – with the *Agnus Dei* coinage as a transition between *Helmet* and *Last Small Cross* – accords very well with the historical

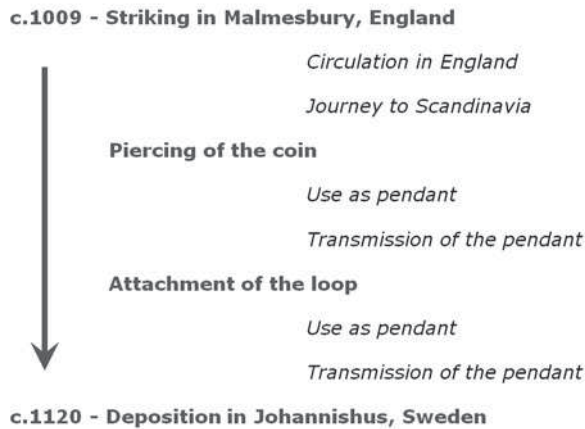


Fig.10.11. Simplified biography of the *Agnus Dei* coin-pendant from Johannishus.



Fig 10.12. The *Agnus Dei* penny in the Fitzwilliam Museum, Cambridge (after Keynes & Naismith 2011; drawing: Bob Naismith). Not to scale.

evidence (see Keynes 2007; see also Keynes & Naismith 2011:181–8).

What happened in England in 1009? The decades around the year 1000 are marked by a series of Viking invasions. The English are unable to cope with the Viking fleets that return again and again. In August 1009, a Danish army led by Thorkel arrives at Sandwich. A royal assembly is convened in response at Bath, where desperate measures are taken to earn God's favour. They include a programme of prayer and fasting for all the people of England as well as special arrangements for members of the clergy. It is now well established that the *Agnus Dei* coinage was intended as a symbolic complement to this appeal for divine help (Keynes 2007:190–200). The

Lamb of God, as a symbol of Christ, conveys a message of redemption and victory. The Holy Dove, as a symbol of the Holy Spirit, conveys a message of peace and divine inspiration.

These two symbols, and more especially the *Agnus Dei*, were increasingly popular in Anglo-Saxon England at that time (Schiller 1972:117–21). They were used in different art forms, such as manuscript decoration, sculpture and metalwork. It was the first time, though, that the two motifs were depicted on coins.

10.3.3. The coin designs in the context of southern Scandinavia

According to most numismatists and historians, the strong Christian meaning attached to these symbols would explain why the *Agnus Dei* coins were so often turned into pendants in Viking-Age Scandinavia (Dolley & Talvio 1979:124; Keynes 2007:200; Garipzanov 2011:36–7). But to what extent was the Christian iconography recognised and valued in an eleventh-century Scandinavian context? Interestingly, it seems that the image of the Holy Dove was particularly appreciated.

Table 10.2 lists all the reused *Agnus Dei* pennies for which the two sides are not coordinated, which implies that only one of the two images could appear the right way up. With no exception, the image of the Holy Dove is systematically preferred to that of the Lamb. Such a preference may appear surprising. At that time, the Lamb of God was more popular than the Holy Dove in Christian art. It even seems to have been introduced at an early point in Denmark, with a large group of eleventh-century brooches decorated with a Lamb of God in openwork (Pedersen 2014:210–2). Consequently, it is legitimate to wonder whether the Scandinavian owners of these coins had a Christian background and the knowledge to be able to identify the Holy Dove.

There are good reasons to believe that the

Table 10.2. Orientation of the reused *Agnus Dei* coins for which the two sides are not coordinated (source: Keynes & Naismith 2011).

Province	Parish, site	Inv nr	Orientation of the Lamb of God	Orientation of the Holy Dove
Blekinge (Sw)	Hjortsberga, Johannishus	SHM 3491	270°	180°
Denmark?	Unknown	Private collection	315°	45°
Harju (Ee)	Kose, Kose borough	AM 25159/1530	90°	0°
Gotland (Sw)	Västerhejde, Nygårds	SHM 5202	135°	45°
Lolland (Dk)	Vindeby, Vindeby Syd	MS FP 8386.1	90°	0°
Russia or Estonia?	Unknown	Unknown location	270°	0°
Sjælland (Dk)	Lille Lyngby, Meløse Gammeltoft	MS FP 7807.2	315°	0°

bird on this penny was not interpreted as the Holy Dove in a Scandinavian context. Firstly, as noted on several occasions, it is impossible to identify the bird species on morphological grounds only (Fig.10.12). It has even been suggested that the bird represented on the *Agnus Dei* coinage was in fact a raven or an eagle (Keynes 2007:193; Woods 2013). Secondly, the Scandinavian imitations of the *Agnus Dei* coinage often replace the original design with what appears to be a bird of prey (Fig.10.13). The Lamb of God, on the other hand, is reproduced relatively faithfully. In the light of this, there are good reasons to believe that the image of the Holy Dove was reinterpreted with the help of Scandinavian iconographic references.

A very similar motif – a bird seen from above – appears occasionally in Viking-Age Scandinavia, especially in the form of sword-chapes, mounts or keys (Fig.10.14). It is also represented on runestones and picture stones (see Ambrosiani 2001; Lindberger 2001). This motif is often referred to as ‘the falcon motif’. Generally speaking, the falcon motif has been interpreted as an elite symbol or as an identity marker. It seems to be largely connected with Birka and the Varangian activities, as shown by the Eastern distribution of the falcon sword-chapes (Hedenstierna-Jonson 2009). Interestingly, most of the objects featuring a bird seen from above can be dated to the tenth century.

The bird motif is also popular in the eleventh century, but it tends to take a different shape at that time. A case in point is provided by a large group of bird-shaped brooches found in southern Scandinavia on which the bird is viewed from the side (Fig.10.15). These copper-alloy brooches, which were a new type of ornament in the eleventh century, use different Scandinavian art styles in their decoration. They have been interpreted as Christian objects, both because they allude to the Christian iconographical tradition and because they sometimes feature a cross. It is difficult to determine, though, whether these brooches represented birds of prey, doves or peacocks (Pedersen 2001).

Admittedly, the bird depicted on the *Agnus Dei* coin resembles more closely the falcon motif than the motif represented on bird-shaped brooches. However, given the context in which the coin investigated here appears to have been looped and used, which is late and southern, its owners are more likely to have been familiar with the latter. This, unfortunately, leaves open the question of how the Holy Dove on the *Agnus Dei* penny from Johannishus was reinterpreted. With what kind of bird was it identified? Was it viewed as a Christian motif or as something else? The fact that the bird was systematically preferred to the Lamb of God when the two images were not coordinated is an argument against the Christian interpretation (Table 10.2).



Fig.10.13. *Agnus Dei* coin of Sven Estridsen found at Varla (KMK dnr 245/93; photograph: Frédéric Elfvér). Scale 1.5:1.



Fig.10.14. Ornament in the form of a falcon from the Birka settlement (SHM 35000; photograph: Eva Vedin, SHM). Scale 1.5:1.



Fig.10.15. Copper alloy brooch found in Uppåkra (after Hårdh 2010; photograph: Bengt Almgren, LUHM). Scale 1.5:1.



Fig.10.16. Cross-shaped pendant from Johannishus with a loop of type Lr3B and a ring of type R3A (SHM 3491; photograph: Ulrik Skans, SHM). Scale 1:1.

10.3.4. The *Agnus Dei* coin in the context of the Johannishus hoard

Since it was found in a mixed hoard, it is not possible to know how our penny was originally worn and the ornaments with which it was originally combined. The Johannishus hoard contains a large collection of pendants and coin-pendants, as well as many arm-rings. These ornaments are far too numerous to form a single set. At the same time, the large size of the Johannishus hoard and the number of ornaments make it obvious that the last owner of the *Agnus Dei* penny investigated here belonged to an elite group. It is interesting, in this respect, to emphasise that this individual or his/her family was able to acquire an impressive collection of rare coins, including a series of complete dirhams, two Byzantine miliaria of Basil II and Constantine VIII as well as two *Agnus Dei* pennies. Almost all of these rare coins were turned into pendants.

The decision to attach a ring of type R3A implies a reference to various ornaments from the Johannishus hoard, including several coin-chains, a crucifix and a cross-shaped pendant (Fig.10.16). It is unclear whether these ornaments were intended to be worn together, but a certain link seems to exist between them. That the *Agnus Dei* coin was associated with a crucifix and a cross-shaped pendant might indicate that, in some way, it had a Christian meaning to its owner.

Finally, it is interesting to note that the two *Agnus Dei* coins from Johannishus are mounted with very similar loops, thus suggesting that they were converted as a pair (Fig.3.4). This observation has important implications, especially since both coins appear to have separate histories. Unlike the specimen studied so far, the second *Agnus Dei* coin from Johannishus has not been pierced for suspension. It was transformed only once, with the attachment of a loop. Another basic difference is the presence of a peck on the

second *Agnus Dei* coin, which may indicate that it circulated for some time in the Viking world. From this, we can infer that the two coins were reunited in Scandinavia at a late stage, even though they were both struck in 1009 in western England. The desire to create a pair may explain why this *Agnus Dei* coin was transformed a second time.

The three cases investigated here have been selected because they provide particularly valuable insights into the reuse of coins as pendants in the Viking Age. These cases are representative in many ways of the diversity of the practice, but they are non-characteristic in other ways. For instance, all the contexts in which they appear may be characterised as

‘high status’, thus ignoring the fact that many owners of coin-pendants belonged to lower social classes. Indeed, it is easier to cast light on the practice by drawing on rich finds rather than poor ones.

By studying the entire trajectory of these coin-pendants, it has been possible to show how these foreign coins were gradually turned into Scandinavian ornaments through a complex process of appropriation. As soon as they were reused, they started to be incorporated into the local iconographic and ornamental tradition. Of course, the ideas associated with the coins themselves, such as ‘silver value’ or ‘foreignness’, were not erased by the transformation into pendants, but they became just one of the many qualities of the ornaments.

Chapter 11. Conclusions

This thesis has investigated the reuse of coins as pendants in Viking-Age Scandinavia in order to gain a better understanding of this practice and to explore the role of the object ‘coin’ within it. The material used for this investigation, which combines both archaeological and numismatic data, has been divided into two main catalogues: one comprising 134 Scandinavian graves with coin-pendants and the other comprising a random sample of 80 Scandinavian hoards. The hoard catalogue was primarily intended for quantitative purposes while the grave catalogue was primarily intended for qualitative purposes. The importance of studying the Viking-Age coin-pendants both in graves and in hoards cannot be overemphasised. None of these contexts is a direct reflection of the reality of the practice, as shown by the differences in composition observed between them (Ch.7.4.1).

A major strand throughout this thesis has been the idea that objects go through several stages of existence and that they move between contexts in various ways. Accordingly, they cannot be understood at only one point in their existence. This biographical view is particularly relevant to the study of the Viking-Age coin-pendants, since these objects appear to have been frequently recontextualised in the course of their lives. A large part of this thesis has been concerned with identifying and investigating key events/phases in the life of the Viking-Age coin-pendants (Ch.3–6). Another part has been concerned with understanding how these events/phases relate to each other (Ch.7 & 10).

The idea that meaning is not fixed has also opened the door to approaches drawn from semiotics. Throughout this work, it has been stressed that the messages received by those using coins were different from the messages intended by those issuing them (Ch.5 & 10), that coins could be meaningful on different levels (Ch.9) and that coins meant different things to different users (Ch.7 & 10).

Because of this variability in meaning, it is impossible to understand the practice of reusing coins as pendants without undertaking a contextual analysis of this material. By ‘contextual’ it is meant not only that the Viking-Age coin-pendants must be studied in relation to their immediate archaeological surroundings and to the objects with which they are physically combined, but also that they must be studied in relation to:

- 1- The broader framework in which they are situated. The practice of reusing coins as pendants is obviously shaped by a wide range of social, economic, cultural and religious factors (Ch.8 & 10).
- 2- Other objects with which they are metaphorically associated – i.e. the concept of citation. Obvious examples include: coin-pendants outside Scandinavia, coin-like ornaments, other pendants and other objects with coin designs (Ch.9 & 10).

Applying these theoretical and methodological insights has made it possible to answer the four research questions formulated at the beginning of this work (Ch.1.3).

Where, when and by whom were the coin-pendants made and worn?

In the Viking Age, the reuse of coins as pendants has a pan-Scandinavian scope. Finds of coin-pendants occur all over Scandinavia, from Iceland in the west to Gotland in the east, and from the Danevirke in the south to the Swedish province of Jämtland in the north (Ch.2.3.2 & 2.3.3). There is, however, a marked Eastern bias, which is particularly evident when comparing three of the main Viking-Age trading centres: Birka in eastern Scandinavia, Hedeby in southern Scandinavia and Kaupang in western Scandinavia. A total of 34 graves with coin-pendants are known from Birka, but there are none from Hedeby and Kaupang. It seems that this eastern bias arises from internal factors, including differing depositional practices, but also from an external influence. At that time, the reuse of coins as pendants was most popular to the east of Scandinavia, especially in Rus, among Finnish tribes and in the Byzantine Empire (Ch.9.2.1).

By studying how the coins were suspended, it is possible to identify several areas of production (Ch.4.4). The coin-pendants equipped with loops of type Lr2, finds of which are concentrated in the eastern part of the Viking world, seem to have been primarily produced along the Varangian route or in the Birka area. The coin-pendants equipped with loops of type Lr3 and with rings of type R3A, the finds of which are concentrated in southern Scandinavia, seem to have been primarily produced in the Danish kingdom, possibly in Lund. In both cases, there is evidence suggesting that the transformation into pendants was carried out in workshops by craft specialists. The other types of suspension, by contrast, cannot be associated with any specific area. Their production, which required fewer skills, was more decentralised. The coins provided with holes should be regarded as homemade products.

The practice of wearing coins as pendants is attested throughout the Viking Age, which covers the period between c.800 and 1140 in numismatic terms (Ch.2.3.2 & 2.3.3). The earliest sets of Viking-Age coin-pendants seem to have been assembled at the very beginning of the period, possibly around 800. They first appear in graves and hoards a few decades later, in the second and third quarters of the ninth century. The latest sets of Viking-Age coin-pendants were assembled at different times depending on the area. In Norway, the practice had already declined in the last quarter of the eleventh century, while it did not decline until the second quarter of the twelfth century on Gotland. This decline seems to be linked, to a large extent, to the local development of a coin economy, even if some coin-pendants continue to be used after the end of the Viking Age (Ch.8.3).

This long period can be divided into two main phases: Phase I from c. 800 to 980 and Phase II from c.980 to 1140. Each of these phases consists of two sub-phases, with a demarcation in c.890 and c.1060 (Ch.2.3.2). The coin-pendants from Phase I and Phase II differ in many respects. Substantial differences emerge in terms of composition, structure and technique. The contexts in which these coin-pendants occur also change over time, but too gradually to fit into this chronological framework. There is much less variation between the different sub-phases. It is worth noting, though, that the production of coin-like pendants is restricted to sub-phases IA and IIB, when there was a more limited access to foreign coins (Ch.9.3).

Despite these differences, no sharp division can be drawn between Phase I and Phase II. Some of the coin-pendants from Phase I continue to be used well into Phase II and some of the coins circulating during Phase I were transformed during Phase II (Ch.3.4.1). It is also striking that most of the means of

suspension, i.e. holes and undecorated loops, occur throughout the Viking Age (Ch.4.4). From many points of view, there is a strong sense of continuity. The coin-pendants from both phases can be regarded as forming a single category.

In the light of the archaeological evidence from hoards and burials, the typical owner of coin-pendants in Viking-Age Scandinavia can be described as follows (Ch.2.3.3): an adult woman, affiliated with the upper stratum of society, who is somehow engaged in long-distance networks and has special ties with places of power, such as trading and aristocratic centres. Unsurprisingly, this typical owner belongs to a social group that had relatively easy access to coins in the Viking Age.

Many owners of coin-pendants, however, deviate from this typical profile. Some coin-pendants derive from poorly-furnished graves, thus suggesting that their owners belonged to lower social groups and had limited long-distance connections. Some occur in remote areas, such as northern Scandinavia or Iceland, which demonstrates that the practice of wearing coins as pendants had spread away from the most central places. Some seem to have been associated with men, even if the evidence for this is limited.

The religious identity of those owning coin-pendants is often hard to determine archaeologically, but it is clear that they are increasingly influenced by the Christian religion (Ch.8.2). Towards the beginning of the Viking Age, the graves in which the coin-pendants appear are predominantly located in pre-Christian cemeteries and contain a wide range of grave-goods. Towards the end of the Viking Age, the graves in which they occur are predominantly located in Christian churchyards and contain no grave-goods apart from personal jewellery. The fact that those owning coin-pendants could be

Christians does not automatically prove that the coin-pendants they wore had a Christian meaning.

What was the function of the Viking-Age coin-pendants and how was this function shaped by wider society?

Unsurprisingly, given this diversity of actors and contexts, the Viking-Age coin-pendants appear to have fulfilled a wide range of functions. They could be used, *inter alia*, as identity markers, as status symbols, as religious amulets, as Christian emblems, as pieces of memorabilia or even as mere ornaments (Ch.9.2.3). Of course, these different functions were not mutually exclusive. As is often the case with adornment, the same piece could be worn for more than one purpose.

This multifunctionality means that it is almost impossible to interpret a Viking-Age coin-pendant without considerable contextual information. A coin-pendant decorated with a cross, for instance, was not necessarily a Christian emblem or a religious amulet. These functions may have been secondary or even completely lacking. Even if some information resides in the object itself, very little can be concluded without first knowing who wore this object and how it was worn.

In Viking-Age Scandinavia, the relationship between coin-pendants and their owners is a personal one (Ch.9.2.2). The very fact that coins were preferably used in the form of pendants rather than in the form of brooches implies that: (a) they could be directly produced by their owners or under their supervision; (b) they could be combined with other pendants to form unique sets whose composition reflected personal taste and personal history. From this point of view, the Viking-Age coin-pendants convey a clear sense of individuality.

The nature of this personal relationship depends not only on the background of the own-

er, which determines how the object ‘coin’ and its iconographic/epigraphic content can be understood, but also on the biography of the object itself. Because they passed through many hands and through many contexts over the course of their lives, the Viking-Age coin-pendants probably came to be associated with a number of specific persons and places. It seems, in particular, that the way the coin-pendant or the future coin-pendant was acquired – i.e. through inheritance, travel or networking – played an important role in shaping its functions and meanings. Unfortunately, this event is very difficult to investigate archaeologically.

Despite the considerable influence of this personal relationship on the practice, it must be emphasised that the functions of the Viking-Age coin-pendants were, at the same time, fundamentally shaped by wider society, i.e. by the religious, economic, social and cultural contexts in which these ornaments occurred. Three main types of influence can be distinguished.

Firstly, the wider context plays a role in shaping the practice itself. The fact, for instance, that crosses are increasingly common on coin-pendants throughout the Viking Age, or that the production of coin-like pendants develops in the eleventh century, is mainly attributable to broad social and cultural processes, such as Christianisation (Ch.8.2) and monetisation (Ch.8.3). Similarly, the fact that status was expressed differently in central and in remote areas reflects differences in cultural values and in economic conditions (Ch.5.4.2).

Secondly, the wider context plays a role in shaping the background of those owning coin-pendants. The capacity, for instance, to understand the image of the *Agnus Dei* depends largely on the penetration of Christianity in Scandinavia and on the prevalence of this motif in the local material culture (Ch.10.3.3). Simi-

larly, the ideas with which the object ‘coin’ is associated are mainly determined by the local economic conditions and by the acquaintance with foreign economies (Ch.9.1.3).

Thirdly, the wider context plays a role in shaping the biography of the coin-pendants (Ch.7). The way coins circulated and were treated, for instance, varies according to the degree of economic development. Similarly, the way coins were acquired is dependent upon the activities in which the Scandinavians were involved abroad.

What made coins so meaningful in Viking-Age Scandinavia that they were frequently turned into pendants?

It is remarkable how diverse the practice of wearing coins as pendants was in Viking-Age Scandinavia. The coin-pendants are made from a profusion of coin types and using a wide range of techniques. They are worn in many different ways by all kinds of individuals. They occur in a variety of contexts and fulfil multiple functions. Within this diversity, however, a common denominator emerges: the object ‘coin’.

Clearly, there was something about coins that made them desirable to wear in Viking-Age Scandinavia, just as it did, for instance, in early Anglo-Saxon England (Williams, G. 2006:161–9). This ‘something’ probably had much to do with the nature of the object ‘coin’ itself. As stressed by Richard Kelleher (2013:24, my emphasis), ‘coins were chosen to be adapted *because* they were coins’. This is not to deny that every coin and every type had special qualities of their own, but to observe that coins as a group had qualities setting them apart from other objects (Ch.9.1.3).

It could be argued that the object ‘coin’ was chosen largely for practical reasons. Coins were decorative objects with a wide circulation during most of the Viking Age. They were easily accessible (Ch.3), but also easily

adaptable into pendants (Ch.4.3). They certainly appeared as a reasonable option when looking for a foreign valuable to reuse as an ornament. Yet this explanation, plausible as it seems, is far from sufficient. Coins were apparently regarded as significant objects. When they were not available, they were replaced by substitutes reproducing their main qualities (Ch.9.3).

It has been shown that the images appearing on coins often played an important role in the practice of wearing coin-pendants. Some coins were undoubtedly selected on the basis of their iconography, such as the Nordic coins of type KG 3–6 and the *Agnus Dei* coins (Ch.3.3.4). Moreover, there is a tendency to display the coin designs correctly, even if the results show marked variation between coin types (Ch.5). That the images appearing on coins often played an important role can be explained by the fact that many of them had a resonance in Viking-Age Scandinavia. The stronger the resonance, the more likely the coins were to be valued for their iconographic content (Ch.9.1.1). Three types of resonance can be distinguished. Firstly, the coins bearing foreign images were often reinterpreted with the help of local iconographic references. Secondly, a small group of locally made coins had images rooted in the local iconographic tradition. Thirdly, many of the images appearing on foreign coins, and especially on English and German coins, were gradually incorporated into the Scandinavian iconographic repertoire.

At the same time, the coin designs carried a strong evocative charge (Ch.8.1.3). They signified beyond their iconographical content by conveying ideas such as ‘value’ and ‘foreignness’. From this perspective, the coin designs can be viewed as a defining characteristic of the object ‘coin’. It is no wonder that unstruck flans, which lack designs entirely, were only reused as pendants in very

rare cases. The ideas associated with coins were probably crucial in the practice of wearing coin-pendants. They can be put in relationship with some of the main driving forces within Scandinavian society in the Viking Age: long-distance interaction and accumulation of wealth in the form of silver.

There is no doubt that the images appearing on coin-pendants could operate both through their iconographical content and their evocative charge. These two levels of meaning were not mutually exclusive. It must be emphasised, though, that all coins have an evocative charge, no matter their orientation, while they only have an iconographical significance when they are orientated in a certain way. The first level thus provides a more comprehensive explanation of the practice of reuse than the second one.

More generally, it can be argued that the meaning of the coin-pendants was largely derived from the ideas with which coins were themselves associated. The transformation into pendant, although inevitably generating new meanings, essentially involved a transposition of former ones. That coins were foreign objects, that they had a guaranteed silver value, that they had intricate biographies, that they evoked power and high status, that they bore meaningful symbols or inscriptions – all of this was to be infused into the pendants. In other words, the symbolic value of the coin-pendant already resides, to a large extent, in the object ‘coin’ before its transformation.

Seen in this light, the coins circulating in the Viking Age can no longer be viewed as neutral pieces of silver. They had a symbolic value beyond their metal content, even if this underlying value probably played a secondary role when they were not reused as pendants. This aspect is essential for understanding the different social situations in which coins were involved, including trading activities.

What does the practice of reusing coins as pendants say about the Scandinavian mind in the Viking Age?

Generally speaking, it seems that coins were considered beautiful objects in Viking-Age Scandinavia. When reused as pendants, there was no need to further decorate them, for instance with a border or an elaborate mount. The object 'coin' itself was sufficient and could be displayed without – or with very little – additional embellishment (Ch.4). It is also striking that the Viking-Age coin-pendants can occur together with some of the finest pendants of the time, such as those decorated with granulated volutes or those made from pieces of foreign metalwork (Ch.6.3). They were viewed as aesthetically pleasing enough to be combined with objects that were originally produced to have outstanding ornamental qualities.

That coins had an aesthetic value in Viking-Age Scandinavia is further evidenced by the way they were turned into pendants. Indeed, those wearing coin-pendants often seem to have done their best to select good-quality coins (Ch.3.3.3), to orientate the coin designs geometrically (Ch.5.2) and to limit the damage involved in the process of transformation (Ch.4.3). These outward concerns would have been meaningless if the coins themselves had no aesthetic value.

However, not all the coins reused as pendants in Viking-Age Scandinavia are likely to have been viewed as beautiful. Some of them were worn out (Ch.3.3.3), badly struck and/or roughly adapted (Ch.4.1). They were sometimes so damaged that they could hardly be identified. This occasional use of low-quality coin-pendants can be explained in three ways. Firstly, it was not always possible to have access to high-quality coins. Some owners of coin-pendants probably had to content themselves with what they found. Secondly, the aesthetic value of coins appears

secondary to their symbolic value. The coins worn as pendants were preferably beautiful, but they could be imperfect if they had a special significance for their owners, as for instance when they had had a long biography. Thirdly, aesthetic value was not absolute and most certainly varied from one owner to another. Different owners had different ideas of what was visually acceptable.

Even though these differences between owners may partly depend on individual tastes and preferences, they seem to result primarily from variations at the collective level. As pointed out on several occasions, the degree of aesthetic sensitivity is, to a large extent, geographically and socially determined in the Viking Age. The closer the ties with central areas and the higher the social status, the better the aesthetic quality of the coin-pendants (Ch.5.4). In other words, the idea of 'beauty' had varying definitions according to the background of the wearer.

It is possible to determine how those wearing coin-pendants in Viking-Age Scandinavia responded to the images appearing on them by studying how these coins were selected for reuse and how they were subsequently turned into pendants. As already emphasised, the images appearing on coins seem to have played an important role in the practice, but this role is not uniform.

Clearly, those owning coin-pendants in Viking-Age Scandinavia responded differently to different coin designs (Ch.9.1.1). Some of these designs, such as those with inscriptions or locally-made pictorial images, generated an active response, while others, such as those with portraits or buildings, were largely ignored. The response to crosses, on the other hand, appears to have been more varied, even if there is a tendency towards a more active response by the end of the Viking Age (Ch.8.2.2).

Because of the amount of individual variation, it is often difficult to determine exactly why a certain coin design generated a certain response, but the type of response seems to have depended on three main factors (Ch.5.4)

1- Visual perception: coin designs generated a more active response when these designs were easily discernible – quality of strike, clear axis, etc.

2- Ability to recognise/understand the design: coin designs generated a more active response when those looking at them were able to recognise what they depicted – naturalistic, familiarity, etc.

3- Level of significance: coin designs generated a more active response when they had a special resonance in a Scandinavian context – powerful symbol, reinterpretation, etc.

These three factors, which are deeply interrelated, often combine to explain the differences in response to the various coin designs. The limited response to portraits, for instance, seems to be mainly due to the fact that portraits had little symbolic value during most of the Viking Age, but the fact that many portraits on late Anglo-Saxon coins

were highly stylised and that many portraits on German coins were hardly visible may be involved as well.

Studying how the coin designs were displayed and reinterpreted provides some insight into the mechanisms of image perception in Viking-Age Scandinavia. One important observation is that design orientation takes precedence over design integrity (Ch.5.3.3). It is more important to display correctly or geometrically than to display entirely. Another important observation is that there is a certain tolerance in how the designs are orientated. A design orientated at an angle of 15 or 30 degree is not necessarily disregarded (Ch.5.1). Finally, the way the coin-pendants are imitated to create coin-like pendants clearly shows that it was the compositional scheme that mattered the most (Ch.9.3.2). The details of the coin designs were often neglected.

These matters of perception and aesthetics help us to better understand how coins came to play a special role in Viking-Age Scandinavia and why they frequently became valued pieces of jewelry.

Sammanfattning – Transformerade värden. Bruket av mynt som hängen i vikingatidens Skandinavien

Introduktion

Syftet med avhandlingen är att få en ökad förståelse för hur utländska mynt i Skandinavien under vikingatid uppfattades av användarna och hur deras innebörd förändras när de omarbetats till mynthängen. Studiens grundläggande frågeställning är: hur kommer det sig att mynten så ofta användes som smycken under vikingatid?

Materialet som ligger till grund för studien är både arkeologiskt och numismatiskt. Det delas upp i två grupper varav den ena består av 134 gravar med mynthängen och den andra av ett urval om 80 skatter som är representativt för mynten i cirkulation. Stor vikt läggs vid gravarnas vittnesbörd, i och med att de visar hur mynthängen bars och framhåldes av sina ägare.

Mynthängen är en viktig och unik källa för att studera kognitiva processer. Till skillnad från de flesta andra vikingatida smycken, där produktionen krävde en specialist, var mynthängen ofta enkla nog för att tillverkas direkt av ägaren. Detta innebär att det finns en stark personlig relation mellan objektet och dess användare, från vilken både intentioner och känslor kan utläsas. Denna relation kan studeras utifrån flera olika processer som vittnar om mynthängebärarnas ageranden och val, såsom val av mynt, hur dessa har modifierats, hur motiven orienterats och hur mynthängena kombinerats med andra föremål. Alla dessa processer studeras i avhandlingen, genom olika analyser som särskilt utformats för ändamålet.

Kapitel 1. Mynt omvandlade till smycken: gamla och nya perspektiv

Användningen av mynt som smycken har länge förbigåtts av både den numismatiska och arkeologiska forskningen, särskilt när smycket inte visar något större konstnärligt eller numismatiskt värde. Praktiken att förse mynt med hängenanordning har också länge ansetts som en "försämring" av artefakten och som en förändring av den information som myntet bär på. Av denna anledning har de enkelt producerade mynthängena från vikingatiden inte särskilt intresserat forskare förrän på 1970-talet, då den sekundära användningen och behandlingen av mynt kom att intressera numismatiker såsom Brita Malmer i spetsen. Sedan dess har antalet publikationer som behandlar detta ämne ökat, särskilt de senaste åren. Samtidigt begränsar sig forskningen till en liten grupp artefakter och analyserna täcker endast delar av materialet. Mynthängen nämns ofta inom ramen för studier rörande skandinavisk ekonomi. I det fallet används de som diagnostiska föremål för att särskilja olika typer av ekonomier under vikingatid.

Att analysera och tolka vikingatida mynthängen kräver att man använder sig av en spännvidd av specifika teoretiska verktyg gällande materiell kultur, kontextuell arkeologi, kulturell biografi och semiotik. Mynten och mynthängena uppfattas här som sociala och kulturella föremål. För att nå fram till mynthängenas praktiker och meningar måste man studera i detalj hur de kan relateras till den

generella kontexten och till diverse liknande föremål, liksom de fysiska och konceptuella förändringarna de kan genomgått under sin existens samt hur de olika tecknen (symboler, bilder, texter, etc.) på mynten fungerar individuellt och i förhållande till varandra.

Utifrån denna bakgrund och teoretiska ram kommer följande frågeställningar att undersökas :

- 1- Var, hur och av vem tillverkades och brukades mynthängen under vikingatiden?
- 2- Vilken funktion fyllde mynthängen och hur formades denna av den generella kontexten?
- 3- Vilka av myntens egenskaper gjorde dem så attraktiva att de ofta användes som smycken under vikingatid?
- 4- Vad kan vi lära oss om vikingatida föreställningsvärldar utifrån praktiken att omvandla mynt till smycken?

Kapitel 2. Presentation av materialet

Ett mynthänge är ett mynt försedd med en upphängningsanordning där den ornamentala omarbetningen medför en (temporär) demonetarisering. Under vikingatiden utgörs denna förändring av ett tillägg av en ögla eller ett hål. Avhandlingen fokuserar på mynthängen i Skandinavien, på Island och i Schleswig-området mellan ca. 800 och 1140 e.kr. Utifrån en numismatisk tidsindelning har vikingatiden en bredare avgränsning, som tillämpas i avhandlingen. Övriga myntliknande föremål som förekom i Skandinavien under samma period analyseras inte systematiskt i avhandlingen, men används som jämförelsematerial för att urskilja viktiga karakteristika som är gemensamma för de två föremålskategorierna.

Katalogen 'Catalogue I' inkluderar samtliga gravar från Skandinavien som innehåller mynthängen från vikingatid. Materialet har en framträdande plats i analyserna eftersom det

bär på information om ägaren. Den andra katalogen, 'Catalogue II', redovisar ett stickprov som omfattar 80 skatter från vikingatid vilka upptäckts efter år 1919 och som innehåller 21 mynt eller fler (Table 2.2). Denna katalog syftar till en bättre statistisk grund för analysen. Två materialkategorier som inte täcks av de två katalogerna, nämligen smyckedepåer och myntkedjor, är listade i 'Appendix I' och 'Appendix II'. Genom att jämföra föremålen i de olika fyndkategorierna undersöks de bakomliggande urvalsprocesserna.

Det är i vissa fall problematiskt att kombinera de kronologiska uppgifterna som de olika katalogerna innehåller eftersom skatter och gravar kan inte dateras med samma precision. När det gäller skatter är *tpq* användbart för att tidbestämma nedgrävningen, ofta på några år. Gravarna, å andra sidan, kan endast dateras typologiskt med hjälp av gravgåvor inom en 50-årsintervall, i bästa fall.

De flesta av de 80 skatterna i stickprovet är så kallade blandade depåer, det vill säga skatter som innehåller både mynt och silver i olika former. Några av skatterna innehåller endast mynt. Den kronologiska spännvidden av skatterna utgör grund för fördelningen av dessa i två huvudfaser: Fas I (ca 800–980) och Fas II (ca 980–1140). Huvudfaserna delas vidare in i fyra under-faser (Table 2.4): Fas IA (ca 800–890), IB (ca 890–980), IIA (ca 980–1060) och IIB (ca 1060–1140). Även om hela Skandinavien är representerat i stickprovet finns en stor koncentration på Gotland, samt mindre koncentrationer i södra och östra Skandinavien (Fig.2.9). Totalt 1 072 (3,1%) av de 35 170 mynten i 'Catalogue II' har omarbetats för upphängning. Samtliga mynt är i silver. Andelen omarbetade mynt varierar under vikingatiden, med en topp under fas IB (Fig.2.10). Variationer finns även från en region till en annan (Fig.2.11) och från skatt till skatt.

Av de 134 gravar med mynthängen som

inventerats för den här studien har 96 stycken kunnat attribueras till någon av under-faserna (Table 2.5). Utöver det har en grav daterats till en tidigare period (pre-Viking Age) och två stycken till en senare period (post-Viking Age). De resterande gravarna kan inte dateras närmare än till vikingatid, alternativt till någon av huvudfaserna. Den geografiska fördelningen av materialet är mycket ojämn. Det finns en stark koncentration i östra Skandinavien, speciellt i Uppland, i Dalarna och på Gotland (Fig.2.12). Gravar med mynthängen speglar en del av variationen som finns i vikingatidens gravpraktiker. Dock är kammar- och båtgravar överrepresenterade i materialet (Table 2.6). De flesta gravarna innehåller föremål tillhörande den kvinnliga dräktraditionen, vilket sammanfaller väl med de tillgängliga osteologiska bedömningsarna. Gravgåvorna varierar i både kvantitet och kvalitet. I vissa fall är mynthängen de enda bevarade föremålen. I andra fall är bärarna av mynthängen omgivna av dyrbara gravgåvor. De 134 gravarna i denna studie innehåller totalt 252 mynthängen, från ett till elva stycken per grav (Fig.2.13).

Kapitel 3. Urval

Tillverkningen av mynthängen börjar med valet av ett mynt från myntbeståndet. Processen kan inte helt rekonstrueras av forskaren eftersom det är svårt att säga exakt vilka mynt som fanns tillgängliga för den som gjorde valet. Däremot tillåter en jämförelse mellan 'omarbetade mynt' och 'icke-omarbetade mynt' inom varje myntgrupp att avslöja vissa preferenser.

Under vikingatiden är det skandinaviska myntbeståndet starkt dominerat av utländska präglingsarna (Table 3.1). I Fas I är dessa främst islamiska och i Fas II engelska och tyska. De andra utländska mynt som cirkulerar parallellt, till exempel karolingska, bysantinska,

sassanidiska eller böhmiska, utgör endast en mycket begränsad del av myntbeståndet. Lokala mynt blir allt vanligare under vikingatidens lopp, för att bli den dominerande gruppen i större delen av Skandinavien under andra delen av 1000-talet.

Andelen omarbetade mynt varierar stort från en myntgrupp till en annan (Table 3.2). Tre grupper som är särskilt populära består av mer än tjugo procent omarbetade mynt: karolingska, nordiska (typ KG3–6) och bysantinska. Fyra andra grupper består av fem till tio procent omarbetade mynt: islamiska, sassanidiska, böhmiska och svenska. Alla andra myntgrupper består av mindre än tre procent omarbetade mynt. Det finns ingen entydig gemensam nämnare mellan de olika grupperna, däremot finns det flera tendenser. Några kriterier verkar spela en större roll, liksom sällsyntheten eller kvaliteten på präglingsarna. Storlek och vikt verkar inte ha haft någon större inverkan på urvalet. Förekomst av en distinkt bild eller symbol framstår som en viktig faktor, men inte alltid avgörande.

Samtidigt beror attraktionen hos en specifik myntgrupp uppenbarligen på kronologiska och geografiska faktorer. Detta förfaller ha två huvudsakliga orsaker. Å ena sidan är de olika grupperna inte tillgängliga i liknande proportioner under hela perioden och i hela Skandinavien. Å andra sidan verkar avståndet i tid (Fig.3.5) och rum (Fig.3.8) till myntets ursprung vara viktigt för dess symboliska värde.

Kapitel 4. Omarbetning

Själva upphängningsanordningarna är viktiga i avhandlingens analys för att avgöra var och när mynten har omarbetats. På grund av de få distinkta egenskaperna hos upphängningsanordningarna, och den begränsade omsorgen vid tillverkningen, är en typologisk analys inte helt enkel, men ett förslag utarbetas. I

den föreslagna typologin är en typ definierad som en idealbild mot vilken ett objekt sträcker sig. Detta betyder att det inte finns någon absolut avgränsning mellan typerna. Genom att analysera hur de definierade typerna har tillverkats, och hur de distribueras geografiskt och kronologiskt, görs här även en bredare undersökning av mynthängenas produktionssammanhang.

Olika metoder har använts för att förvandla mynt till hängen på vikingatiden (Fig.4.2): bikoniska öglor, cylindriska öglor, enkla hål, 'klämda' öglor och ringar. Hålmetoden är den mest använda, före klämda öglor och ringar. Bikoniska och cylindriska öglor är typiska för den merovingiska perioden och är därför ovanliga i det behandlade materialet. Hål, klämda öglor och ringar kan delas in i flera typer. Kategoriseringen av hål utgår ifrån i hur öppningen är formad. Kategoriseringen av klämda öglor baseras på hur mynten är fästade och dekorerade (Fig.4.3), samt formen på den undre delen (Fig.4.4). Kategoriseringen av ringar grundar sig i hur dess ändar är sammanbundna (Fig.4.7) och vilken typ av tråd som använts (Fig.4.8). Trots att öglor och ringar visar på en stor diversitet är några typer mer framträdande (Table 4.1–2): Lr1A, Lr1B, Lr2A, Lr3A, Lr3B och R3A.

Svårighetsgraden i tillverkningen av de olika hänganordningarna varierar. Att göra hål i ett mynt kräver varken speciella verktyg eller sakkunskap. Det räcker att trycka in en syl eller en kniv. Att lägga till en ögla är mer eller mindre komplicerat, beroende på typen. Det krävs åtminstone ett minimum av sakkunskap. Att tillverka en ring är en komplex procedur om metalltråden tillverkas från grunden. Samtidigt verkar det som att en mängd av silvertrådar cirkulerat lite varstans i Skandinavien.

Det finns en korrelation mellan hur avancerad en typ är och kronologiska/geografiska koncentrationer. De mest förekommande

hänganordningstyperna, det vill säga hål (H) och odekorerade öglor (Lr1), används under hela vikingatiden och överallt i Skandinavien (Fig.4.17–18). De mer avancerade hänganordningstyperna förekommer i en mycket snävare kronologisk och geografisk ram. Följaktligen är hela strierade öglor (Lr2) typiska för Fas I och östra Skandinavien (Fig.4.19–20), medan delvis strierade öglor (Lr3) och ringar med sammanknutna ändar (R3A) är typiska för Fas II och södra Skandinavien (Fig.4.22–5).

Kapitel 5. Orientering

Sättet myntmotiven orienteras i förhållande till hänganordningen avslöjar vilken funktion motiven hade för ägaren. Förstods och uppskattades de? Flera metodologiska problem framträder, inte minst frågan om hur mycket ett motiv kan avvika från sin axel utan att förlora sin betydelse. En toleransnivå har fastslagits till 15° för motiv med en uppenbar symmetriaxel och till 30° för motiv utan sådan. Några motiv, som svärdet på baksidan av vissa engelska mynt, kan utläsas från vilket läge som helst.

Om man utgår ifrån hur motiven är orienterade individuellt (Fig.5.4–5) och i förhållande till varandra (Fig.4.6) är det möjligt att kategorisera motiven som förekommer på de ombearbetade mynten, från det lägst till det högst värderade. Korsmotiv och kategorin 'andra figurativa motiv' har väckt det största intresset. Inskriptioner är ofta rätt orienterade, men när motiv finns på andra sidan tenderar den till att föredras. Byst-och byggnadsmotiv har väckt lägst intresse. Ointresset för byster representerar en förändring i förhållande till folkvandringstid under vilken kejsarbyster spelade en stor roll i den germanska symboliken.

Förutom orienteringen av motiven verkar det också som om att en del praktiska

överbägganden spelat roll fär hur hänganordningarna har placerats. Detta syns tydligt där öglor och hål är placerade på ett specifikt element av motivet som används som hållpunkt, till exempel en bokstav eller pärla. I vissa fall är det också möjligt att öglor och hål positioneras i relation till graffiti, även om den knappt syns med blotta ögat. Till skillnad från det som ibland föreslagits har viljan att bevara motiven knappt påverkat placeringen av hänganordningarna. Motivets sammansättning och symmetri är med stor sannolikhet viktigare än bevarandet av ikonografiska och epigrafiska detaljer.

Dessutom varierar sättet som myntmotiven roterats beroende på flera faktorer. Å ena sidan påverkas orienteringen av hur realistiskt myntmotivet är och hur avancerad omarbetningen är: ju bättre kvalitet desto mer respekteras motivet (Fig.5.12). Å andra sidan beror den på de geografiska och kronologiska kontexterna. Sannolikt varierar kunskapen och de estetiska kriterierna i olika delar av Skandinavien och under vikingatidens gång.

Kapitel 6. Kombination

För att förstå mynthängens funktion måste man studera sättet som de burits på och hur människor kombinerat dem med varandra och med andra föremål. En sådan kontextuell studie är möjlig utifrån gravar och smyckedepåer, men inte utifrån blandade depåer. De sistnämnda innehåller objekt ihopsamlade av ekonomiska skäl. Gravar och smyckesdepåer ger samtidigt en statisk bild som kan vara förvrängd jämfört med den levda verkligheten.

De flesta gravarna inom denna studie innehåller mellan ett och fyra mynthängen. Några av dem, i huvudsak inom myntfattiga regioner och/eller perioder, innehåller fler. Tre olika typer av myntkombinationer särskiljs (Table 6.1): antingen är flertalet av mynten

som kombineras visuellt identiska, är olika men har ett gemensamt ursprung, eller är helt olika. Den mest populära kombinationen är den förstnämnda typen, vilken ofta innehåller ett annorlunda mynt. En typologisk analys av hänganordningarna visar att homogena kombinationer ofta tillverkades vid ett och samma tillfälle, till skillnad från heterogena kombinationer.

Med enstaka undantag kombineras mynthängen från alla de studerade gravarna med andra hängsmycken och/eller pärlor. Materialet består av 115 lokala hängsmycken, 31 importerade hängsmycken och ungefär 4 500 pärlor (Table 6.2). Tolkningen varierar från en typ av ornament till en annan, pendlande mellan amuletter, status- och identitetssymboler. De hängsmycken som oftast kombineras med mynthängen – sköldformade, fili-grandekorade med voluter, och Jellingedjur – är alla cirkulära och av liknande storlek, vilket i sin tur antyder på ett viktigt estetiskt intresse. Nästa två tredjedelar av de importerade hängsmycken som kombinerats med mynthängen återfinns i gravar på Birka.

Även om kombinationerna av de tillgängliga mynthängen kan variera mycket är det möjligt att särskilja typer utifrån de element som ingår i kombinationen. Indelningen framhäver den avgörande roll som mynthängen spelar: de är ofta fler än de andra hängsmycken som de uppträder tillsammans med. Den centrala placeringen av mynthängen på halsband och mellan ovala spännbucklor bekräftar myntsmyckenas särskilda värde.

Kapitel 7. Vägar

De huvudsakliga händelserna i ett mynthänges liv följer vanligtvis denna sekvens: (1) prägling, (2) cirkulation som valuta, (3) import till Skandinavien (om myntet är utländskt), (4) cirkulation som betalningsme-

del, (5) omarbetning till mynthänge, (6) användning som mynthänge, (7) deponering. Myntet kan också återgå i cirkulation mellan fas (6) och (7). Möjligheten att rekonstruera en sådan sekvens och dess kronologi beror på flera faktorer, inte minst på tillgängliga dateringar och objektets livslängd.

Eftersom mynten inte har begränsad cirkulationstid under vikingatiden är det svårt att avgöra hur länge ett omarbetat mynt har använts före sin avmonetarisering. Däremot är det möjligt att uppskatta hur lång tid myntet cirkulerat genom att studera knivmärken som gjorts för att testa metallen. Antalet probermärken speglar i teorin antalet kommersiella transaktioner. Studien av dessa probermärken i olika kontexter visar att mynten kunde ta olika vägar innan omarbetningen (Fig.7.3). De flesta förefaller ha demonetarerats snart efter sin ankomst till Skandinavien, men många verkar också ha cirkulerat längre.

För att avgöra hur lång tid ett mynthänge kunde användas som smycke är den mest effektiva metoden att observera hur omarbetade och icke-omarbetade exemplar av samma mynttyp skiljer sig kronologiskt i blandade depåer. Tillämpad på bysantinska mynt i sådana depåer visar metoden att mynten användes som smycken under en kortare period, nämligen cirka 15 år (Table 7.3). Detta innebär att de sällan överfördes mellan generationerna. I gravmaterialet visar graden av slitage på mynthängen istället att de använts under en längre period (Table 7.4). Detta tolkas här som att det specifika värde som förknippas med ett mynthänge i arv minskar sannolikheten för att det ska deponeras i en blandad depå.

Efter användningen som mynthänge verkar majoriteten av de omarbetade mynten återfå en ekonomisk funktion, vilket deras närvaro i blandade depåer och fragmentering vittnar om. Den här typiska parabeln varierar geografiskt och kronologiskt, först och främst

beroende på olika deponeringspraktiker. Den varierar också mellan olika mynttyper (Table 7.5) i takt med att några har ett specifikt ekonomiskt eller symboliskt värde.

Kapitel 8. Omarbetning av mynt under Vikingatid: ett långtidsperspektiv

Den skandinaviska användningen av mynthängen under vikingatiden ingår i en lång lokal tradition, från romersk järnålder till medeltiden och framåt. Förståelsen av hur denna praktik manifesteras och utvecklas under vikingstiden bygger på att den studeras i ett långtidsperspektiv.

Elva mynthängen som tillverkats av gamla mynt, som redan cirkulerade i Skandinavien under järnåldern, kommer från vikingatida kontexter (Table 8.1). Dessa mynt är nästan alla romerska. De typologiska kännetecknen och förslitningen på de gamla mynten antyder att omarbetningen ofta skett före vikingatiden och att de använts kontinuerligt sedan dess. Det finns en koppling mellan praktiken under vikingatid och tidigare perioder som kan härledas till den roll som gamla objekt och monument spelar under vikingatiden.

Under vikingatiden förändrar sig användningen av mynthängen betydligt. Detta framgår av gravar med bysantinska mynthängen, vilka uppvisar en del innovationer: nya upphängningsanordningar, nya sätt att bära mynten på och nya typer av ägare. Även om många av innovationerna kan kopplas till introduktionen av kristendomen rent tidmässigt, går det inte att påvisa att mynthängen ingår i något större religiöst sammanhang (Table 8.2).

I slutet av vikingatiden, som ser utvecklingen av en penningekonomi, blir användningen av mynthängen lite omodernt. Trots detta uppträder fortfarande några mynthängen i skandinaviska fynd. De kan delas in i

tre grupper: mynt som tillverkats och omarbetats under vikingatid (Table 8.3), mynt som tillverkats och omarbetats under medeltid, och mynt som tillverkats under vikingatid men som omarbetats under medeltid. Det finns en kontinuitet mellan vikingatid och medeltid i användningen av mynthängen, som kan illustreras av den viktiga roll islamiska mynt spelar och av det begränsade inflytande av kristendomen på den här praktiken.

Kapitel 9. Mynthängena som en del av vikingatidens skandinaviska materiella kultur

För att bättre förstå användningen av vikingatida mynthängen är det nödvändigt att analysera hur objektet i fråga ingår i den mer generella skandinaviska materiella kulturen under denna period. Hur förhåller de sig till tidens ikonografi, bruk av kvinnliga smycken och produktionen av myntliknande hängen?

Det finns en tydlig korrelation mellan sättet motivet på mynthängen betraktas och deras plats i den lokala ikonografin. Ju mer motiven är förankrade i den skandinaviska traditionen, desto större är chansen att de är rättriktade. Motivens roll begränsas inte heller endast till denna korrelation. Å ena sidan finns det en diskrepans mellan hur meddelandet som figurerar på myntet förmedlas och hur det uppfattas av mottagaren. Motiv på utländska mynt är självklart föremål för omtolkning i den nya kontexten. Å andra sidan verkar myntmotiven betyda mer än sitt ikonografiska innehåll. Dess närvaro väcker olika idéer med vilka mynten associeras, såsom 'silvrets värde' eller 'internationella relationer'.

Under vikingatiden föredrar skandinaver att omarbota mynt till mynthängen snarare än till myntspännen eller broscher, även om sådana förekommer. Detta kan förklaras

med exempelvis lokala traditioner, teknisk kunskap och östliga influenser. Anledningen till att mynthängen föredras framför myntspännen kan vara att mynten kunde ses som mycket personliga objekt, som gärna kombinerades med andra hängen för att forma unika uppsättningar. Denna personliga dimension av mynthängen adderas till de funktioner som man attribuerar vanligen tillskriver dem: amulett, statussymbol och identitetsmarkör. Inget hindrar att mynthängen, som många andra smycken, kan ha flera funktioner samtidigt.

Få myntliknande hängen, hängen som tillverkats för att efterlikna mynt, är tillverkade i Skandinavien under vikingatid. Två grupper kan särskiljas. Den första tillhör 800-talets första hälft och innefattar 25 hängen som stämplat med dirhams-avtryck. Den andra gruppen, som härrör från flera danska verkstäder under 1000-talet, innefattar ett mindre antal hängen som imiterar lokala och utländska mynt. Existensen av dessa imiterande hängen bekräftar att mynt hade ett specifikt symboliskt värde under vikingatiden, som ledde till produktion av substitut när originalmynten var svårtillgängliga.

Kapitel 10. Fallstudie: från utländskt mynt till lokalt hänge

Utifrån tidigare föreslagna tolkningar har tre fynd från nuvarande Sverige valts ut för ett närmare studium. Fynden är inte representativa för hela materialet utan valdes för att belysa vissa teman och fenomen.

I grav 963 från Birka, en relativt fyndrik kammargrav daterad till 900-talet, återfanns tre mynthängen mellan ovala spännbucklor: ett karolingskt mynt med hål (c.822–40), ett nordiskt mynt med silverögla (c.825) och ett anglo-nordiskt mynt med bronsögla (c.921–7). Dessa tre mynthängen, sällsynta i Skandinavien, bildar en unik sammansättning som

troligen kommit till under flera generationer (Fig.10.4). Bilderna på de tre mynthängena antyder att de använts som beskyddande amuletter innan de senare användes mer specifikt i gravritualen.

Vårbyskatten (Fig.10.8), en av de rikaste i Svealand, innehöll ett brett urval av smycken daterade till 900-talet, inte minst sex mynt med identiska öglor: fyra efterbildningar av dirhomer präglade i Kiev och två ovanligt stora autentiska dirhomer. Dessa sex mynt, nästan otillgängliga i Skandinavien, har troligen samlats in och ombearbetats i Rus för att sedan föras till Skandinavien. I denna värdefulla sammansättning är mynthängena inte dominerande. Mynthängen var endast ett av de element som användes av ägaren för att framhäva sin privilegierade status och sina internationella kontakter.

Ett *Agnus Dei* mynt från Johannishusskatten i Blekinge illustrerar den komplexa process som förvandlar ett utländskt mynt till ett lokalt hänge. Detta mynt, dekorerat med tydliga kristna symboler, har varit föremål för flertalet materiella ombearbetningar, men också symboliska omtolkningar. Det verkar som att duvan, som representerar den helige anden på baksidan av mynten, har förknippats med olika andra fåglar som används i vikingatida ikonografi. Dessa fåglar har inte nödvändigtvis några kristna betydelser.

Kapitel 11. Slutsatser

Den här studien syftar till att bättre förstå användningen av mynthängen under vikingatid och att definiera det diskursiva utrymmet mynt som objekt har haft i den här praktiken. Särskilt vikt har lagts vid objektens kulturella biografier, utan vilka det är svårt att följa kontextuella och betydelsefulla förändringar i det omarbetade myntets liv. Idén om att det inte finns någon konstant betydelse har också betraktats semiotiskt. Fokus har

legat på meningsskillnader mellan det burna meddelandet och det som tas emot, samt hur de olika symbolerna artikuleras. Den här studien möjliggör att placera mynthängen i förhållande till den allmänna kontexten (ekonomisk, religiös och kulturell) och i förhållande till andra liknande föremål (motsvarande ikonografier, andra smycken och myntliknande hängen).

Tack vare dessa metodologiska och teoretiska verktyg har det varit möjligt att svara på frågorna ställda i första kapitlet.

1- Mynthängena tillverkades och bars i många sammanhang, och av olika typer av människor. Trots detta är det möjligt att identifiera gemensamma drag i hur bruket kommer till uttryck och genom att det finns en kontinuitet över tid.

2- De hängeförsedda mynten hade inte bara en funktion. De kunde tjäna estetiska, religiösa, identitetsskapande och prestigemässiga syften. Oftast förefaller de kombinera flera av dessa funktioner. Sättet som hängena bars och visades upp på vittnar om ett nära band mellan dem och den som bar dem.

3- Under vikingatiden hade mynt ett särskilt, symboliskt värde. Detta utgick delvis från deras ikonografiska innehåll men i synnerhet från de idéer som objekten förknippades med, såsom metaller, ekonomiskt värde, exotism och relationen till utländska makthavare. På ett fascinerande sätt låter mynthängena på så vis oss komma närmare några av periodens starkaste drivkrafter såsom internationella kontakter, utlandsfärder, och bruket att ansamla stora värden i form av silver.

4- Genom att studera olika processer kring myntens omvandling och användning som hängsmycken, är det möjligt att dra väsentliga slutsatser kring skandinavisk mentalitet och föreställningar under vikingatiden. Exempelvis visar resultaten på estetiska preferenser och hur ikonografin förstods av individer som kom i kontakt med den, och hur detta också har viktiga regionala skillnader.

Résumé – Valeurs transformées. Les monnaies utilisées comme pendentifs en Scandinavie à l'époque viking

Introduction

L'objectif de cette étude est de mieux comprendre comment les monnaies – pour la plupart étrangères – circulant en Scandinavie à l'époque viking étaient perçues par ceux qui les utilisaient et comment les messages qu'elles véhiculaient étaient remodelés lorsqu'elles étaient transformées en pendentifs. Par suite, il devrait être possible de répondre à la question élémentaire posée ici : pourquoi les monnaies étaient-elles si fréquemment adaptées à des fins ornementales à l'époque viking ?

Le matériel servant de fondation à cette étude est à la fois archéologique et numismatique. Il se divise en deux groupes : 134 tombes contenant des pendentifs monétaires et 80 trésors constituant un échantillon du stock monétaire disponible. Une importance toute particulière a été accordée au témoignage des tombes, car il permet de déterminer comment les pendentifs monétaires étaient portés et mis en valeur par leurs propriétaires.

Les pendentifs monétaires constituent une source d'information unique pour traiter des questions de perception et de signification. Contrairement à la plupart des bijoux de l'époque viking, dont la production requerrait nécessairement l'intervention d'artisans spécialisés, les pendentifs monétaires étaient souvent suffisamment élémentaires pour être produits directement par leurs propriétaires. Cela implique une relation très personnelle entre l'objet et son porteur, dans laquelle transparaissent goûts et intentions. Cette relation personnelle peut être étudiée en pre-

nant pour base plusieurs processus traduisant l'action des propriétaires de pendentifs monétaires, comme la sélection de la monnaie, sa modification, l'orientation de ses motifs ou son association avec d'autres bijoux.

Chapitre 1. L'utilisation de la monnaie à des fins ornementales : état des lieux et nouvelles perspectives

L'utilisation de la monnaie à des fins ornementales a longtemps été ignorée par la recherche numismatique et archéologique, surtout lorsque ces bijoux ne présentaient pas de valeur artistique ou numismatique particulière. Pire encore, cette pratique a souvent été considérée avec défaveur, parce qu'elle implique une altération physique de la monnaie et des informations que cet objet est censé apporter. Ainsi, les pendentifs monétaires de l'époque viking, presque tous de facture élémentaire, n'ont guère retenu l'attention des chercheurs avant les années 1970, moment où le traitement secondaire de la monnaie a commencé à être analysé sous l'impulsion de numismates comme Brita Malmer. Depuis, le nombre de publications sur le sujet n'a cessé d'augmenter, notamment ces dernières années, mais celles-ci se limitent souvent à un petit groupe d'objets et à des interprétations fragmentaires. Les pendentifs monétaires sont aussi fréquemment mentionnés dans le cadre d'études sur l'économie scandinave. Ils servent alors d'objets diagnostiques permettant de distinguer les différents types d'économie coexistant à l'époque viking.

L'analyse et l'interprétation des pendentifs monétaires de l'époque viking, objets situés à la frontière entre numismatique et archéologie, nécessitent la mobilisation d'outils théoriques spécifiques : notions de culture matérielle, d'archéologie contextuelle, de biographie culturelle et de sémiotique. Ces outils permettent respectivement de concevoir la monnaie comme un objet social et culturel, de déterminer la place des pendentifs monétaires par rapport au contexte général et à divers objets apparentés, de mettre en avant les transformations physiques et conceptuelles que subissaient les monnaies modifiées au cours de leur existence et de comprendre de quelle façon les différents signes – symboles, images, textes, etc – présents sur la monnaie fonctionnaient isolément et conjointement.

C'est dans ce cadre historiographique et théorique que les questions suivantes seront discutées :

- 1- Où, comment et par qui les pendentifs monétaires de l'époque viking étaient-ils fabriqués et portés ?
- 2- Quelle était la fonction de ces pendentifs monétaires et comment cette fonction était-elle modelée par le contexte général ?
- 3- Quelles propriétés des monnaies les rendaient attrayantes au point d'être utilisées si souvent en guise de pendentifs à l'époque viking ?
- 4- Que peut nous apprendre cette pratique sur les mentalités scandinaves à l'époque viking ?

Chapitre 2. Présentation du matériel

Un pendentif monétaire est une pièce de monnaie pourvue d'un élément de suspension dont le détournement à des fins ornementales traduit une démonétisation au minimum provisoire. À l'époque viking, cette modification de la monnaie se limite d'ordinaire à l'ajout d'une bélière ou d'une perforation. La pré-

sente étude se propose d'étudier les pendentifs monétaires utilisés en Scandinavie, y compris en Islande et dans la province de Schleswig, entre 800 et 1140 environ. Suivant une définition numismatique, l'époque viking s'entend ici dans un sens très large. Les différents objets monétiformes parfois utilisés en Scandinavie à la même époque ne seront pas analysés systématiquement, mais leur comparaison avec les pendentifs monétaire servira à isoler les caractéristiques les plus significatives de ces deux catégories d'objets.

Le catalogue nommé 'Catalogue I' regroupe l'ensemble des tombes scandinaves contenant des pendentifs monétaires de l'époque viking. Ce matériel occupe une place essentielle dans l'analyse, en raison notamment des informations qu'il apporte sur les propriétaires des pendentifs. Le catalogue nommé 'Catalogue II' regroupe un échantillon de 80 trésors de l'époque viking découverts après 1919 et contenant 21 monnaies ou plus (Table 2.2). Ce catalogue vise essentiellement à offrir une meilleure base statistique à l'analyse. Les trésors formés exclusivement de bijoux et les chaînes de monnaies, deux catégories de trouvailles non couvertes par les deux catalogues, sont inventoriés dans 'Appendix I' et 'Appendix II'. Une comparaison du matériel entre les différents types de trouvailles permettra de mettre en lumière les processus de sélection qui président à leur constitution.

Il n'est pas facile de concilier les données chronologiques apportées par les deux catalogues, trésors et tombes ne pouvant être datés avec le même niveau de précision. Dans le cas des trésors, le *tpq* permet de situer l'enfouissement à quelques années près. Dans le cas des tombes, l'étude typologique du mobilier permet rarement une datation à moins de 50 années près.

Les 80 trésors de cette étude sont en majo-

rité des trésors mixtes, c'est-à-dire des trésors contenant à la fois monnaies et métal argent sous diverses formes. Quelques trésors, principalement dans le sud de la Scandinavie, sont exclusivement monétaires. La répartition chronologique des trésors permet de distinguer deux périodes principales et quatre sous-périodes (Table 2.4) : Phase I (800 à 980 environ) et Phase II (980 à 1140 environ), subdivisées en Phase IA (800 à 890 environ), IB (890 à 980 environ), IIA (980 à 1060 environ) et IIB (1060 à 1140 environ). Bien que l'ensemble de la Scandinavie soit représentée dans l'échantillon proposée ici, on peut noter une forte concentration sur l'île de Gotland, ainsi que des concentrations secondaires dans le sud et l'est de la Scandinavie (Fig.2.9). Au total, 1.072 des 35.170 monnaies prises en compte ont été modifiées pour être suspendues, ce qui correspond à environ 3,1 pourcent du matériel. Toutes ses monnaies sont en argent. Le taux de modification varie au cours de l'époque viking, avec un pic pendant la Phase IB (Fig.2.10). Elle varie également d'une région à l'autre et d'un trésor à l'autre.

Sur les 134 tombes avec pendentifs monétaires inventoriées ici, 96 peuvent être attribuées à l'une des sous-périodes identifiées précédemment, une aux décennies précédant le début de l'époque viking et deux aux décennies suivant la fin de l'époque viking (Table 2.5). Les tombes restantes ne peuvent être datées avec précision. La répartition géographique du matériel est très inégale, avec de très fortes concentrations dans l'est de la Scandinavie, notamment dans les provinces d'Uppland et de Dalarna, ainsi que sur l'île de Gotland (Fig.2.12). Les tombes avec pendentifs monétaires reflètent la diversité des pratiques funéraires de l'époque, mais certaines formes de sépultures privilégiées semblent surreprésentées, comme la chambre funéraire ou le bateau-tombe (Table 2.6). La plupart des tombes étudiées contiennent

des éléments de parure féminine, ce qui corrobore les quelques données ostéologiques disponibles. Le mobilier mis au jour varie en quantité et en qualité. Dans certains cas, les pendentifs monétaires sont les seuls objets présents dans les tombes ; dans d'autres, plus fréquents, les propriétaires de pendentifs sont accompagnées d'un mobilier particulièrement riche. Les 134 tombes de cette étude contiennent un total de 252 pendentifs monétaires. Le nombre de pendentifs monétaire par tombe oscille entre un et onze (Fig.2.13).

Chapitre 3. Sélection

La fabrication d'un pendentif monétaire commence par la sélection d'une monnaie parmi celles disponibles. Ce processus reste très largement hors de portée du chercheur, car il est impossible de déterminer avec exactitude quelles monnaies étaient à la disposition de celui ou de celle à l'origine de la sélection. Cependant, une comparaison entre 'monnaies modifiées' et 'monnaies non-modifiées' au sein de chaque groupe monétaire permet de mettre en évidence certaines préférences.

A l'époque viking, le stock monétaire scandinave est fortement dominé par les frappes étrangères (Table 3.1). Ces frappes sont majoritairement islamiques pendant la Phase I, puis anglaises et allemandes pendant la Phase II. Les autres monnaies étrangères qui circulent en parallèle, notamment carolingiennes, byzantines, sassanides ou bohémiennes, représentent une part très limitée du stock monétaire. La place occupée par les monnaies locales, quant à elle, s'accroît tout au long de l'époque viking, pour devenir dominante dans une grande partie de la Scandinavie dans la seconde moitié du onzième siècle.

Le taux de modification varie significativement d'un groupe monétaire à l'autre (Table 3.2). Trois groupes semblent parti-

culièrement recherchés, avec plus de vingt pour cent de monnaies modifiées : les monnaies carolingiennes, nordiques (type KG3–6) et byzantines. Quatre autres groupes ont un taux de modification relativement élevé, compris entre cinq et dix pour cent : les monnaies islamiques, sassanides, bohémiennes et suédoises. Tous les autres groupes monétaires ont un taux de modification inférieur à trois pour cent. Aucun dénominateur commun n'est identifiable parmi les groupes fréquemment ou rarement modifiés, mais plusieurs tendances se dégagent. Certains critères, comme la rareté ou la qualité de frappe, semblent jouer un rôle important. D'autres critères, comme la taille ou le poids, semblent peu influencer la sélection. La présence d'une image ou d'un symbole distinctif apparaît comme un facteur important, mais pas toujours décisif.

Simultanément, l'attractivité d'un groupe monétaire peut dépendre de facteurs chronologiques et géographiques. Cela tient à deux causes principales. D'une part, les différents groupes ne sont pas disponibles dans les mêmes proportions partout et tout le temps. D'autre part, la distance – dans l'espace et le temps – avec la source d'approvisionnement semble influencer la valeur symbolique de la monnaie (Fig.3.5 & 3.8).

Chapitre 4. Transformation

Parce qu'ils représentent les seuls vestiges physiques de la transformation, les éléments de suspension sont de première importance pour déterminer où et quand cette transformation a eu lieu. L'examen typologique de ces éléments pose cependant de nombreuses difficultés, en raison du peu de caractéristiques distinctives qu'ils présentent et du soin limité parfois apporté à leur réalisation. Dans la typologie proposée ici, un type se définit comme une image idéale vers lequel un ob-

jet tend. Le principe suivi est qu'il n'existe pas de démarcation absolue entre les types. En examinant comment les types ainsi définis ont été respectivement fabriqués et comment ils sont dispersés géographiquement et chronologiquement, il sera possible, par déduction, de se faire une idée précise des contextes dans lesquels les monnaies ont été transformées.

Plusieurs méthodes ont été utilisées pour suspendre les monnaies à l'époque Viking (Fig.4.2) : bélières biconiques, bélières cylindriques, perforations, bélières pincées et anneaux. La perforation est de loin la technique la plus commune, suivie de la bélière pincée et de l'anneau. Les bélières biconiques et cylindriques, très peu représentées dans le présent corpus, sont caractéristiques de l'époque mérovingienne. Perforations, bélières pincées et anneaux se déclinent en plusieurs types. La classification des perforations repose uniquement sur la forme de l'ouverture. Celle des bélières pincées repose sur la méthode de fixation, la décoration réalisée en surface (Fig.4.3) et la forme de la partie inférieure (Fig.4.4). Celle des anneaux repose sur le type de fil utilisé (Fig.4.7) et la façon dont ses extrémités sont attachées (Fig.4.8). Bien que bélières et anneaux révèlent une grande diversité typologique, plusieurs groupes dominent nettement (Table 4.1–2) : les types Lr1A, Lr1B, Lr2A, Lr3A, Lr3B et R3A.

Le niveau de difficulté pour réaliser les éléments de suspension varie selon la méthode choisie. Perforer une monnaie ne requiert pas d'outillage ou de savoir-faire particulier. Il suffit d'y enfoncer un poinçon ou une pointe de couteau. Adjoindre une bélière peut s'avérer plus ou moins technique en fonction du type. Un minimum de savoir-faire est toujours indispensable. Fabriquer un anneau est un procédé complexe si le fil en métal doit être lui-même fabriqué. Cependant, il semble que des fils en argent déjà préparés aient cir-

culé un peu partout en Scandinavie.

Il existe une corrélation entre niveau de sophistication d'un type et concentration chronologique/géographique des trouvailles. Les types de suspensions les plus élémentaires, à savoir perforations (H) et bélières non décorées (Lr1), se rencontrent tout au long de l'époque viking et partout en Scandinavie (Fig.4.17–18). Les types de suspensions plus élaborés, quant à eux, s'inscrivent dans un cadre chronologique et géographique plus restreint. Ainsi, les bélières entièrement striées (Lr2) sont typiques de la Phase I et de la Scandinavie orientale (Fig.4.19–20) tandis que les bélières partiellement striées (Lr3) et les anneaux à extrémités entrelacées (R3A) sont typiques de la Phase II et de la Scandinavie méridionale (Fig.4.22–5).

Chapitre 5. Orientation

La façon dont les motifs frappés sur les monnaies ont été orientés par rapport à l'élément de suspension permet de mieux comprendre la fonction de ces motifs pour ceux qui les portaient. Étaient-ils compris et appréciés par leurs propriétaires ? Différents problèmes méthodologiques se posent toutefois, notamment celui de déterminer dans quelle mesure un motif peut dévier de son axe sans perdre sa signification. Cette tolérance a été fixée arbitrairement à 15 degrés pour les motifs pourvus d'un axe de symétrie évident et à 30 degrés pour ceux qui en sont dépourvus. Quelques motifs, comme l'épée figurant au revers de certaines monnaies anglo-nordiques, peuvent être lus dans n'importe quelle position.

En se basant sur la façon dont ils sont orientés individuellement (Fig.5.4) et les uns par rapports aux autres (Fig.5.5), il est possible de classer les motifs frappés sur les monnaies modifiées du moins apprécié au plus apprécié. Les motifs qui semblent avoir suscité le plus d'intérêt sont les croix et ceux appartenant au

groupe 'motifs figuratifs divers'. Viennent ensuite les inscriptions, qui sont souvent orientées correctement mais rarement préférées au motif frappé sur l'autre face. Les motifs qui semblent avoir suscité le moins d'intérêt sont clairement les bustes et les édifices. Ce manque d'intérêt pour les bustes représente un changement par rapport à l'époque des Grandes Migrations, période pendant laquelle le buste impérial jouait un rôle particulier dans la symbolique germanique.

Outre l'orientation des motifs monétaires, certaines considérations d'ordre pratique semblent parfois entrer en jeu dans le positionnement des éléments de suspension. C'est particulièrement évident dans le cas de bélières et de perforations positionnées sur un élément distinctif du motif, comme une lettre ou un globule, dont on peut supposer qu'il a servi de point de repère. C'est également possible dans le cas de bélières et de perforations prenant en considération des graffiti pourtant quasi-invisibles à l'œil nu. Contrairement à ce qui a pu être suggéré, le désir de préserver les motifs intacts semble avoir peu influencé le positionnement des éléments de suspension. La composition d'ensemble et la symétrie de celle-ci importent vraisemblablement plus que la préservation de détails iconographiques et épigraphiques.

En outre, la façon dont les motifs frappés sur les monnaies ont été orientés varie en fonction de plusieurs facteurs. D'une part, cette orientation dépend du réalisme avec lequel le motif monétaire a été exécuté et du soin avec lequel la monnaie a été montée. Plus la qualité est élevée, plus les motifs sont respectés (Fig.5.12). D'autre part, elle dépend du contexte géographique et chronologique, probablement parce que les connaissances disponibles et les critères esthétiques ne sont pas les mêmes partout en Scandinavie et durant toute l'époque viking.

Chapitre 6. Association

Pour définir la fonction des pendentifs monétaires, il convient d'étudier la façon dont ils étaient portés et associés par leurs propriétaires. Une étude contextuelle de ce type, qui met en lumière les liens entre objets et individus, est possible à partir du témoignage des tombes et des trésors de bijoux, dans lesquels les assortiments semblent le plus souvent conservés au complet. Ce témoignage reste malgré tout discutable, car il donne une image figée et probablement déformée de la réalité.

La plupart des tombes figurant dans le présent corpus contiennent entre un et quatre pendentifs monétaires, mais certaines, essentiellement dans les régions et/ou aux périodes pauvres en monnaies, en contiennent davantage. Trois types d'assortiments peuvent être distingués (Table 6.1) : soit la majorité des monnaies sont visuellement identiques, soit la majorité des monnaies ont une origine commune, soit la majorité des monnaies sont dissemblables. Il existe une préférence notable pour le premier type d'assortiment, dans lequel on trouve néanmoins souvent une pièce disparate. Un rapide examen typologique des éléments de suspensions suggère que les assortiments homogènes étaient, à la différence des assortiments hétérogènes, généralement formés en une fois.

A quelques exceptions près, toutes les tombes figurant dans le présent corpus associent les pendentifs monétaires à d'autres pendentifs et/ou à des perles. Ce matériel comprend 115 pendentifs locaux, 31 pendentifs importés et environ 4500 perles (Table 6.2). Son interprétation varie d'un type d'ornement à l'autre, oscillant entre amulettes, marqueurs de statut et symboles identitaires. Les pendentifs qui sont le plus fréquemment associés aux pendentifs monétaires, tels ceux en forme de bouclier, ceux décorés de volutes granulées ou ceux décorés d'un animal dans le style de Jelling, sont tous circulaires et de calibre équi-

valent, ce qui suggère l'existence d'une préoccupation esthétique. Près de deux tiers des pendentifs importés associés à des pendentifs monétaires sont issus des sépultures de Birka.

Bien que les assortiments dans lesquels les pendentifs monétaires sont intégrés possèdent rarement la même composition, il est possible d'en distinguer plusieurs types en fonction de la place occupée par les différents éléments les constituant. Cette répartition met en avant le rôle prépondérant joué par les pendentifs monétaires, dont le nombre dépasse souvent celui des autres pendentifs qui leur sont associés. L'étude de la position relative des pendentifs monétaires au sein des colliers et des parures pectorales semble confirmer le caractère particulier de ce type de bijou.

Chapitre 7. Trajectoires

Les principaux événements qui marquent la vie d'un pendentif monétaire forment habituellement la séquence suivante : (1) frappe de la monnaie, (2) circulation légale, (3) importation en Scandinavie (si la monnaie est étrangère), (4) circulation au poids, (5) transformation en pendentif, (6) utilisation comme pendentif, (7) dépôt. A cela s'ajoute un éventuel retour à la circulation entre les phases (6) et (7). Au niveau individuel, la possibilité de reconstituer les détails de cette séquence et sa chronologie dépend de plusieurs facteurs, notamment des indices de datation disponibles et de la durée de vie de l'exemplaire.

En l'absence de décri, déterminer combien de temps les monnaies modifiées ont circulé avant d'être démonétisées est particulièrement difficile. Il est possible, cependant, d'évaluer la durée de circulation de celles-ci en étudiant les entailles faites au couteau pour tester la qualité de leur métal, le nombre d'entailles reflétant théoriquement le nombre de transactions commerciales. L'étude de ces entailles dans divers contextes montre que les monnaies pouvaient

suivre des trajectoires très différentes avant leur transformation (Fig.7.3). La majorité d'entre elles semblent avoir été démonétisées rapidement après leur arrivée en Scandinavie, mais beaucoup ont vraisemblablement circulées plus longuement.

Pour déterminer combien de temps en moyenne les monnaies étaient portées comme pendentifs, la méthode la plus précise consiste à observer comment exemplaires modifiés et exemplaires non-modifiés diffèrent chronologiquement dans les trésors mixtes. Appliquée aux monnaies byzantines, cette méthode démontre que les monnaies étaient généralement portées sur une courte période, environ 15 ans en moyenne (Table 7.3). Cela signifierait qu'elles n'étaient pas ou peu transmises entre générations. Le résultat de cette étude contraste avec celui que l'on obtient en examinant les pendentifs monétaires issus de sépultures, dont l'usure suggère une utilisation prolongée (Table 7.4). L'hypothèse avancée pour expliquer ce contraste est que la valeur particulière donnée aux pendentifs monétaires obtenus par héritage décroît leurs chances d'être déposées dans des trésors mixtes.

Après leur utilisation en guise pendentifs, la majorité des monnaies modifiées semble retrouver une fonction économique, comme en témoigne leur présence dans les trésors mixtes ou leur fragmentation occasionnelle. Cette trajectoire typique varie cependant géographiquement et chronologiquement, principalement en raison de l'hétérogénéité des logiques de dépôt. Elle varie également d'un type à l'autre (Table 7.5), certains types ayant une valeur économique ou symbolique particulière.

Chapitre 8. La réutilisation de la monnaie à l'époque viking : évolution à long terme

L'utilisation à l'époque viking de la mon-

naie à des fins ornementales s'inscrit dans une longue tradition locale, commencée à l'âge du fer romain et presque ininterrompue jusqu'à l'époque médiévale et au-delà. Comprendre la façon dont la pratique se manifeste et évolue à l'époque viking passe donc par son étude sur le long terme.

Onze pendentifs fabriqués à partir de monnaies anciennes, c'est-à-dire circulant en Scandinavie dès l'âge du fer, sont issus de contextes datés de l'époque viking (Table 8.1). Ces monnaies sont, à une exception près, des monnaies romaines. Les caractéristiques typologiques et le degré d'usure des monnaies anciennes laissent penser que leur transformation est souvent antérieure au début de l'époque viking et que leur utilisation a été continue depuis lors. Il existe donc un lien entre la pratique de l'époque viking et celle des époques antérieures, lien que l'on peut rapprocher du rôle important joué par les objets et les monuments du passé en Scandinavie à l'époque viking.

Au cours de l'époque viking, l'utilisation de la monnaie à des fins ornementales évolue de façon significative. En témoignent les tombes contenant des pendentifs monétaires byzantins, dont l'étude met en évidence un certain nombre de mutations : nouveaux types de suspensions, nouvelles façons de porter les monnaies et nouveaux profils des propriétaires. Même si beaucoup de ces mutations peuvent être mises en relation avec l'arrivée de la religion chrétienne, il ne semble pas que les pendentifs monétaires aient vu leur fonction devenir davantage religieuse (Table 8.2).

Avec la fin de l'époque viking, qui se traduit notamment par la mise en place d'une économie monétaire, l'utilisation de la monnaie à des fins ornementales devient largement désuète. Malgré cela, quelques pendentifs monétaires se rencontrent toujours çà et là dans les trouvailles scandinaves. Ceux-ci se répartissent en trois groupes : monnaies

frappées et transformées à l'époque viking (Table 8.3), monnaies frappées et transformées à l'époque médiévale, monnaies frappées à l'époque viking mais transformées à l'époque médiévale. Plusieurs caractéristiques trahissent une certaine continuité entre l'époque viking et l'époque médiévale, par exemple le rôle important joué par les monnaies islamiques et le rôle limité joué par la symbolique chrétienne dans la pratique.

Chapitre 9. Pendentifs monétaires et culture matérielle scandinave à l'époque viking

Pour mieux comprendre la signification des pendentifs monétaires étudiés ici, il convient de s'intéresser à la façon dont cet objet s'inscrit dans le cadre plus général de la culture matérielle scandinave de l'époque viking. Les thématiques suivantes méritent une attention toute particulière : iconographie, usage des bijoux féminins et production de pendentifs monétiformes.

Il existe clairement une corrélation entre la façon dont les motifs des pendentifs monétaires sont considérés et la place de ces mêmes motifs dans l'iconographie locale. Plus les motifs sont ancrés dans la tradition scandinave, plus ils ont de chances d'être orientés correctement. Ceci dit, le rôle joué par les motifs ne se limite pas à cette corrélation. D'une part, il y a souvent un écart de signification entre le message porté par la monnaie et la réception de ce message. Ce qui figure sur les monnaies étrangères est logiquement sujet à réinterprétation. D'autre part, les motifs monétaires semblent signifier au-delà de leur contenu iconographique. Leur présence évoque différentes idées avec lesquelles les monnaies sont associées, comme celle de 'valeur argent' ou celle de 'relation internationale'.

A l'époque viking, les Scandinaves pré-

fèrent transformer les monnaies en pendentifs plutôt qu'en broches, bien que cette dernière forme se rencontre occasionnellement. Cela peut s'expliquer de trois façons : tradition locale, exigences techniques et influence des modes orientales. Le fait que la forme 'pendentif' soit privilégiée à la forme 'broche' suggère par ailleurs que les monnaies pouvaient être considérées comme des objets très personnels, que l'on associait volontiers à d'autres pendentifs pour former des assortiments uniques. Cette dimension personnelle du pendentif monétaire s'ajoute aux fonctions qui lui sont généralement attribuées : amulette, marqueur de statut et signe d'identité. Rien n'empêche les pendentifs monétaires, comme pour la plupart des autres bijoux, de cumuler plusieurs fonctions.

Peu de pendentifs monétiformes sont produits en Scandinavie à l'époque viking. Deux groupes peuvent toutefois être distingués. Le premier, attribuable à la première moitié du neuvième siècle, comprend environ 25 pendentifs portant l'empreinte d'un dirham utilisé comme matrice. Le second, issu de plusieurs ateliers danois actifs au onzième siècle, comprend un petit nombre de pendentifs inspirés de frappes locales et étrangères. L'existence de ces deux groupes confirme que les monnaies avaient une valeur symbolique particulière à l'époque viking, au point de donner lieu à la production de substituts quand les pièces originales étaient difficilement disponibles.

Chapitre 10. Etudes de cas : de monnaie étrangère à pendentif local

A l'aune des interprétations proposées précédemment, trois trouvailles ont été sélectionnées pour faire l'objet d'une étude approfondie. Ces trouvailles ne sont pas tout à fait représentatives de l'ensemble du corpus. Elles ont été sélectionnées parce que leurs

traits sont particulièrement saillants.

Dans la tombe 963 de Birka, chambre funéraire du dixième siècle au contenu relativement riche, trois pendentifs monétaires ont été découverts entre les broches ovales : une monnaie carolingienne avec perforation (822–40 environ), une monnaie nordique avec bélière en argent (825 environ) et une monnaie anglo-norroise avec bélière en bronze (921–7 environ). Ces pendentifs, réalisés à partir de monnaies rares en Scandinavie, forment un assortiment tout à fait unique, dont l'assemblage a vraisemblablement été fait sur plusieurs générations (Fig.10.4). Les images figurant sur les trois pendentifs monétaires laissent penser qu'ils ont notamment été utilisés comme amulettes protectrices, avant de jouer un rôle plus spécifique dans le rituel funéraire.

Le trésor de Vårby (Fig.10.8), l'un des plus riches de la région de Svealand, contenait un vaste assortiment de bijoux datés du dixième siècle, y compris six monnaies équipées de bélières identiques : quatre imitations de dirhams frappées à Kiev et deux dirhams authentiques à flan large. Ces six monnaies, quasi-impossibles à réunir en Scandinavie, ont sans doute été collectées et transformées sur le territoire Rus', puis rapportées par leur propriétaire. Dans cet assemblage d'une grande valeur, les pendentifs monétaires ne semblent pas occuper une place prééminente. Ils n'étaient que l'un des éléments utilisés par leur propriétaire pour mettre en avant son statut privilégié et l'étendue de ses contacts internationaux.

Le cas d'une monnaie au type *Agnus Dei* découvert dans le trésor de Johannishus permet d'illustrer plus particulièrement la complexité du processus qui aboutit à la conversion d'une monnaie étrangère en pendentif local. Cette monnaie, décorée de symboles chrétiens manifestes, a connu plusieurs transformations physiques au cours de sa vie

(Fig.10.11), mais aussi plusieurs réinterprétations symboliques. Il semble en effet que la colombe représentant le Saint-Esprit au revers de la monnaie ait été assimilée à différents oiseaux présents dans l'iconographie scandinave à l'époque viking, dont l'interprétation n'est pas forcément chrétienne.

Chapitre 11. Conclusions

Cette étude s'est attachée à mieux comprendre l'utilisation de la monnaie à des fins ornementales à l'époque viking et à définir la place de l'objet 'monnaie' dans cette pratique. Pour ce faire, une importance toute particulière a été accordée au concept de biographie culturelle des objets, sans lequel il est difficile de suivre les changements de contexte et de signification marquant la vie d'une monnaie modifiée. L'idée qu'il n'existe pas de signification immuable a également été envisagée d'un point de vue sémiotique, en insistant expressément sur les écarts de signification entre message porté et message reçu ainsi que sur les modalités d'articulation entre différents symboles. Etant donné la complexité d'une telle démarche, il s'est avéré indispensable de procéder à une étude contextuelle minutieuse. Celle-ci a permis de situer les pendentifs monétaires par rapport au contexte général (économique, religieux et culturel) et par rapport à divers objets apparentés (correspondances iconographiques, autres bijoux et pendentifs monétiformes).

Grâce à cet outillage méthodologique et théorique, il a été possible de répondre de façon circonstanciée aux quatre questions posées à la fin du premier chapitre.

1- Les pendentifs monétaires ont été fabriqués et portés dans de nombreux contextes et par des individus aux profils variés. Cependant, il est possible d'identifier une base commune dans la manière dont la pratique se manifeste et une continuité sur le long terme.

2- Les pendentifs monétaires n'avaient pas de fonction fixe. Ils pouvaient servir à des fins esthétiques, religieuses, identitaires ou de prestige. Le plus souvent, ils semblent d'ailleurs cumuler plusieurs de ces fonctions. La façon dont les pendentifs monétaires ont été portés et mis en valeur témoigne d'un lien très personnel entre cet objet et ses propriétaires.

3- A l'époque viking, les monnaies avaient une valeur symbolique singulière, qui dérivait en partie de leur contenu iconographique, mais surtout des idées avec lesquelles cet objet était associé. De façon remarquable, la

plupart de ces idées peuvent être rapprochées des principales forces motrices de l'époque viking, comme l'activité internationale et l'accumulation de richesses sous forme d'argent.

4- L'étude des divers processus liés à la transformation et à l'utilisation des pendentifs monétaires a permis de faire plusieurs observations sur les mentalités scandinaves à l'époque viking, notamment sur les goûts et les connaissances iconographiques de leurs propriétaires. L'existence d'importantes disparités régionales est particulièrement frappante.

List of abbreviations

Ab. = Aarsberetning for foreningen til norske fortidsminnesmerkers bevaring
ALM = Archäologisches Landesmuseum der Christian-Albrechts-Universität, Kiel
AM = Eesti Ajaloomuuseum, Tallinn
ATA = Antikvarisk-Topografiska Arkivet, Stockholm
B = Accession catalogue, Universitetsmuseet i Bergen
BM = British Museum
BP = Bead Period (see Callmer 1977)
Berg. Mus. Årb. = Bergens Museums Årbok
C = Accession catalogue, Universitetets Oldsaksamling i Oslo
c. = Circa
C. = Century
CNS = Corpus Nummorum Saeculorum IX-XI qui in Suecia Reperti Sunt, 1975–
Dbg = Dannenberg 1876–1905
De = Germany
DM = Dalarnas Museum
Dk = Denmark
Ee = Estonia
ESM = Eskilstuna Stadsmuseum
FC = Accession catalogue, Myntkabinettet ved Universitetet i Oslo
Frg = Fragment
GAM = Göteborgs Stadsmuseum
GF = Gotlands Fornsal
GR database = Gert Rispling unpublished database
Hbg = Hauberg 1900
Häv = Hävernicks 1935
Inv nr = Inventory number
Is = Iceland
KHM = Kulturhistorisk Museum, Oslo
KLM = Kalmar Läns Museum
KM = Kulturen i Lund
KMK = Kungliga Myntkabinettet, Stockholm
Litt. = Literature
LUHM = Historiska Museet vid Lunds Universitet
LMG = Länsmuseum Gävleborg
LVN = Länsmuseum Västernorrland
MM = Malmö Museer

MS FP = Accession catalogue, Den kgl. Mønt og Medaillesamling i København
 NM = Nationalmuseet i København
 NFG = Numismatiska Forskningsgruppen, Stockholm
 NNA = Nordisk Numismatik Årsskrift
 No = Norway
 ÖLM = Örebro Länsmuseum
 ÖM = Östergötlands Museum
 RAÄ = Riksantikvarieämbetet
 S = Accession catalogue, Stavanger museum
 SCBI = Sylloge of Coins of the British Isles, 1958–
 SF = Sigtuna Museum
 SHM = Statens Historiska Museet, Stockholm
 SML = Sveriges Mynthistoria Landskapsinventeringen, 1982–
 SSM = Stadsmuseet i Stockholm
 Sw = Sweden
 T = Accession catalogue, Vitenskapsmuseet i Trondheim
 WKG I = Thunmark-Nylén 1995b
 WKG IV = Thunmark-Nylén 2000
 Tpq = Terminus post quem
 UMF = Uppsala Universitets Museum för nordiska fornsaker
 UU = Uppsala Universitet
 UUMK = Uppsala Universitets Myntkabinett
 VLM = Västmanland Länsmuseum
 Þjms = Þjóðminjasafn Íslands, Reykjavík

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Introduction to the catalogues

The material on which this thesis is based is twofold: 134 Scandinavian graves containing coin-pendants and a random sample of 80 Scandinavian hoards. The 134 graves are described in Catalogue I and the 80 hoards in Catalogue II.

Because these two catalogues were designed for different purposes, they present data at different levels of detail. The hoard catalogue, primarily intended for quantitative analysis, only provides general data on the content of the find, while the grave catalogue, primarily intended for qualitative analysis, provides detailed data on the context of the find, its content and the coin-pendant(s) in the burial. Despite these differences, the two catalogues were designed in the same format to allow for easy comparison.

In both catalogues, the finds have been sorted alphabetically by country, province and parish, placing them for convenience within modern political borders. The catalogue respects the order of the Swedish alphabet, with the additional letters 'Å', 'Ä', and 'Ö' at the end.

In both catalogues, the terms used to designate the provenance of the different coin groups follow the system adopted by the CNS (1975–2011) and in Cecilia von Heijne's thesis (2004). Some of these terms have an anachronistic feel, but it is necessary, considering the great variety of provenances, to keep the number of categories to a minimum. The term 'English', for instance, is used to designate the Anglo-Saxon coins predating King Edgar's monetary reform (up to c.973), the Anglo-Saxon coins postdating King Edgar's monetary reform (c.973–1066) and the Anglo-Norman coins (post-1066).

Part of the numismatic material has been collected and evaluated through literature, using either published works (e.g. Skaare 1976; CNS 1975–2011; SML 1982–2015; von Heijne 2004) or unpublished lists available at coin cabinets. Gert Rispling's unpublished database was an invaluable source of information for finds containing Islamic and Sasanian coins. However, a large part of the numismatic material has also been attributed specifically for this thesis by drawing upon a wide range of references. The following list is limited to the reference works used most frequently: Byzantine coins (Grierson 1973), Carolingian coins (Grierson & Blackburn 1986), Danish coins (Hauberg 1900), Nordic coins (Malmer 1966), English coins (Hildebrand 1881; SCBI 66), German coins (Dannenberg 1876–1905; Hävernicks 1935), Anglo-Scandinavian coins (Malmer 1989, 1997) and Swedish coins (Malmer 1989, 1997). Viacheslav Kuleshov was kind enough to check the attributions for a number of Islamic coins.

Introduction to Catalogue I

Catalogue I includes all known Scandinavian graves with coin-pendants dated to the Viking Age. The amount of information varies considerably between entries, ranging from brief notes to detailed descriptions. The amount of information can also vary within one entry, especially

when a coin-pendant still available for study derives from a poorly-documented grave. Despite this, every entry in the catalogue has been structured in the same way:

1- Identification

Every grave has been assigned a catalogue number. This number is followed by basic location information: parish name, locality and grave number – if relevant. Also included is the year in which the grave was opened, with a distinction between professionally excavated graves ('excavated in') and non-professionally recovered artefacts ('discovered in'). Figure 2.4 shows the precise location of all the graves catalogued here.

2- Grave type

This section provides general information on grave type and burial ritual. Two main variables have been taken into account: internal construction and external marking. Grave orientation is also included in the case of inhumations.

3- *Tpq*

The *tpq* uses the numismatic material to specify the earliest date at which every grave can possibly have been closed. Because it is very often based on the issuing date of a coin reused as a pendant, a considerable gap can be expected between this date and the deposition date.

4- Phase

Using all dating information available, every grave has been ascribed to one of the following phases/sub-phases (see Ch.2.3.2):

- | | |
|----------------------------------|--|
| - Phase I: from c.800 to c.980 | - Sub-phase IA: from c.800 to c.890 |
| | - Sub-phase IB: from c.890 to c.980 |
| - Phase II: from c.970 to c.1140 | - Sub-phase IIA: from c.980 to c.1060 |
| | - Sub-phase IIB: from c.1060 to c.1140 |

The few pre-Viking-Age and post-Viking-Age graves are denoted with the abbreviations 'pre-VA' and 'post-VA'

5- Content of the grave

This section gives a basic overview of the objects contained in the grave. Every inventory follows the same logical order: coin-pendants, other pendants, beads, other ornaments, implements and other objects. Object types are indicated when they have been used for dating purposes. Reference works mentioned in the catalogue include: beads (Callmer 1977), Scandinavian-style pendants (Callmer 1989), oval brooches (Jansson 1985), animal-head brooches (Thunmark-Nylén 2006) and penannular brooches (Thunmark-Nylén 2006).

6- Position of the coin-pendant(s)

If known, the position of the coin-pendants in relation to the body and/or to some other relevant grave-goods is specified. This description is accompanied, as often as possible, by a drawing or photograph of the grave.

7- Description of the coin-pendant(s)

Every coin-pendant is described here as comprehensively as possible. This description is four-fold. First, it provides general data on the coin from which the coin-pendant is made: origin,

issuer, dynasty, coin type, date of issue and mint. The order in which these data appear can vary depending on the coin group. Second, it provides metrological data on the object: weight and size. These metrological data can be very helpful for identifying the object in museum collections. Third, it provides data on the reuse of the coin as a pendant: suspension type (see Ch.4.2) and position of the suspension in relation to obverse/reverse designs. Design orientation, although expressed in degrees, should not be confused with die-axis, which is not specified in this catalogue. Finally, it provides additional data of various kinds, including state of preservation, use of special techniques and presence of graffiti. Whenever possible, a picture of the coin-pendant (scale 1:1) has been included. All photographs are by the author, except for the following: Cat.I:32–3, 134 (Kenneth Jonsson, NFG), Cat.I:37–8 (Christoph Kilger, UU), Cat.I:55, 91 (Gabriel Hildebrand, SHM), Cat.I:115–8 (unknown photographer, VLM), Cat.I:119, 121 (Susanne Cassé, VLM), Cat.I:126 (Björn Grankvist, LVN).

8- Inventory number (Inv nr)

This number is used to search for the objects in the collections where they are held. All the abbreviations are explained in the List of abbreviations. Some recent finds were still unnumbered at the time of completion of this work.

9- Selected bibliography (Ref)

Many of the graves and/or coin-pendants catalogued here have already been discussed elsewhere. The present bibliography contains only the most important of these references.

Introduction to Catalogue II

Catalogue II includes most of the Viking-Age hoards with 21 coins or more found in Scandinavia since 1919. The islands of Bornholm and Gotland are only partly covered: parishes A–N and parishes A–F respectively. The majority of hoards included in this sample are very well documented, but occasionally some information may be missing. Every entry in the catalogue has been structured in the following way:

1- Identification

Every hoard has been assigned a catalogue number. This number is followed by basic location information: parish name and locality. Also included is the year in which the hoard was discovered. Figure 2.5 shows the precise location of all the hoards catalogued here.

2- Container

If known, the container in which the hoard was originally deposited is specified. The dash symbol may indicate that there was either no container or that no information is available on the presence of a container.

3- Number of coins (Coins)

The figures here indicate the total number of coins in the hoard to the best of the author's knowledge. Numbers of coins can vary from one inventory to another depending on when and how this inventory has been made. Often, new coins are found when the find-spot is ploughed over or metal detected. There are also cases where some of the coins originally included in the hoard are no longer accessible for study.

4- Number of reused coins (Reused)

The figures here indicate the total number of pierced and looped coins in the hoard as documented by the author. Proportion of reuse, expressed in percentage, follows in brackets. This percentage is the total number of pierced and looped coins in relation to the number of documented coins.

5- *Tpq*

The *tpq* specifies the earliest date at which a hoard can possibly have been deposited. In hoards, deposition is statistically likely to have happened shortly after the *tpq* provided by the latest coin.

6- Phase

Using the *tpq*, every hoard has been ascribed to one of the following phases/sub-phases (see Ch.2.3.2):

- | | |
|----------------------------------|--|
| - Phase I: from c.800 to c.980 | - Sub-phase IA: from c.800 to c.890 |
| | - Sub-phase IB: from c.890 to c.980 |
| - Phase II: from c.970 to c.1140 | - Sub-phase IIA: from c.980 to c.1060 |
| | - Sub-phase IIB: from c.1060 to c.1140 |

7- Other objects

This section provides a basic overview of the non-numismatic content of the hoard. Only the complete objects are listed comprehensively, while the fragmented objects are designated as 'hack-silver'.

8- Table

The numismatic content of the hoard is summarised in a table. The rows of the table represent coin groups of different provenances, while the columns represent different types of secondary treatment. For each coin group, the number of complete and fragmented coins is indicated, followed by the number of coins reused as pendants.

9- Suspension

This section provides basic information on how the reused coins included in the hoard were suspended. Detailed typological information for loops and rings can be found in List I.

10- Inventory number (Inv nr)

This number is used to search for the hoards in the collections in which they are held. All the abbreviations are explained in the List of abbreviations. Some recent finds were still unnumbered at the time of completion of this work.

11- Selected bibliography (Ref)

Many of the hoards catalogued here have already been discussed elsewhere. The present bibliography contains only the most important of these references.

Catalogue I. The grave catalogue

Denmark

Bornholm

1. Knudsker parish, Rabækkegård. Discovered in 1874.

Inhumation in a cist-grave covered by a mound.

Tpq: 913/4

Phase: IB

Content: 9 coin-pendants, 2 circular pendants (Callmer type A2), 29 beads (BP VIII), 6 Islamic coins.

-Islamic, Umayyad, Ardashir Khurrah, 712/3. 2.51g. Lr1A (45°/75°), H1 (30°/90°).

-Islamic, Samanid, L-

-Islamic, Samanid, H-

-Islamic, Samanid, H-

-Islamic, Samanid, H-

-Islamic, Samanid, H-

-Islamic, Samanid, H-

-Islamic, Samanid, H-

-Islamic, Samanid, H-

Inv nr: MS FP 364

Ref: Brøndsted 1936:nr132; Callmer 1977:nr112; Galster 1980:nr11; von Heijne 2004:nr5.76.

Iceland

Vesturland

2. Mýrasýsla parish, Mjóidalur. Discovered in 1837.

Tpq: 926/7

Phase: IB

Content: 2 oval brooches (P48), trefoil brooch, 2 coin-pendants, 25 beads.

-Islamic, Samanid, 917/8. H1.

-Islamic, Samanid, 926/7. H1.

Inv nr: NM 5425–26; Bjms 10913–14a-b

Ref: Eldjárn 2000:nr45.

Norway

Aust-Agder

3. Tromøy parish, Vågsnes. Discovered in 1962.

Mound.

Tpq: 814

Phase: -

Content: -

-Carolingian, Louis the Pious, 814-40. H-. Dispersed.

Inv nr: -

Ref: Skaare 1976:nr64; Garipzanov 2005:nr17; Garipzanov 2008:nr119.

Buskerud

4. Krødsherad parish, Søndre Bø. Discovered in 1962.

Cremation covered by a mound.

Tpq: c.840

Phase: IB

Content: 7 coin-pendants, 32 beads (BP VII), fragment of Iron Age brooch reused as ornament, 2 oval brooches (P42?), ring-headed pin, key, 2 plates.

-Carolingian, Louis the Pious, Cross and Temple type, c.822-40. 1.51g, 20mm. H1 (345°/315°).

-Carolingian, Louis the Pious, Cross and Temple type, c.822-40. 1.51g, 20mm. H1 (300°/0°).

-Carolingian, Louis the Pious, Cross and Temple type, c.822-40. 1.21g, 20mm. H1 (105°/165°).

-Carolingian, Louis the Pious, Cross and Temple type, c.822-40. 1.05g, 21mm. H1 (255°/15°).

-Carolingian, Louis the Pious, Cross and Temple type, c.822-40. 1.55g, 20mm. Lr- (60°/195°). Bronze loop remains.

-Carolingian, Charles the Bald, Cross and Temple type, c.840-64. 1.47g, 21mm. H1 (150°/180°). Bronze loop, broken.

-English, Mercia, Coenwulf, Crescent Cross type, c.820. 1.27g, 20mm. H1 (180°/90°).

Inv nr: C 7541

Ref: Ab. 1875:89–90; Skaare 1976:nr30; Callmer 1977:169; Garipzanov 2005:nr4–9; Garipzanov 2008:nr106–11; Coupland 2011:114–5; Aannestad 2015:357–8; SCBI 65:24.

Hordaland

5. Voss parish, Veka. Excavated in 1908.

Inhumation with coffin, orientated west/east covered by a circular mound (c.30 m in diam).

Tpq: 792

Phase: IB

Content: Coin-pendant, 6 bead-pendants, 112 beads (BP VIII), 2 oval brooches (P51), bisymmetric brooch, 2 arm-rings, iron knife, needle case, spindle whorl, sickle, iron staff, iron ring, weaving equipment, wooden box (remains).

The coin-pendant was found beneath the skull. It was not directly combined to the beads.

-English, Mercia, Offa, Heavy coinage, 792–6. 0.97g, 15mm. H1 (0°/90°). Broken hole.

Inv nr: B 6228

Ref: Shetelig 1908; Shetelig 1912:206–11; Skaare 1976:nr106; Callmer 1977:nr45; Jansson 1985:214; SCBI 65:23.

Møre og Romsdal

6. Grytten parish, Setnes. Excavated in 1961.

Inhumation, probably in a boat.

Tpq: 768/9

Phase: IB

Content: Coin-pendant, hollow silver pendant, 21 beads, trefoil brooch, tongue-shaped brooch (frg), knob-shaped mount, spindle whorl, balance, 2 lead weights, reliquary, hanging bowl, silver bit.

-Islamic, Abbasid, Madinat al-Salam, 768/9. 1.94g, 24mm. Lr- (195°/330°)

Inv nr: T 18198

Ref: Marstrander 1962; Skaare 1976:nr133; Khazaei 2001:nr42.

7. Grytten parish, Tomberg. Excavated in 1929.

Inhumation without external marking.

Tpq: c.965

Phase: IIA?

Content: 2 coin-pendants, Scandinavian-style pendant, 42 beads, iron fragments.

-German, Magdeburg, Sachsenpfennig, Kilger type 1.1, c.965–85. H1+R3C (unknown/330°).

-German, Magdeburg, Sachsenpfennig, Kilger type 1.1, c.965–85. H1+R3C.

Inv nr: T 14060

Ref: Skaare 1976:nr134.

8. Ørsta parish, Mo. Excavated in 1909.

Inhumation with coffin covered by an oval-shaped mound (c.20x5 m).

Tpq: 807/8

Phase: I-

Content: Coin-pendant, bronze key, knife, whetstone, soapstone spindle whorl, 3 bronze vessels (remains), pebble, rivets.

-Islamic, Umayyad of Spain, al Andalus, 807/8. 2.36g, 25mm. Lr1B (105°/240°).

Inv nr: B 6360

Ref: Berg. Mus. Årb. 1910:nr40a; Shetelig 1913:27–8; Skaare 1976:nr125; Khazaei 2001:nr39.

Vest-Agder

9. Spangereid parish, Spangereid grave 43. Discovered in 1879.

Cremation covered by a mound.

Tpq: c.825

Phase: IA

Content: 5 coin-pendants, 52 beads (BP III), 2 oval brooches (P39), equal-armed brooch, arm-ring, bronze mount, knife, whetstone, ladle, rivets.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. H. Dispersed.

-Nordic, Malmer KG4, c.825. H1 (285°/240°). Dispersed.

-Nordic, Malmer KG4, c.825. H1 (300°/60°). Dispersed.

-Nordic, Malmer KG4, c.825. H- Dispersed.

-Nordic, Malmer KG4, c.825. H- Dispersed.

Inv nr: C 9430

Ref: Rygh 1880:43; Skaare 1976:nr72; Callmer 1977:168.

Sweden

Blekinge

10. Bräkne-Hoby parish, Mörtjuk. Discovered in 1829.

Round stone setting.

Tpq: c.930

Phase: -

Content: Coin-pendant, 13 beads, Islamic coin (frg).
 -Islamic, Samanid imitation, c.930–40. 1.86g, 29mm.
 H1 (240°/180°). Very damaged.

Inv nr: SHM 1452:68–9

Ref: CNS 4.1.1; SML 9 Bl:11; von Heijne 2004: nr2.1.

11. Hjortsberga parish, Johannishus. Discovered in 1821.

Mound.

Tpq: c.825

Phase: -

Content: Coin-pendant, other artefacts?

-Nordic, Malmer KG4, c.825. 0.45g, 16mm. H? (0°/90°). Broken suspension.



Inv nr: SHM 455

Ref: CNS 4.1.3; SML 9 Bl:26; Malmer, B. 1966: nr52; Hårdh 1976:nr3; von Heijne 2004:nr2.5.

Dalarna

12. Leksand parish, Kyrkudden grave 138. Excavated in 1971.

Churchyard. Inhumation with coffin, orientated east/west, without external marking.

Tpq: c.1029

Phase: IIB

Osteology: Female, adultus.

Content: 2 coin-pendants, 36 beads, penannular brooch, 2 silver arm-rings, iron knife, textile remains. The two coin-pendants were found near the lower jaw, together with the beads.

-English, Æthelred II, Helmet type, c.1003–9, London. 1.33g, 19mm. L? (45°/45°). Much corrosion, pecks. Uncertain position of the loop.



-English, Cnut, Short Cross type, c.1029–35, York. 1.06g, 18mm. L? (270°/270°). Much corrosion, pecks. Uncertain position of the loop.



Inv nr: SHM 30636; KMK 100149

Ref: CNS 16.1.5; SML 3 Dr:88; Jonsson, K. 1982; Serning 1982:118.

13. Leksand parish, Kyrkudden grave 156. Excavated in 1971.

Churchyard. Inhumation, orientated east/west, without external marking.

Tpq: c.997

Phase: IIB

Content: 2 coin-pendants, temple ring (frg), needle, textile remains.

The two coin-pendants were found in two different layers (disturbed contexts), at some distance from each other and from grave 156. Their connection with grave 156 is likely, but uncertain. The presence of remains of hair on the ring attached to the Scandinavian imitation suggests that the coin was worn as a temple ring.

-English, Æthelred II, Long Cross type, c.997–1003, Lincoln. 1.29g, 21mm. Lr (90°/90°), H1 (90°/90°), H1 (270°/270°), H1 (270°/270°).



-Swedish, Olof Skötkonung, imitation 'Long Cross type', after 997, Sigtuna. 1.42g, 20mm. Lr1B+R3A (345°/0°)



Inv nr: SHM 30636; KMK 100149

Ref: CNS 16.1.5; SML 3 Dr:88; Jonsson, K. 1982; Serning 1982:119; Malmer, B. 1989:91.

14. Leksand parish, Kyrkudden grave 222. Excavated in 1971.

Churchyard. Inhumation with coffin, orientated east/west, without external marking.

Tpq: c.1090

Phase: IIB

Osteology: Female, adultus.

Content: 11 coin-pendants, fire-steel pendant, 43 beads, penannular brooch, annular brooch, knife, key, needle case, fire-steel, comb (frg), leather remains, horn remains, bronze fitting (for bridle?).

All the coin-pendants were found in the neck area, together with the beads and the fire-steel pendant.

-English, Æthelred II, Long Cross type, c.997–1003, London. 1.87g, 20mm. H1 (0°/0°). Corrosion.



-English, William II, Cross in Quatrefoil type, c.1090–3, Hereford. 1.25g, 20mm. H1 (225°/315°). Corrosion around the hole.



-English, William II, Cross in Quatrefoil type, c.1090–3, Thetford. 1g, 20mm. H1 (0°/90°). Corrosion around the hole.



-English, William II, Cross in Quatrefoil type, c.1090–3. 0.56g, 17mm. H1 (270°/180°). Damaged. Corrosion around the hole.



-German, Goslar, Otto-Adelheid, Hatz III-IV, c.991–1040. 1.03g, 19mm. Lr- (unknown/15°). Corrosion around the rivet, pecks.



-German, Goslar, Otto-Adelheid, imitation, Hatz V 5c3?, c.1020–50. 0.48g, 18mm. L? (unknown).

-German, Köln, EB. Pilgrim and K. Konrad II, 1027–36, Häv 222i. 1.01g, 19mm. L? (225°/270°).



-German, Mainz, EB. Bardo, 1031–51, Dbg 805. 0.78g, 19mm. L? (225°/225°). Corrosion around the hole, pecks.



-German, Strassburg, K. Heinrich II, 1014–24, Dbg 920. 1.28g, 21mm. Lr- (135°/15°). Pecks.



-Irish, Sihtric III, imitation 'Helmet type', c.1005–10. 0.95g, 18mm. L? (315°/270°). Corrosion around the rivet. Pecks.



-Swedish, Olof Skötkonung, imitation 'Crux type', after 997, Sigtuna. 1.24g, 21mm. L? (180°/180°). Corrosion around the hole, pecks.



Inv nr: SHM 30636; KMK 100149

Ref: CNS 16.1.5; SML 3 Dr:88; Jonsson, K. 1982; Serning 1982:121-2; Malmer 1989:71.

15. Leksand parish, Kyrkudden grave 248. Excavated in 1971.

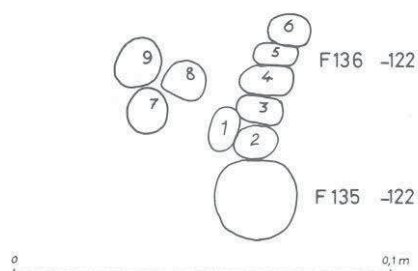
Churchyard. Inhumation with coffin, without external marking.

Tpq: 1037

Phase: IIB

Content: Coin-pendant, 9 beads, iron rod.

The beads were aligned in a V-shape, with the coin-pendant lying at the point of the V.



-Bohemian, Břetislav I, 1037–55, Cach 317. 1.17g, 20mm. Lr1B (15°/255°), H1 (90°/195°). Cracks, pecks.



Inv nr: SHM 30636; KMK 100149

Ref: CNS 16.1.5; SML 3 Dr:88; Jonsson, K. 1982; Serning 1982:123.

16. Leksand parish, Kyrkudden grave 249. Excavated in 1971.

Inhumation, orientated east/west, without external marking.

Tpq: 1067

Phase: IIB

Content: Coin-pendant, 11 beads, annular brooch, miniature scythe, knife, nails.

The coin-pendant and the beads were found together in a disturbed context.

-Norwegian, Olav Kyrre, 1067–93. 0.55g, 16mm. L- (0°/0°). Damaged. Much corrosion. Uncertain position of the loop.



Inv nr: SHM 30636; KMK 100149

Ref: CNS 16.1.5; SML 3 Dr:88; Jonsson, K. 1982; Serning 1982:123.

17. Leksand parish, Kyrkudden grave 252. Excavated in 1971.

Inhumation, orientated east/west, without external marking.

Tpq: 1039

Phase: IIB

Content: 2 coin-pendants, 17 beads.

The coin-pendants and the beads were found together near the cranium.

-German, Gittelde, Dbg 1310, c.1040. 0.82g, 18mm. Lr- (195°/285°)



-German, Speyer, Kg/K. Heinrich III, 1039–59, Dbg 830. 0.39g, 19mm. L- (45°/45°). Damaged, Corrosion.



Inv nr: SHM 30636; KMK 100149

Ref: CNS 16.1.5; SML 3 Dr:88; Jonsson, K. 1982; Serning 1982:123.

18. Leksand parish, Västannor grave 1. Excavated in 1914.

Inhumation, orientated north-east/south-west, without external marking.

Tpq: 1068

Phase: IIB

Content: Coin-pendant, 4 beads, iron knife.

-German, Stavoren?, Gf. Egbert II, 1068–90, Dbg 532?. 0.46g, 17mm. H1 (135°/315°). Broken in two pieces, pecks.



Inv nr: SHM 15223

Ref: CNS 16.1.6; SML 3 Dr:91; Serning 1966:147–8; Hatz, G. 1974:nr319.

19. Leksand parish, Västannor grave 3. Excavated in 1914.

Inhumation, orientated north-east/south-west, without external marking.

Tpq: c.1086

Phase: IIB

Content: 4 coin-pendants, 21 beads, 2 oval brooches (Jansson 1985 fig.142), annular brooch (fig), arm-band (fig).

-English, Æthelred II, Long Cross type, c.997–1003. 0.83g, 18mm. H4 (315°/150°). Corrosion around the hole, pecks.



-English, William I, Pacx type, c.1086–7, Exeter. 1.18g, 19mm. H-. Pecks

-German, Köln, Eb. Anno, 1056–75, Häv 313/314/326. 0.19g. Pendant?

-German, Speyer, Kg/K. Otto III/Heinrich II, 983–1024, Dbg 827/836. 0.81g, 18mm. L?. Very worn. Corrosion around the hole, pecks.



Inv nr: SHM 15223

Ref: CNS 16.1.6; SML 3 Dr:91; Serning 1966:147–8; Jansson 1969:38–40; Hatz, G. 1974:nr319; Jansson 1985:202–3; Sandberg 1998:185.

20. Mora parish, Kråkberg grave 4. Excavated in 1990.

Inhumation, orientated north-east/south-west, without external marking.

Tpq: 1046

Phase: IIB

Content: 3 coin-pendants, 4 beads, disc brooch (animal ornamentation?), neck-ring, fire-steel, iron hanks, textile remains.

-German, Speyer, K. Heinrich III, 1046–56, Dbg 829. 0.68g, 18mm. H1 (75°/120°). Traces of a loop, pecks.



-German, Strassburg, K. Heinrich II, 1014–26, Dbg 920?. 0.63g, 19mm. H4. Pecks.



-German. 0.37g, 17mm. H2.



Inv nr: DM 220-8942-90; KMK 279/91

Ref: -

21. Mora parish, Kråkberg grave 5b. Excavated in 1990.

Inhumation, orientated north-east/south-west, without external marking.

Tpq: 1046

Phase: IIB

Content: 6 coin-pendants, 11 beads, 2 oval brooches (Jansson 1985 fig.142), annular brooch, 2 arm-rings, arm-ring (frg), clasp, textile remains.

-German, Bardowick?, Köln imitation, Häv 717ff, eleventh century. 0.7g, 18mm. L?



-German, Deventer?, B Berndel, 1027–54, Dbg 570–3. 0.86g, 18mm. H1 (195°/unknown). Traces of a loop, pecks.



-German, Emden, Gre Herrmann, 1020–51, Dbg 773. 0.37g, 18mm. L? (30°/180°). Uncertain position of the loop.



-German, Speyer, K. Heinrich III, 1046–56, Dbg 832. 0.59g, 18mm. L? (60°/210°). Pecks, diffuse remains of a corroded loop?



-German. 0.25g, 18mm. H1.



-German. Pendant? Very small fragment.

Inv nr: DM 220-8942-90; KMK 279/91

Ref: -

22. Rättvik parish, Backa grave 2. Discovered in 1895.

Inhumation, double grave?

Tpq: c.1023

Phase: IIB?

Content: 2 coin-pendants, 6 beads, penannular brooch, arm-ring, finger-ring, English coin, axe, arrowheads, knife (frg), comb, 2 fire-steels, 2 horse-shoes, horse crampon.

-English, Æthelred II, Long Cross type, c.997–1003. 0.79g, 16mm. H1 (90°/90°). Damaged edge (broken perforation?), pecks.



-German, Worms, Kg/K Heinrich II, 1002–24, Dbg 845var?.. 0.64g, 18mm. H1 (unknown/180°). Pecks.



Inv nr: SHM 10395, 10842

Ref: CNS 16.1.10; SML 3 Dr:117; Serning 1966:180; Hatz, G. 1974:nr103.

Gotland

23. Eksta parish, Bopparve. Excavated in 1992.

Tpq: -

Phase: -

Content: Coin-pendant-

-Unknown origin, H-

Inv nr: GF C 11510

Ref: WKG IV-1:127.

24. Endre parish, Lilla Hulte grave 2. Excavated in 1961.

Tpq: -

Phase: II?

Secondary inhumation in a cist-grave from the Roman Iron Age, orientated north/south, under a mound surrounded by a stone circle (21m in diam).

Content: Coin-pendant.

The coin-pendant was associated with the secondary burial, but its exact relation to the skeleton is unclear.

-Unknown origin, 19mm. H1 (cross orientated). Very damaged.



Inv nr: SHM 32393:2

Ref: WKG IV-1:141.

25. Fröjel parish, 'Ridanäs' grave 32. Excavated in 1998.

Churchyard. Inhumation with coffin, orientated west/east, without external marking.

Tpq: c.997

Phase: IIB

Content: Coin-pendant, beads, belt buckle, knife, nails.

The coin-pendant and the beads were clustered near the cranium.

-English, Æthelred II, Long Cross type, c.997–1003. Lr- (0°/cross orientated?).

Inv nr: -

Ref: Carlsson, D. 1999:127–9.

26. Garde parish, Garde. Excavated in 1951.

Churchyard. Inhumation with coffin, orientated east/west, without external marking.

Tpq: after 997

Phase: IIB

Content: Coin-pendant, 10 beads, 3 animal-head brooches (type 6d, 7a, 7d), 2 dress-pins, arm-ring, wrist-ring, tool brooch with chain, knife, key, needle case, bronze ring, textile remains.

The beads and the coin-pendant were found aligned on the right side of the mandible.

-Swedish, Olof Skötkonung, imitation 'Long Cross type', after 997, Sigtuna. 2.15g, 20mm. H1 (225°/0°). Traces of loop attached with bronze rivet, flattened coin, pecks.

Inv nr: SHM 24527

Ref: WKG I:Abb.455; WKG IV-1:217; Carlsson, A. 1983:151; Thunmark-Nylén 1995:190; Malmer 1997:144.

27. Garde parish, Garde grave 1953:1. Excavated in 1953.

Churchyard. Inhumation, orientated east/west, without external marking.

Tpq: 1111

Phase: IIB

Content: 2 coin-pendants, octagonal pendant with cross motif, 35 beads, animal-head brooch (type 7e), penannular brooch (type 6d), dress-pin, German coin, chain, 2 iron fragments, textile remains.

-German, Mainz, EB Adalbert, 1111–37, Dbg 824a. 0.42g. H-

-German. 0.87g. H-

Inv nr: SHM 25501

Ref: WKG I:Abb.459; WKG IV-1:218; Hatz, G. 1974:nr369; Carlsson, A. 1983:151; Carlsson, A. 1988:149; Thunmark-Nylén 1995:190.

28. Garde parish, Garde grave 1968. Excavated in 1968.

Churchyard. Inhumation, orientated east/west, without external marking.

Tpq: 1047

Phase: IIB

Content: 2 coin-pendants, c.100 beads, hemispherical silver pendant, animal-head brooch (type 7d), 2 dress-pins, key? (frg), textile remains, 15 nails.

One of the coin-pendants and 8 beads were scattered on the left-side ribs. The position of the second coin-pendant and of the hemispherical pendant is unknown.

-Danish, Sven Estridsen, 1047–74, Hbg 39. 1.14g, 18mm. Lr1B (0°/90°).

-English, Cnut, Pointed Helmet type, c.1023–9, London. 0.78g, 19mm. Lr1B (180°/270°). Broken loop.

Inv nr: SHM 32459; KMK 102544

Ref: WKG I:Abb.454; WKG IV-1:220–1; Thunmark-Nylén 1995:191; NNÅ 97-99:131.

29. Grötlingbo parish, Barshalder grave 1962:13:1. Excavated in 1962.

Inhumation in a cist-grave, orientated north-east/south-west.

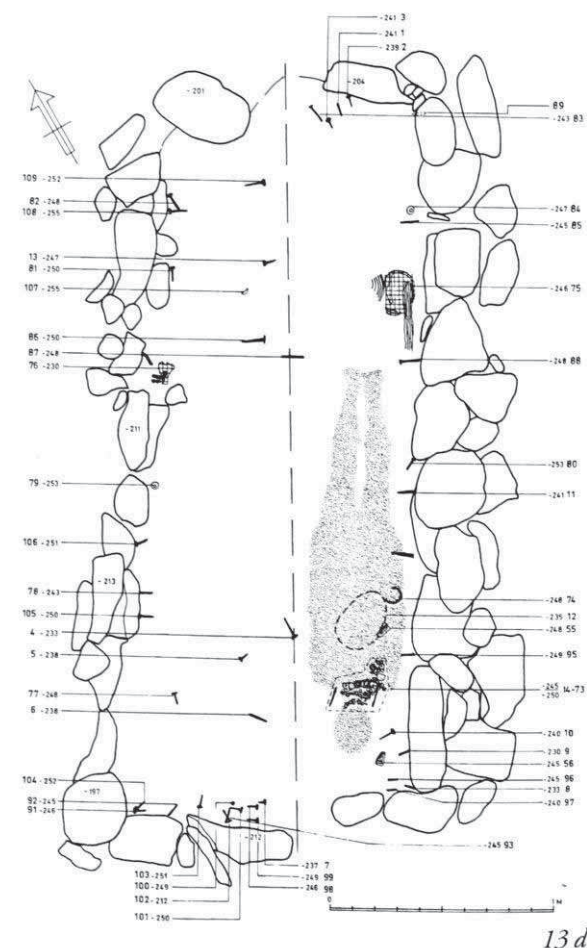
Tpq: c.997

Phase: IIB?

Content: Coin-pendant, tongue pendant, sieve pendant, spoon pendant, silver-mounted amethyst, 3 silver-mounted crystals, c.50 beads, 2 animal-head brooches (type 6b), disc-on-bow brooch, 2 dress-pins,

arm-ring, spindle-whorl, wooden spatula, copper vessel, ceramic vessel (frg), wooden box (frg), piece of amber, textile remains, food remains, nails.

The pendants and the beads were all found in the neck area and in the upper chest area.



-English, Æthelred II, Long Cross type, c.997–1003, York. Lr- (0°/90°).

Inv nr: SHM 27779

Ref: WKG I:Abb.84; WKG IV-1:260–2; Carlsson, A. 1983:154–5; Trotzig 1991:214–8; Rundkvist 2003:180–1.

30. Grötlingbo parish, Barshalder grave 1963:5. Excavated in 1963.

Inhumation in a cist-grave, orientated north/south.

Tpq: c.997

Phase: II-

Content: Coin-pendant, bead, knife, knife sheath, key, comb, ceramic vessel, iron ring (frg), 2 iron rods (frg).

The coin-pendant was found beside the knife in the pelvic area.

-English, Æthelred II, Long Cross type, c.997–1003, London. 1.12g, 20mm. Lr- (180°/0°). Corroded loop, pecks.



Inv nr: SHM 27779

Ref: WKG I:Abb.69; WKG IV-1:263; Rundkvist 2003:183.

31. Grötlingbo parish, Broe grave 41. Excavated in 1933.

Found in the cemetery in a disturbed context.

Tpq: c.963

Phase: II?

-Byzantine, Nikephoros II, Grierson G.6, 963–9. 2.09g, 20mm. Lr1A+R1A (0°/180°).



Inv nr: SHM 20517

Ref: WKG IV-1:345; Hammarberg et al. 1989:Find 74.

32. Hellvi parish, Ire grave 238. Excavated in 1943.

Inhumation with coffin in a cist-grave, orientated east/west, under a circular cairn with stone kerb (6.2m in diam). Reused picture stone among the kerb stones.

Tpq: c.977

Phase: II-

Content: Coin-pendant, knife, comb (frg), comb-case, bronze fitting, iron fragment, wooden object.

The coin-pendant was found in the eastern part of the cist, together with a bronze fitting.

-Byzantine, Basil II and Constantine VIII, Grierson class IIA G.17, c.977–89. 3.61g, 21mm. Lr1B+R1C (180°/0°). Heavily corroded.



Inv nr: GF C 10221:92–99

Ref: WKG I:Abb.218; WKG IV-1:417–8; Stenberger 1961:131; Hammarberg et al. 1989:Find 83; Rundkvist 2012:153.

33. Hellvi parish, Ire grave 479A. Excavated in 1943.

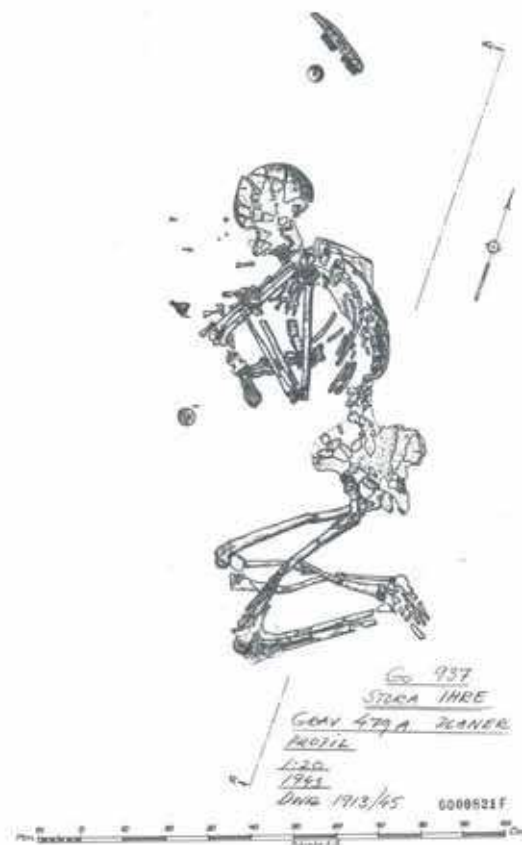
Inhumation, orientated north/south, under a circular cairn with stone kerb (2.6m in diam).

Tpq: -

Phase: pre-VA

Content: Coin-pendant, tongue pendant, spoon pendant, bronze bracteate, 3 animal-head brooches (VZG Abb.1337-8), dress-pin, comb, spindle-whorl, 2 chain holders, chain (frg).

All the pendants, including the Roman coin, were clustered before the face, with the exception of the bracteate, which was found at the waist level.



-Roman, fourth century?. 15mm. H1 (180°/unknown). Very worn, perforation under obverse portrait.



Inv nr: GF C 10221:130–143

Ref: WKG IV-1:429, Stenberger 1961:107; Lind 1981:52.

34. Hemse parish, Hemse annex grave b. Discovered in 1873.

Inhumation.

Tpq: 917/8

Phase: IIA

Content: Coin-pendant, 26 beads, 2 animal-head brooches (type 7e), box-brooch (type 4), dress-pin, 2 arm-rings, wrist-ring, tool-brooch with chain, key, comb, Islamic ceramic cup.

-Islamic, Samanid, Samarqand, 917/8. 1.47g, 26mm. H1 (90°/0°), H1 (90°/0°). Damaged coin, graffito, unfinished perforation.



Inv nr: SHM 5035b

Ref: WKG IV-1:452-3; Arne 1914:197-8; Arne 1938; Graham-Campbell 1980:100; Carlsson, A. 1983:164-5; Jansson 1988:646.

35. Lye parish, Bjärges grave 2. Excavated in 1951. Cremation covered by a damaged stone-setting with stone kerb (7.5m in diam).

Tpq: -

Phase: II-

Content: Coin-pendant, bronze fragments, lead fragment, lump of clay.

The artefacts were all found in an irregular area (max diam c.2.5 m) situated NE of the grave's centre.

-German. 0.9g, 19mm. Lr1B. Damaged during conservation.



Inv nr: SHM 25448

Ref: WKG IV-2:535.

36. Norrlanda parish, Butrajvs grave 5a. Excavated in 1887.

Secondary inhumation, orientated north/south, under a circular cairn with stone kerb (c.9.5m in diam) from the early Iron Age.

Tpq: c.991

Phase: II-

Content: Coin-pendant, c.40 beads, arm-ring, finger-ring, 2 knives, knife sheath (frg), needle case, needles, bronze ring.

All these artefacts were associated with the secondary burial. No further information about their position.

-German, Goslar, Otto-Adelheid, Hatz III-IV, c.991-1040. 0.86g, 18mm. H4 (0°/0°). Still looped when unearthed.



Inv nr: SHM 8554

Ref: WKG I:Abb.240; WKG IV-2:558; Hatz, G. 1974:nr415.

37. Silte parish, Silte grave 3. Excavated in 1971.

Churchyard. Inhumation, orientated east/west, without external marking.

Tpq: c.977

Phase: post-VA

Content: Coin-pendant.

The coin-pendant was discovered at the chin of the skeleton.

-Byzantine, Basil II and Constantine VIII, Grierson class IIA G.17d, c.977-89. 2.12g, 21mm. Lr2bA (180°/180°). Detached loop.



Inv nr: GF C

Ref: WKG IV-2:621; Trotzig 1972; Hammarberg et al. 1989:Find 140; Liljeholm 1999; Hultberg 2015: 21; Audy 2016:161.

38. Silte parish, Silte grave 7 or 8. Excavated in 1971.

Churchyard. Disturbed context.

Tpq: c.997

Phase: post-VA

Content: -

-English, Æthelred II, Long Cross type, c.997-1003, Lincoln. Lr- (0°/180°). Broken loop, graffiti on both sides.



Inv nr: GF C

Ref: WKG IV-2:621; Trotzig 1972; Liljeholm 1999; Hultberg 2015:22.

39. Stånga parish, Stånga grave 4. Excavated in 1903.

Churchyard. Inhumation with coffin, orientated east/west, without external marking.

Tpq: 1082

Phase: IIB

Content: 4 coin-pendants, cross pendant, c.17 beads, animal-head brooch (type 7d), wrist-ring, bronze spirals, iron chain (frg), bronze ring (frg), iron fragments.

The coins, the beads and the cross were all lying in the neck area.

-English, Æthelred II, Long Cross type, c.997–1003, Colchester. 19mm. Lr- (0°/90°). Broken loop, pecks.



-German, Corvey, A. Maquart, 1082–1106, Dbg 1622. 18mm. H1 (0°/135°).



-Anglo-Scandinavian, imitation 'Long Cross type', after 997. 20mm. Lr1A (240°/270°).



-Anglo-Scandinavian, imitation 'Long Cross type', after 997. 19mm. Lr1C (135°/60°). Pecks.



Inv nr: SHM 13436b

Ref: WKG I:Abb.456; WKG IV-2:643; Hatz G.,

1974:nr337; Carlsson, A. 1983:176; Thunmark-Nylén 1995:193; Malmer 1997:177, 191; Staecker 1999:nr79.

40. Stånga parish, Stånga graves. Discovered in 1903.

Churchyard. Several graves in an area of approximately 3m in diam.

Tpq: -

Phase: IIB

Content: 4 coin-pendants, 2 tongue pendants, 2 sieve pendants, 3 spoon pendants, 3 silver-mounted crystals, c.80 beads, 12 animal-head brooches, disc-on-bow brooch, 6 dress-pins, 4 arm-rings, German coin (frg), tool brooch with chains, 2 knives, 2 keys, needle-case, 2 combs, fossil, textile remains, nails.

-Byzantine, Nikephoros II, Grierson class G.6, 963–9. 3.35g, 23mm. Lr1B (90°/90°).



-English, Æthelred II, Long Cross type, c.997–1003, York. 1.44g, 19mm, Lr4B (240°/345°).



-English, Æthelred II, Last Small Cross type, c.1009–17, Exeter. 1.34g, 19mm. Lr1A (0°/105°), H1 (300°/165°). Pecks.



-English, William II, Profile type, c.1086–9, Southwark?. 1.42g, 19mm. Lr3A (0°/180°). Pecks.



Inv nr: SHM 11948

Ref: WKG IV-2:636-8; Carlsson, A. 1983:175; Hammarberg et al. 1989:Find 146; Thunmark-Nylén 1995:193.

41. Visby parish, Kopparsvik 18. Excavated in 1963.

Inhumation, orientated north-east/south-west, without external marking.

Tpq: c.150

Phase: IB

Content: Coin-pendant, tongue pendant, sieve pendant, spoon pendant, 14 beads, 2 animal-head brooches (type 5a, 5d), box-brooch (type 2d), dress pin, arm-ring, tool-brooch with chain, knife sheath (frg), 2 keys, comb, chain (frg), chewing resin.

The coin, the beads and the pendants were found together below the left clavicle.

-Roman, c.150. 16mm. H1 (255°/unknown), H1 (0°/unknown). Second hole broken.

Inv nr: GF C 12675:18

Ref: WKG I:Abb.335; WKG IV-2:837; Kilger 2008a:331.

42. Väskinde parish, Gällungs 12. Excavated in 1973.

Inhumation without external marking.

Tpq: 178-9

Phase: IB?

Osteology: Female, juvenil.

Content: Coin-pendant, tongue pendant, sieve pendant, spoon pendant, 19 beads, nut shell.

-Roman, c.178-9. 16mm. H-

Inv nr: SHM 32391

Ref: WKG IV-2:709-10; Kilger 2008:331.

Gästrikland

43. Hille parish, Oppala. Discovered in 1889.

Several inhumation burials in a pit.

Tpq: 724

Phase: IB

Content: Coin-pendant, bead, 6 oval brooches (P51, P52), axe, iron ring, bronze fragments.

-Islamic, Umayyad, Wasit, [724-38]. 1.59g, 27mm. dH1 (30°/345°)



Inv nr: SHM 8631

Ref: Bellander 1938:129; Linder Welin 1974:176; Callmer 1976:176.

44. Övansjö parish, Storvik A5. Excavated in 1994. Secondary cremation covered by an oval-shaped cairn (c.11x9m). Two other cremations under the cairn.

Tpq: 915/6

Phase: IB

Content: Coin pendant, 3 circular pendants (Callmer type A3), 66 beads, 2 oval brooches (P52, P52/55), 2 annular brooches, equal-armed brooch, disc brooch, needle case (frg), comb (frg), crampons, bronze chain (frg), bronze fragments, iron fragments, iron spiral, textile remains, horse equipment, nails, rivets.

The coin-pendant was found at the interface between cremation B1 and cremation B4, but is interpreted by the excavators as belonging to the former.

-Islamic, Samanid, al-Shash, 915/6. 3.09g, 27mm. Lr2bA (60°/75°).



Inv nr: KMK dnr 711-4047-1994

Ref: Thorén 1997.

45. Valbo parish, Hemlingby 4. Excavated in 1931.

Secondary cremation with boat remains covered by a damaged mound (c.12m in diam). Four other cremations under the mound.

Tpq: -

Phase: IB

Content: Coin-pendant, circular pendant (Callmer type B), 42 beads (BP IX), 2 oval brooches (P51), equal-armed brooch, knife (frg), iron chain (frg), bronze ring, iron fragments, rivets, nails.

-Islamic, Abbasid. H-. Corroded, dispersed.

Inv nr: SHM 19802

Ref: Arbman 1933; Jansson 1969:59; Jansson 1985: 210; Callmer 1977:nr201; Thorén 1997:68.

46. Österfärnebo parish, Rasbo 11:1. Excavated in 1934.

Cremation covered by an irregularly circular cairn (c.13m in diam). One other cremation under the cairn.

Tpq: c.979

Phase: IIA

Content: Coin-pendant, circular pendant (Callmer type A3), 3 beads, 2 oval brooches (P48), equal-armed brooch, disc brooch, sword (frg), knife (frg), key, comb (frg), whetstone, bronze fragments, iron fragments, ceramic vessel, wooden plates, textile remains, horse equipment, nails.

Most of the artefacts, including the coin-pendant, were scattered in the cremation layer.

-English, Æthelred II, First Hand type, c.979–85. H1 (0°/0°). Broken hole. Dispersed?

Inv nr: LMG 7172

Ref: Bellander 1938:18–9; Jansson 1985:206; Callmer 1977:170; Thorén 1997:68.

Halland

47. Vinberg parish, Sannagård 195. Excavated in 1990.

Cremation originally covered by a mound, as suggested by the remains of a stone kerb. One secondary burial.

Tpq: c.825

Phase: IA?

Osteology: Adultus.

Content: 3 coin-pendants?, 29 beads, silver plate (frg), bronze fragments.

All the artefacts, including the coin-pendants, were scattered in the cremation layer.

-Nordic, KG.3, c.825. 0.75g, 19mm. H1 (180°/270°). Traces of loop.

-Nordic, KG.3, c.825. 1.07g. Damaged pendant?

-Islamic, Abbasid [750–815]. 2.59g, 25mm. Damaged pendant?

Inv nr: KMK dnr 153/90

Ref: SML 10 Ha:341; Artelius 1990; Lindberger 1992; Artelius 2000; Svanberg 2003:179.

Jämtland

48. Frösö parish, Frösö Läger 2. Excavated in 1963.

Cremation covered by a cairn of irregular outline (c.10x6m).

Tpq: c.991

Phase: IIA

Content: Coin-pendant, circular pendant decorated with great beast, bronze pendant (frg), oval brooch (P51?, frg), 2 tongue-shaped brooches, 2 disc brooches, tweezers? (frg), needle case? (frg), comb, locking spring?, chain (frg), 2 iron rings, iron rods, glass fragments, rivets, nails.

Most of the artefacts, including the coin-pendant, were scattered in the cremation layer.

-English, Æthelred II, Crux type, c.991–7. Lr1A (300°/unknown). Dispersed?

Inv nr: SHM 27361

Ref: SML 7 Jä:12; Hedqvist 1964; Callmer 1977: 170; Zachrisson, I. 1991.

Skåne

49. Ingelstorp parish, Ingelstorp 35. Excavated in 1975.

Cremation covered by a round stone-setting (c.8m in diam).

Tpq: 918/9

Phase: -

Osteology: Female?, adultus.

Content: Coin-pendant, 3 beads, iron fragment

All the artefacts, including the coin-pendant, were found in the cremation layer. The three beads were lying close to each other, at some distance from the coin-pendant.

-Islamic, Samanid, Samarqand, 918/9. 2.29g, 27mm. dH1 (0°/270°). Damaged.

Inv nr: -

Ref: Strömberg 1982:171; Svanberg 2003:296; von Heijne 2004:1.57.

Småland

50. Vimmerby parish, Gästgivarehagen 102. Excavated in 1900.

Cremation under a circular mound (9.5m in diam).

Tpq: 906/7

Phase: IIA

Content: Coin-pendant, circular pendant (bronze, 4

volutes), c.100 beads (BP IX/XII), bronze fragment, 2 iron rings, iron fragments, nails.

-Islamic, Samanid, Samarqand, 906/7. 1.74g, 28mm. H-

Inv nr: SHM 11485

Ref: Callmer 1977:135.

Södermanland

51. Brännkyrka parish, Berga 9. Excavated in 1961.

Cremation with urn under a stone-setting of irregular outline (c.7m in diam). One secondary burial.

Tpq: c.822

Phase: I-

Content: Coin-pendant, ceramic sherds, nails.

The coin-pendant was found in the cremation layer.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. Lr- (45°/0°).



Inv nr: SSM 30811.1

Ref: Garipzanov 2008:79, nr54.

52. Eskilstuna parish, Gårdskäl A2876. Excavated in 2012.

Cremation with urn under a circular stone-setting (2.5m in diam).

Tpq: tenth century

Phase: II?

Content: Coin-pendant, 5 beads, whetstone, crampon, 2 ceramic vessels (frg), iron ring, metal fragments.

All the artefacts, including the coin-pendant, were scattered in the cremation layer.

-German, Köln, Häv 29e, mid-tenth century. 0.9g, 17mm. H1+R- (15°/210°).

Inv nr: -

Ref: Emanuelsson et al. 2013:36–7.

53. Vansö parish, Hålbö 3. Excavated in 1979.

Cremation with urn under a stone-setting of irregular outline (c.4x4m), with stone kerb.

Tpq: 744/5

Phase: IA

Content: 2 coin-pendants, 37 beads, ring, iron fitting, ceramic sherds, nails.

All the artefacts, including the coin-pendants, were scattered in the cremation layer.

-Islamic, Umayyad, Kirman, 715/6. 1.85g, 24mm. Lr2bA (180°/0°). Broken, nick, graffito on the reverse in the shape of a compass rose.



-Islamic, Abbasid revolution, Jayy, 744/5. 2.32g, 24mm. Lr2bA (45°/345°). Nick.



Inv nr: SHM 32298 ; KMK 101937

Ref: Olsson 1984; Hovén 1989.

Uppland

54. Adelsö parish, Björkö 58A. Excavated in 1875.

Inhumation with coffin, orientated east/west under a circular mound (c.7 m in diam), with remains of stone kerb. Hemlanden cemetery (1B).

Tpq: -

Phase: I-

Content: 2 coin-pendants, shield-shaped pendant, bead, penannular brooch, knife, silver wire embroidery, nails.

The bead and the pendants were clustered in the western part of the grave, on the same level as the penannular brooch and the knife.

-Islamic. L? Damaged.

-Islamic. Pendant?

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:27–8.

55. Adelsö parish, Björkö 66. Excavated in 1875.

Cremation with urn under a mound of irregular outline (c.6.9x5.1m). Hemlanden cemetery (1B).

Tpq: c.812

Phase: IA

Content: Coin-pendant, circular pendant (frg), bead-pendant, 27 beads (BP III), Islamic coin (frg), comb, 2 ceramic vessels, rivets, nails, hazelnut, nutshell.

All the artefacts were scattered in the cremation layer.

-Carolingian, Charlemagne, Portrait type, c.812–4. 1.98g, 19mm. Lr2bA (120°/90°). Gilded.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:27–8; Callmer 1977:168; Duczko 1985:52, 75–6; Ambrosiani 2006; Garipzanov 2008:76–7, nr56.

56. Adelsö parish, Björkö 168. Excavated in 1875. Cremation with urn under a circular mound (5.1m in diam). Hemlanden cemetery (1B).

Tpq: c.825

Phase: IB

Content: 2 coin-pendants, 23 beads (BP VIII), Islamic coin (frg), chest clasp, ceramic sherds, rivets, nails. All the artefacts were scattered in the cremation layer.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 1.47g, 18mm. Lr2bA (75°/0°), H1 (0°/75°).



-Nordic, Malmer KG.3, c.825. 0.79g. Lr2bA (180°/0°). Broken in several pieces.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:72–3; Malmer 1966:nr93; Callmer 1977:169; Ambrosiani 2006; Garipzanov 2008:77, nr57.

57. Adelsö parish, Björkö 184. Excavated in 1875. Cremation with urn under a circular mound (7.5m in diam). Hemlanden cemetery (1B).

Tpq: c.850

Phase: IB

Content: 4 coin-pendants, oriental mount reused as pendant, c.80 beads (BP VIII), knife, 3 combs, fire-steel, whetstone, 3 ceramic vessels, bucket (remains), staples, nails, eggshell?

Two vessels were found next to each other in the cremation layer, with all the pendants gathered near one of them. The beads were clustered around the vessels within an area of 0.45m. The remaining artefacts were scattered in the cremation layer.

-Nordic, Malmer KG5, c.850. 1.17g, 19mm. Lr1A (0°/285°).



-Nordic, Malmer KG5, c.850. 1.13g, 20mm. Lr1A (0°/90°).



-Nordic, Malmer KG5, c.850. 1.08g, 19mm. Lr2bA (0°/270°).

-Nordic, Malmer KG5, c.850. 0.97g, 19mm. Lr1B (345°/315°).



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:76–7; Malmer 1966:nr93; Callmer 1977:155.

58. Adelsö parish, Björkö 306A. Excavated in 1876. Cremation with urn under a circular mound (7.2m in diam). One secondary burial. Kvarnbacka cemetery (4D).

Tpq: c.850

Phase: IB

Content: Coin-pendant, 2 oriental mounts reused as pendants, silver ornament (filigree, frg), bead pendant, 2 suspension rings (bead pendants?), 81 beads (BP VIII), oval brooch (P51, frg), penannular brooch (frg), ceramic sherds, rivets, hazelnut shell.

Most of the ornaments, including the coin-pendant, were found in the cremation deposit.

-Nordic, Malmer KG5, c.850. 0.73g, 19mm. Lr- (0°/105°). Remains of a bronze loop.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:88–9; Malmer 1966:nr93; Callmer 1977:nr228; Duczko 1985:103; Jansson 1985:127.

59. Adelsö parish, Björkö 367. Excavated in 1876.

Cremation with urn under a circular mound (7.2m in diam). Cemetery south of Borg (4A).

Tpq: 806/7

Phase: I-

Content: Coin-pendant, 2 beads, Islamic coin (frg), comb (frg), needle, pins, pieces of flint, bone remains (stylus?), weight, chest (remains), ceramic sherds, metal rings, rivets, nails.

-Islamic, Abbasid, 786?. 2.48g, 25mm. Lr2bB. Very corroded.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:104.

60. Adelsö parish, Björkö 418. Excavated in 1876.

Cremation with possible boat remains covered by a damaged mound (c.5.7m in diam). Cemetery south of Borg (4A).

Tpq: c.822

Phase: IB

Content: Coin-pendant, circular pendant (Callmer type A1), circular pendant (iron, frg), 2 fragments of bow brooches reused as pendants, 36 beads (BP XA), disc brooch, four-sided brooch, tweezers (handle), knot, ceramic sherds, rivets, nails, hazelnut shells.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 0.97g, 19mm. H1 (210°/285°). Lost loop, two broken holes.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:117–8; Callmer 1977:nr230; Ambrosiani 2006; Garipzanov 2008:77, nr58.

61. Adelsö parish, Björkö 457. Excavated in 1890.

Cremation with urn. Borg cemetery (3)

Tpq: 793/4

Phase: IA

Content: Oval brooch (frg), ornament (frg), coin-pendant, 25 beads, 2 ceramic vessels, ceramic sherds, cup sherds, tating jug, silver bit, iron rods, staple, nails.

-Islamic, Idrisid, Tudgah, 793/4. 0.75g. Lr1A. Corroded.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:128–9; Callmer 1980:205.

62. Adelsö parish, Björkö 508. Excavated in 1877.

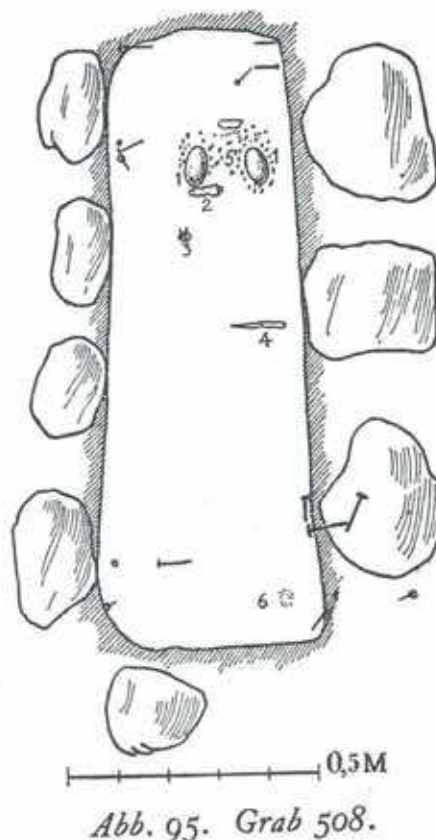
Inhumation with coffin, orientated east/west, without external marking. Cemetery north of Borg (2A).

Tpq: c.850

Phase: IA

Content: 2 coin-pendants, 306 beads (BP VI), 2 oval brooches (Birka type), equal-armed brooch, knife, nails.

The two coin-pendants were found near the chest area, isolated from the other artefacts and from the beads.



-Nordic, Malmer KG5, c.850. 0.96g, 20mm. Lr2bB (0°/90°). Broken loop.



-Nordic, Malmer KG5, c.850. 0.94g, 19mm. Lr2bA (0°/0°). Broken loop.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:149; Malmer 1966: nr93; Callmer 1977:nr234; Jansson 1985:126.

63. Adelsö parish, Björkö 526. Excavated in 1877. Inhumation with coffin, orientated east/west, without external marking. Cemetery north of Borg (2A).

Tpq: c.825

Phase: IA

Content: 6 coin-pendants, 362 beads (BP IIIB), 2 oval brooches (Birka type), disc brooch (frg), finger-ring, 3 Nordic coins, knife, 3 keys, needle case (frg), purse (remains), silver chain, beaker, silver fragment, nails.

The coin-pendants were scattered in the grave. Three were found in direct relation with the oval brooches. One was found below the cluster of beads. Two were found together at some distance from the oval brooches, outside the cluster of beads.

-Nordic, Malmer KG3, c.825. 0.89g, 19mm. Lr- (0°/0°).

-Nordic, Malmer KG3, c.825. 0.78g, 19mm. Lr- (270°/0°).



-Nordic, Malmer KG3, c.825. 0.64g, 19mm. H1 (270°/0°). Nick.



-Nordic, Malmer KG3, c.825. 0.54g, 18mm. Lr- (255°/0°).

-Nordic, Malmer KG3, c.825. 0.54g, 19mm. Lr2bA (90°/270°). Very damaged.

-Nordic, Malmer KG4, c.825. 0.85g, 18mm. Lr- (0°/180°).

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:161–2; Malmer 1966:nr93; Callmer 1977:nr239; Jansson 1985:126.

64. Adelsö parish, Björkö 557. Excavated in 1878. Chamber grave without external marking. Cemetery north of Borg (2A).

Tpq: 842

Phase: IB

Content: 2 coin-pendants, oriental mount reused as pendant, oriental vessel fragment reused as pendant, pendant made of silverwire, 9 bead-pendants, 105 beads (BP V), 2 oval brooches (P15), rectangular brooch, finger-ring, stone from finger-ring, gold ornament, 2 knives, 2 keys, chest? (frg), beaker (sherds), window glass (frg), glass sherds, ceramic sherds, bucket, horse bit? (frg).

The beads and the pendants were clustered between the two oval brooches.

-Byzantine, Michael III, Grierson class 1 G5, 842–56. 1.71g, 24mm. H1 (180°/150°). Nicks.



-Carolingian, Charles the Bald, Cross and Temple type, c.840-64. 0.59g, 19mm. Pendant?



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:176–9; Callmer 1977:nr244; Duczko 1985:72, 77–8; Hammarberg et al. 1989:Find 7; Ambrosiani 2006; Garipzanov 2008: 78, nr59.

65. Adelsö parish, Björkö 632. Excavated in 1877. Chamber grave without external marking. Cemetery north of Borg (2A).

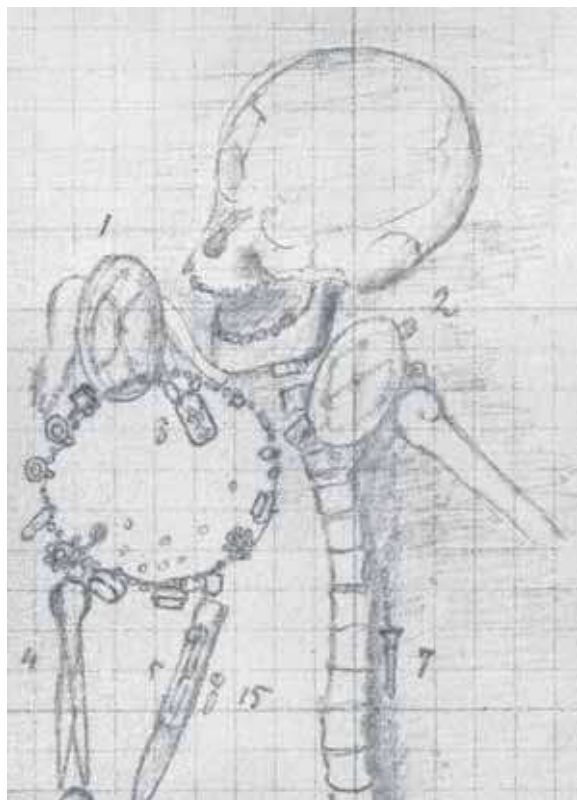
Tpq: c.838

Phase: IB

Content: Coin-pendant, 2 oriental mounts reused as pendant, oriental vessel fragment reused as pendant, 2 Carolingian mounts reused as pendants, pendant

with filigree decoration (frg), coiled snake pendant, bowl-shaped pendant, sieve-shaped pendant, miniature chair, 5 bead-pendants, 58 beads (BP IV), 2 oval brooches (P42), Islamic coin (frg), knife, scissors, needle case, silver knob, bronze dish, ladle, bucket (remains), iron ring, iron fragments.

The beads and the pendants were lying in a perfect circle below the right shoulder.



-Byzantine, Theophilos, Grierson class 4 G11, c.838–40. 2.28g, 23mm. Lr2bA (165°/180°), H1 (180°/165°). Nicks.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:210–3; Callmer 1977:nr249; Graham-Campbell 1980:45; Duczko 1985:44, 69–70, 102; Jansson 1985:126; Hammarberg et al. 1989:Find 10; Jansson 1996:18; Audy 2016:159–60.

66. Adelsö parish, Björkö 639. Excavated in 1878. Chamber grave without external marking. Cemetery north of Borg (2B).

Tpq: c.850

Phase: IA

Content: 2 coin-pendants, circular pendant (Callmer type A1), 140 beads (BP V), 2 oval brooches (P51),

equal-armed brooch, Islamic coin (frg), scissors, tweezers, needle, pin, ceramic vessel, glass sherds, 2 chests.

-Nordic, Malmer KG5, c.850. 0.78g, 18mm. Lr- (0°/270°). Corroded.

-Nordic, Malmer KG5, c.850. 0.57g. Lr1B (0°/285°). Damaged, corroded.

Comment: It is uncertain whether the two coin-pendants, which seem to have been damaged by fire, belonged to this grave.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:215–8; Malmer 1966:nr93; Callmer 1977:nr251; Duczko 1985:74; Jansson 1985:127.

67. Adelsö parish, Björkö 646. Excavated in 1877. Inhumation, orientated south-east/north-west. Cemetery north of Borg (2A).

Tpq: c.825

Phase: IA

Content: 2 coin-pendants, 2 beads (BP III or IV), 2 oval brooches (P27), equal-armed brooch, knife.

The two coin-pendants were found at the throat, above the equal-armed brooch.

-Nordic, Malmer KG3, c.825. 0.91g, 19mm, Lr2bA (270°/0°).

-Nordic, Malmer KG4, c.825. 0.74g, 20mm, Lr2bA (0°/0°). Damaged, loose loop.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:226–7; Malmer 1966:nr93; Callmer 1977:169; Jansson 1985:126.

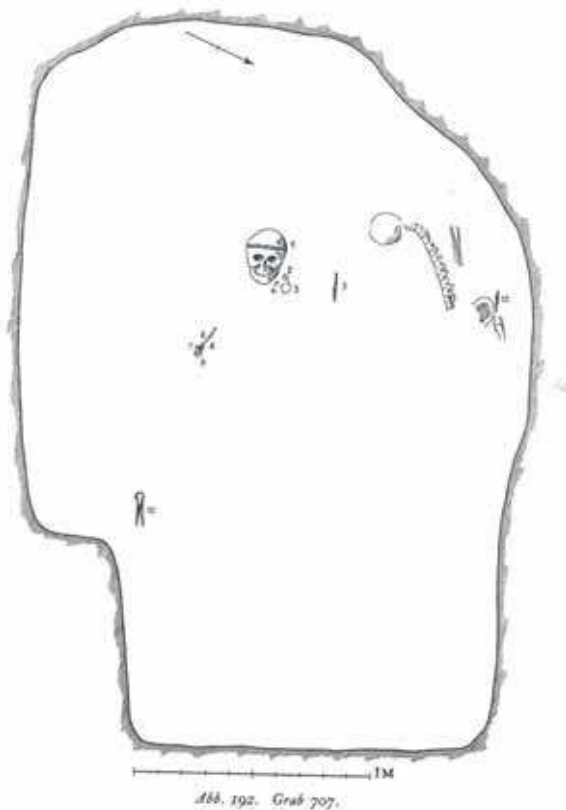
68. Adelsö parish, Björkö 707. Excavated in 1879. Chamber grave under a mound. Secondary cremation above the chamber. Hemlanden cemetery (1C).

Tpq: 899?

Phase: IB

Content: 2 coin-pendants, bowl-shaped pendant, 8 beads, penannular brooch, Islamic coin? (frg), arrow-head, knife, scissors, tweezers or needle fragment, 2 weights, glass mirror (frg).

The two coin-pendants and the bowl-shaped pendant were lying at the end of a string of beads.



-Islamic, Umayyad, Wasit, 726/7. 2.31g, 27mm. H1 (90°/180°). Lost loop.



-Islamic, Abbasid, Marw, 860/1. 2.59g, 25mm. Lr2bA (165°/0°).



Inv nr: SHM 32298; KMK 101937
Ref: SML 4 Up:4; Arbman 1943:241–2; Duczko 1985:44.

69. Adelsö parish, Björkö 731. Excavated in 1879. Chamber grave covered by a circular mound (c.8-9m in diam). Hemlanden cemetery (1C).

*Tp*q: 908/9

Phase: IB

Content: 3 coin-pendants, 2 oval brooches (P51), 2

penannular brooches, disc brooch, 2 headgears (remains), finger-ring, 5 beads, 2 Islamic coins (frg), sword, spearhead, shield boss, arrowheads, 2 knives, 2 scissors, whetstone, 2 purses (remains), chest (frg), ceramic vessel, ceramic cup, iron fragments.

The three coin-pendants were found together, isolated from the other artefacts. They were positioned right between the two sets of grave-goods, which make it difficult to determine to whom they belonged.

-Islamic, Umayyad, Wasit, 723/4. 2.3g, 26mm. H1 (45°/0°).

-Islamic, Samanid, al-Shash, 908/9. 2.38g, 28mm. Lr1A (210°/165°).



-English, Wessex, Edward the Elder, 901–24. H1 (75°/195°).

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:253–5; Duczko 1985:85; Jansson 1985:128.

70. Adelsö parish, Björkö 735, Adelsö parish. Excavated in 1879.

Chamber grave covered by a circular mound (13.2m in diam). Horse on a separate platform. Hemlanden cemetery (1C).

*Tp*q: c.900

Phase: IB

Content: Coin-pendant, 56 beads (BP VI), 2 oval brooches (P51), annular brooch, belt buckle, sword, fighting knife (frg), spearhead, shield boss, 4 knives, scissors, tweezers (frg), ear-spoon, key? (frg), awl, piece of flint, whetstone, 6 weights, glass mirror (frg), 2 bells, purse?, 4 crampons, iron chain, chest (remains), ceramic vessel, glass cup, textile remains, horse equipment.

The coin-pendant was probably contained in a purse, together with a glass mirror and a small piece of silk.

-Nordic, Malmer KG7, c.900–50. 18mm. Lr2bA. Loose loop.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:256–9; Malmer 1966:nr93; Callmer 1977:nr269; Jansson 1985:127.

71. Adelsö parish, Björkö 738. Excavated in 1879.
Inhumation with coffin under a circular mound (5.4m in diam). Hemlanden cemetery (1C).

Tpq: c.900

Phase: IB

Content: 3 coin-pendants, 36 beads (BP VI), trefoil brooch, disc brooch, Islamic coin (frg), knife, key? (frg), fire-steel, piece of flint, crampon, ceramic vessel.

The three coin-pendants were found together within a circle of beads, beside the trefoil brooch and the disc brooch.

-Nordic, Malmer KG7-9, c.900-70. 0.14g. H1 (75°/15°). Damaged, dispersed loop.

-Nordic, Malmer KG7, c.900-50. 0.43g, 18mm. H1 (195°/165°). Damaged, dispersed loop.

-Nordic, Malmer KG7, c.900-50. 0.22g, 18mm. H- (345°/195°). Damaged, dispersed loop.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:262-3; Malmer 1966:nr93; Callmer 1977:nr261.

72. Adelsö parish, Björkö 750. Excavated in 1879.
Chamber-grave covered by a circular mound (14m in diam). Horse on a separate platform. Hemlanden cemetery (1C).

Tpq: 911/2

Phase: IB

Content: Coin-pendant, Thor's hammer, silver cross (frg), silver sheet, 6 beads (BP VI), 2 oval brooches (P51), penannular brooch, wheel-cross brooch, bow-brooch, 2 belt buckle, 2 strap ends, gold and silver bands, 2 Islamic coins, 2 Islamic coins (frg), sword, sword chape (falcon), axe, spearhead, shield boss, shield remains?, hammer, rasp, drill?, wedge, 2 knives, scissors, key, needle case, brush (remains), awl?, firesteel, piece of flint, 2 whetstones, 4 weights, glass mirror (frg), bell, 2 purses (remains), bronze knob from a penannular brooch, playing-board (remains), 26 playing-pieces, iron chain (frg), glass cup, bronze bowl, iron ring, iron fragments.

The coin-pendant was contained in a purse, together with 2 Islamic coins, 4 weights and a bronze knob. The purse had been placed in a bronze bowl.

-Roman, Faustina II, RIC III nr744, 176-80. 17mm. Lr1A (270°/15°). Gilded.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:267-72; Callmer 1977:169; Lind 1981:nr164; Duczko 1985:60-1, 72, 90; Jansson 1985:128.

73. Adelsö parish, Björkö 780. Excavated in 1879.
Cremation with urn under a circular mound (4.8m in diam). Hemlanden cemetery (1C).

Tpq: c.825

Phase: I-

Content: Coin-pendant, 9 beads, ice skate, 2 ceramic vessels, rivets, nails.

The coin-pendant was found together with the beads on top of the urn.

-Nordic, Malmer KG3, c.825. 0.9g, 20mm. Lr2bA (90°/0°). Broken loop.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:284; Malmer 1966:nr93.

74. Adelsö parish, Björkö 834. Excavated in 1879.
Chamber-grave in the town wall, originally covered by a mound. Two horses on a separate platform. Hemlanden cemetery (1C).

Tpq: 917/8

Phase: IB

Content: Coin-pendant, 2 oval brooches (P42), penannular brooch, 2 disc brooches, 5 beads (BP VIII), 2 Islamic coins, 3 Islamic coins (frg), iron staff, sword, fighting knife, spearhead, shield boss, arrowheads, 2 knives, scissors, tweezers, needle case, 2 awls, 2 purses (remains), 4 crampons, iron chain, 2 chests (remains), bucket (remains), horse equipment.

The coin-pendant was found isolated just between the two oval brooches.

-Islamic, Abbasid, Madinat al-Salam, 818/9. 2.42g, 24mm. Lr2bA (330°/0°). Detached loop.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:304–8; Callmer 1977:169; Duczko 1985:85; Jansson 1985:126; Price 2002:132–9.

75. Adelsö parish, Björkö 835. Excavated in 1879. Inhumation, orientated east/west, in or beneath the town wall. Hemlanden cemetery (1C).

Tpq: 911/2

Phase: IB

Content: 2 coin-pendants, shield-shaped pendant, 2 circular pendants (Callmer type A3), 2 mount fragments? reused as pendants, cross pendant (Staecker type 1.2.2), circular pendant with filigree decoration, oriental mount reused as pendant, 2 amber pendants, 25 beads (BP IXA), 2 oval brooches (P51), penannular brooch, 2 disc brooches, knife (frg), scissors, key, fire-steel, 2 weights, crampon, bucket (remains), polished stone (frg), rivets, nails.

The pendants and the beads were lying in a perfect row between the two oval brooches.

-Nordic, Malmer KG5, c.850. 0.9g, 19mm. Lr1B (285°/75°). Gilded?



-Islamic, Samanid, Andarabah, 911/2. 1.66g, 20mm. Lr1A (180°/330°).



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:308–9; Malmer 1966:nr93; Callmer 1977:nr268; Duczko 1985:37–8; Jansson 1985:128.

76. Adelsö parish, Björkö 843B. Excavated in 1873–95.

Inhumation, orientated east/west, covered by a mound. One secondary burial. Hemlanden cemetery (1C).

Tpq: c.785

Phase: IB

Content: Coin-pendant, circular pendant, 2 four-sided mounts reused as pendants, 34 beads (BP VIII), arm-

ring, 2 knives (frg), iron fragment, sandstone ball.

All the pendants were found together within a circle of beads.

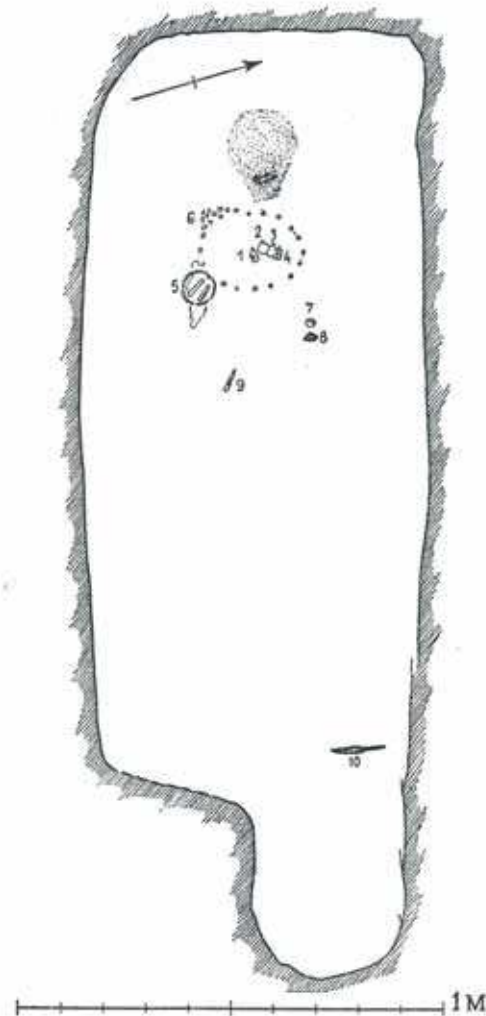


Abb. 264. Grab 843 B.

-Islamic, Abbasid, c.785–800. 0.75g. Lr1A. Corroded, broken loop.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:316–7; Callmer 1977:nr271.

77. Adelsö parish, Björkö 844. Excavated in 1873–95.

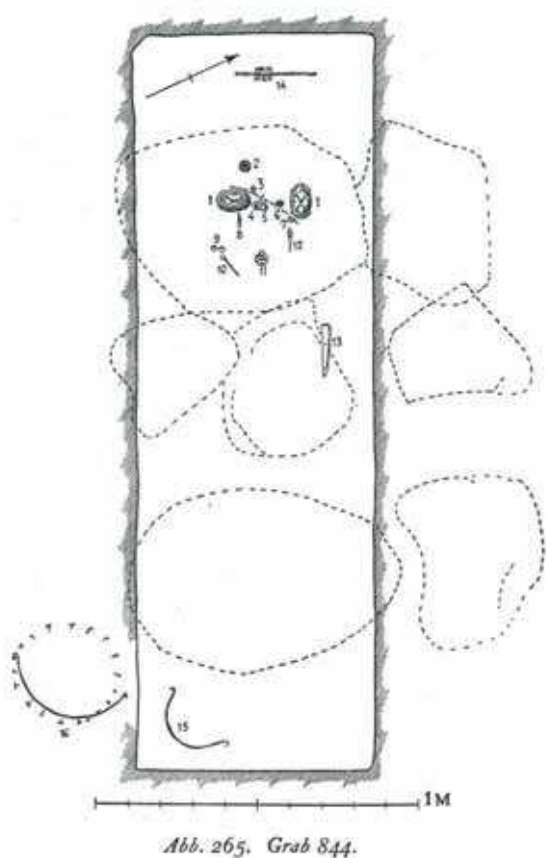
Inhumation, orientated east/west, without external marking. Hemlanden cemetery (1B).

Tpq: 809/10

Phase: IB

Content: Coin-pendant, four-sided mount reused as pendant, shield-shaped pendant, coiled snake pendant, miniature chair, Anglo-Saxon fastening adapted as pendant, animal ornament from a pendant, 29 beads (BP VIII/IX), 2 oval brooches (P51), circular pendant (Callmer type A1) adapted as brooch, wheel-shaped pendant adapted as brooch, chain (frg) with gold band, silver ring, knife, scissors (frg), tweezers, ear-spoon, needle, needle (frg), 2 weights, 2 buckets (remains).

The coin-pendant, the beads and most of the pendants were lying in a perfect row between the two oval brooches.



-Islamic, Abbasid, Balkh, 809/10. 1.93g, 24mm. Lr2bA (165°/270°). Gilded?



Inv nr: SHM 32298; KMK 101937
Ref: SML 4 Up:4; Arbman 1943:317–9; Callmer 1977:nr272; Jansson 1985:127; Gustafson 2008.

78. Adelsö parish, Björkö 845. Excavated in 1873–95.

Chamber grave covered by a mound. Hemlanden cemetery (1B).

Tpq: 925/6

Phase: IB

Content: Coin-pendant, 2 oriental mounts reused as pendants, 4 beads (BP VI), 2 oval brooches (Berdal type), penannular brooch, 2 disc brooches, silver-embroidered silk band, Islamic coin (frg, gilded), iron staff, knife, scissors, tweezers (frg), whetstone, purse (remains), chest (remains), ceramic vessel, bucket (remains), iron mount.

The coin-pendant, the oriental mounts and one bead were lying in a row beside one of the disc brooches.

-Anglo-Viking, York, Sitric, c.921–7. 19mm. H- (30°/150°). Broken hole.

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:319–20; Callmer 1977:169; Jansson 1985:129; Price 2002:140–1.

79. Adelsö parish, Björkö 847. Excavated in 1873–95.

Inhumation with coffin, orientated east/west, without external marking. Hemlanden cemetery (1B).

Tpq: c.900

Phase: IB

Content: 2 coin-pendants, 35 beads (BP IXA), 2 oval brooches (P51), penannular brooch, disc brooch, 2 beads, scissors, key, piece of flint, crampon, chest (remains), iron fragments.

The coin-pendants and the beads were clustered in the centre of the grave, at some distance below the three brooches. They were probably resting on the abdomen.

-Nordic, Malmer KG7, c.900–50. 1.03g, 17mm, Lr1A (330°/135°).

-Nordic, Malmer KG7, c.900–50. 0.7g, 18mm, Lr1A (0°/90°).



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:321–2; Malmer 1966:nr93; Callmer 1977:nr273; Jansson 1985:128.

80. Adelsö parish, Björkö 860B. Excavated in 1873–95.

Chamber grave without external marking. Hemlanden cemetery (1C).

Tpq: c.850

Phase: IB

Content: 4 coin-pendants, oriental mount reused as pendant, circular pendant with central hole, 2 knot-shaped pendants (Callmer type D), mask (Callmer type D), fire-steel pendant (frg, Callmer type C), 4 bead-pendants, 92 beads (BP XII), 4 oval brooches (P51, P52), penannular brooch, trefoil brooch, bow-brooch, arm-ring, 2 knives, knife sheath, 2 scissors, tweezers, pin (from brooch?), 2 awls, whetstone, playing-piece, chest (remains), ceramic sherds, ring. The coin-pendants, the pendants and most of the beads formed a festoon between the two oval brooches. It uncertain whether there were one or two strands.

-Nordic, Malmer KG5, c.850. 0.88g, 20mm. Lr2bA (0°/270°). Damaged edge.



-Nordic, Malmer KG5, c.850. 0.71g, 19mm. Lr1A (0°/90°).



-Nordic, Malmer KG5, c.850. 0.23g. Lr- (15°/195°). Broken loop.



-Islamic, Abbasid, [749–833]. 0.39g. Pendant?

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:335–7; Malmer 1966:nr93; Callmer 1977:nr275; Jansson 1985:128.

81. Adelsö parish, Björkö 943. Excavated in 1881. Chamber grave. Hemlanden cemetery (1A).

Tpq: 907/8

Phase: IB

Content: 2 coin-pendants, 3 oriental mounts reused as pendants, 2 circular pendants with filigree decoration, Thor's hammer, amber pendant, slate pendant, lead-piece in silver net, glass-piece (from a beaker) in silver net, 21 beads (BP XII), 2 oval brooches (P52), 2 disc brooches, penannular brooch, silver ribbons, purse, Islamic coin (frg), 2 knives, 2 scissors, needle case, awl, whetstone, 4 weights, 2 purses (remains), 4 crampons, wooden bowl (remains), c.10 amber pieces, iron fragments.

The two coin-pendants, the two silver nets and one of the oriental mounts were clustered below one of the oval brooches. The other pendants, including the Thor's hammer, were placed elsewhere in the grave. The position of four pendants is unknown.

-Nordic, Malmer KG5, c.850. 0.96g, 19mm. Lr5B (0°/270°).



-Nordic, Malmer KG7, c.900–50. 0.55g, 17mm, Lr2bA (0°/0°).



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:366–8; Malmer 1966:nr93; Callmer 1977:nr277; Duczko 1985:35; Jansson 1985:129.

82. Adelsö parish, Björkö 954. Excavated in 1881.

Chamber grave without external marking. Hemlanden cemetery (1A).

Tpq: c.850

Phase: IB

Content: 3 coin-pendants, oriental mount reused as pendant, shield-shaped pendant, 2 Thor's hammers, miniature axe, 37 beads (BP XII), 2 oval brooches (P51), 2 penannular brooches, trefoil brooch, knife, key, awl, piece of flint, whetstone, iron ring, iron staple (?), horse crampon, nail.

Two rows of beads were lying in a festoon between the two oval brooches. The coin-pendants, the shield-shaped pendant, the oriental mount and a few beads were found right above them. The other pendants,

including the Thor's hammers, were placed elsewhere in the grave.

-Nordic, Malmer KG5, c.850. 0.68g, 19mm. H4 (0°/90°). Edge damage near the hole.

-Islamic, Abbasid, Madinat al-Salam, 771/2. 2.54g, 23mm. Lr2bA (180°/0°).



-Islamic, Abbasid, Madinat al-Salam, 803/4. 2.83g, 23mm. H1 (285°/195°).

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:377–9; Malmer 1966:nr93; Callmer 1977:nr280; Jansson 1985:128.

83. Adelsö parish, Björkö 963. Excavated in 1881.

Chamber grave without external marking. Hemlanden cemetery (1A).

Tpq: c.921

Phase: IB

Content: 3 coin-pendants, shield-shaped pendant, sieve-shaped pendant, 32 beads (BP IXA), 2 oval brooches (P51), 2 disc brooches, silver ribbon, knife, scissors, tweezers, ear-spoon, needle, comb (fig), glass linen-smoother, weight, chest (remains), ring, piece of amber, iron fragment.

The beads and the pendants were clustered between the two oval brooches. Several rows of ornaments are distinguishable.

-Anglo-Viking, York, St Peter type, c.921–7. 0.79g, 20mm. Lr- (195°/165°). Bronze loop, corroded.



-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 0.71g, 18mm. H1 (270°/0°). Nicks, damaged edge. Lost loop?



-Nordic, Malmer KG5, c.850. 0.76g, 19mm. Lr2bA (285°/0°). Damaged edge.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:386–8; Malmer 1966:nr93; Callmer 1977:nr283; Jansson 1985:128; Ambrosiani 2006; Garipzanov 2008:78–9, nr60.

84. Adelsö parish, Björkö 967. Excavated in 1881.

Chamber grave without external marking. Hemlanden cemetery (1A).

Tpq: 901

Phase: IB

Content: 3 coin-pendants, circular pendant (Callmer type A1), pierced smooth stone, 35 beads (BP IXB), 2 oval brooches (P51), 2 disc brooches, silver band, 2 knives, scissors, tweezers, key? (frg), needle case, weight, bucket (remains), chest (remains).

The pendants, the beads and the coins were lying beside one of the oval brooches, in the chest area.

-Islamic, Umayyad, Wasit, 742/3. 2.81g, 24mm. Lr2bA (210°/330°). Gilded



-English, Wessex, Edward the Elder, 901–24. 1.45g, 19mm. Lr1A (165°/180°).



-Anglo-Viking, York?, c.900–30. 0.74g, 19mm. H1 (90°/345°). Damaged.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:393–4; Callmer 1977:nr285; Jansson 1985:127.

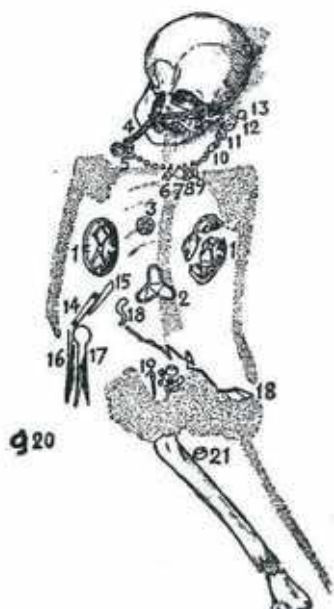
85. Adelsö parish, Björkö 968. Excavated in 1881. Chamber grave without external marking. Hemlanden cemetery (1A).

Tpq: c.900

Phase: IB

Content: 2 coin-pendants, equal-armed cross, shield-shaped pendant, Valkyrie, miniature chair, circular pendant (Callmer type A3), finger-ring, bead-pendant, 39 beads (BP IX/X), silver ribbon, 2 oval brooches (P51), disc brooch, trefoil brooch, finger-ring, 3 Islamic coins (frg), knife, scissors, iron chain with key, needle case, needle, 2 weights, purse, smooth stones.

All but one bead, the pendants and one of the coin-pendants were found in connection with the skull, still in a necklace shape. The position of the other coin-pendant is unknown.



-Nordic, Malmer KG5, c.850. 0.74g, 20mm. H1 (0°/0°).

-Nordic, Malmer KG7, c.900–50. 0.43g, 19mm. H1 (165°/285°).

Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:394–6; Malmer 1966:nr93; Callmer 1977:nr286; Jansson 1985:128.

86. Adelsö parish, Björkö 978. Excavated in 1881.

Inhumation with coffin, orientated east/west, without external marking. Hemlanden cemetery (1A).

Tpq: c.822

Phase: IB

Content: Coin-pendant, bronze pendant (frg), 62 beads (BP IXB), 2 oval brooches (P52), equal-armed brooch, 2 knives, scissors, tweezers, needle, comb, bronze chain (frg), iron piece.

The beads and the pendants were clustered around one of the oval brooches, between the chest and the waist.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 1.23g, 17mm. Lr2bA (45°/225°). Gilded, refilled hole.



Inv nr: SHM 32298; KMK 101937

Ref: SML 4 Up:4; Arbman 1943:404–6; Callmer 1977:nr289; Jansson 1985:129; Ambrosiani 2006; Garipzanov 2008:79, nr61.

87. Adelsö parish, Björkö Seton VI. Excavated in 1827.

Cremation covered by a mound with stone kerb. Hemlanden cemetery.

Tpq: c.822

Phase: IB

Content: Coin-pendant, 2 bowl-shaped pendants with filigree decoration, Oriental mount reused as pendant, 58 beads, oval brooch (P51, frg), penannular brooch, sword, spearhead, arrowhead, knife, whetstone, 3 ceramic vessels, bronze spiral, 2 bronze lumps, bronze rod, rivets, nails.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. Lr2bA (180°/0°).

Inv nr: SHM 474

Ref: SML 4 Up:4; Arbman 1943:XXV; Selling 1945:46–51, 102–4; Duczko 1985:44–7; Ambrosiani 2006; Garipzanov 2008:78, nr55.

88. Adelsö parish, Hovgården 9. Excavated in 1916.

Cremation with urn covered by an irregularly circular mound (4.15x4.8m).

Tpq: c.825

Phase: IB

Content: 2 coin-pendants, bronze mount reused as pendant, 5 bead-pendants, c.45 beads (BP VIII), 3 bronze spirals, 2 ceramic vessels (frg), 2 bronze rings, iron fragments, rivets, nails.

All the artefacts, including the coin-pendants, were scattered in the cremation layer.

-Nordic, Malmer KG3, c.825. 18mm. H1 (180°/0°). Damaged edge, traces of loop.

-Nordic, Malmer KG3, c.825. 20mm. Lr- (270°/255°). Broken loop.

Inv nr: SHM 15726

Ref: SML 4 Up:36; Rydh 1917:92; Rydh 1936:78–80; Malmer 1966:nr100 ; Callmer 1977:169.

89. Adelsö parish, Kunsta 6. Excavated in 1926.

Cremation with urn covered by an irregularly circular mound (6.8x7.5m) with remains of a stone kerb and grave orb in the centre.

Tpq: 776/7

Phase: IA

Content: Coin-pendant, 23 beads, belt buckle (frg), comb (frg), chain (frg), ceramic vessels (Tating ware, frg), bronze rings, bronze fragments, iron fragments, flint core, rivets, nails.

-Islamic, Arab-Sasanian, Tabaristan, 776/7. 0.99g, 18mm. H1 (45°/90°), H4 (225°/270°).



Inv nr: SHM 18357

Ref: SML 4 Up:40; Rydh 1936:38; Arbman 1937:89.

90. Alsike parish, Tuna. Discovered in 1893–4.

Objects deriving from one or several (boat?) graves.

Tpq: 784/5

Phase: IA

Content: 9 coin-pendants, 3 bronze pendants, 84 beads (BP II), 2 oval brooches (type?), penannular brooch, disc-on-bow brooch, bow brooch (frg), belt mount, arm-ring, shield boss, 9 arrowheads, scissors (frg), awl?, 2 combs, 14 playing pieces, 2 bronze chains, 2 iron hooks, chest (remains), bucket (remains), bronze fragments, iron ring, iron fragments, elk horn (frg), horse equipment, rivets, nails.

-Islamic, Umayyad, Sabur, 708/9. 2.42g. Fragment, pendant?

-Islamic, Umayyad, [c.708–17]. 1.52g. Ls1A (255°/105°). Damaged.



-Islamic, Umayyad, Wasit, 745/6. 3.12g, 24mm. Lr1A (150°/90°). Two rivets.



-Islamic, Abbasid, al-Mohammedia, 765/6. 3.36g, 26mm. Ls1B (270°/180°).



-Islamic, Abbasid, al-Mohammedia, 766/7. 2.44g, 26mm. H1 (285°/330°). Lost loop?



-Islamic, Abbasid, al-Mohammedia, 769/70. 1.69g, 25mm. Lr1A (285°/165°). Damaged.



-Islamic, Abbasid, Madinat al-Salam, 770/1. 2.88g, 24mm. Lr1A (315°/90°). Two rivets.



-Islamic, Abbasid, Madinat al-Salam, 779/80. 2.73g, 23mm. Lr1B (270°/270°). Two rivets.



-Islamic, Abbasid, Arminiya, 784/5. 2.35g, 25mm. Lr1A (75°/240°).



Inv nr: SHM 9404, 9818

Ref: SML 4 Up:54A; Arne 1934:20-4; Callmer 1977:168.

91. Bondkyrka parish, Sunnersta A13. Excavated in the 1970s.

Cremation covered by a rounded stone setting (4x3.4 m) with kerb.

Tpq: 924

Phase: IB?

Content: 2 coin-pendants, 3 beads, disc brooch, needle, wedge, comb (frg), crampon, ceramic sherds, silver wire, bronze fragment, bronze plate, iron fragments, piece of bread (?), nuts, rivet.

Most of the artefacts, including the coin-pendants, were scattered in the cremation layer.

-Anglo-Viking, York, St Peter type, c.921-7. Lr2bA (0°/180°).

-English, York, Æthelstan, Building type, 924-39. Pendant?

Inv nr: UMF

Ref: -

92. Ekerö parish, Helgö 12. Excavated in 1978.

Cremation with urn covered by a circular stone setting (6.5m in diam).

Tpq: c.825

Phase: IA?

Osteology: Adultus

Content: Coin-pendant, shield-shaped pendant (frg), 12 beads, ring with Thor's hammers (frg), key, needle case (frg), pin (frg), crampon, 3 chains (frg), ceramic

vessel, bronze fragments, iron rods, glass fragment, rivets, nails.

Most of the artefacts, including the coin-pendant, were found in the cremation layer.

-Nordic, Malmer KG3, c.825. 1.19g, 18mm. Lr- (255°/195°)

Inv nr: SHM 30710

Ref: SML 4 Up:154B; Malmer 1986; Melin & Sigvalius 2001:14-8, 70-1.

93. Ekerö parish, Helgö 23. Excavated in 1977.

Cremation with urn covered by a circular stone setting (5m in diam).

Tpq: c.775

Phase: IA?

Osteology: Maturus

Content: 3 coin-pendants, shield-shaped pendant, 117 beads, comb (frg), lump of slag, rivets, nails.

All the artefacts were found in the cremation layer.

-Nordic, Malmer KG2, c.775-800. 0.95g, 19mm. Lr1A (90°/0°). Damaged edge.

-Nordic, Malmer KG2, c.775-800. 0.81g, 20mm. Pendant?

-Islamic, Abbasid, Madinat al-Salam, 774/5. 2.11g, 25mm. Lr1B (225°/90°). Broken loop.



Inv nr: SHM 30710

Ref: SML 4 Up:154A; Hovén 1986:9, 12; Malmer 1986; Melin & Sigvalius 2001:33-5, 70-1.

94. Gamla Uppsala parish, Gamla Uppsala. Excavated in 2012.

Cremation.

Tpq: c.1015

Phase: II-

Osteology: Infans

Content: Coin-pendant, beads, needle.

-German, Sachsenpfennig, c.1015-25. H4 (cross orientated).

Inv nr: -

Ref: Gräslund 2013:115.

95. Gamla Uppsala parish, Prästgården 36. Excavated in 1973.

Inhumation with boat covered by a boat-shaped stone-setting (5.5x1.5m).

Tpq: c.763/4

Phase: IA

Osteology: Female, maturus

Content: 2 coin-pendants, Valkyrie, pendant (frg), silver spiral, silver rings, bronze ring, 60 beads, 2 oval-brooches (P41), equal-armed brooch, knife, knife sheath, needle case, bronze chain, iron handle (wooden vessel), glass fragments, textile remains, rivets, nails.

The beads and the pendants were clustered below the three brooches. The two coin-pendants were found next to each other, but were suspended to two different strings of beads.

-Islamic, Arab-Sasanian, Tabaristan, [711–28]. 1.48g, 20mm. Ls1A (270°/160°). Damaged edge, bronze loop.

-Islamic, Abbasid, al-Rayy, 763/4. 1.76g, 25mm. Lr1A (225°/75°).

Inv nr: UMF dnr 2/73

Ref: SML 4 Up:201; Jansson 1985:212; Nordahl 2001:46–61.

96. Hållnäs parish, Barknåre 4. Excavated in 1981. Cremation with urn covered by a circular stone setting (c.4m in diam) with kerb.

Tpq: c.1029

Phase: II-

Osteology: Male, senilis.

Content: Coin-pendant, 2 beads, knife, needle case (?) (frg), comb, ceramic vessel, rivets, nails.

All the artefacts were found in the cremation layer.

-English, Cnut the Great, Short Cross type, c.1029–35, Lincoln. 0.91g, 18mm. H1 (285°/60°). Pecks.



Inv nr: KMK dnr 38/82

Ref: SML 4 Up:253; Broberg 1990:72–4.

97. Hållnäs parish, Edsättra 6. Excavated in 1932. Inhumation, orientated south-east/north-west, covered by a circular stone-setting (4.5–5m in diam) with kerb.

Tpq: c.1020

Phase: II-

Content: Coin-pendant, 2 beads, nails.

The coin and the beads were lying on the same level, though at some distance from each other.

-Anglo-Scandinavian, imitation 'Quatrefoil type', c.1020. 1.06g, 21mm, H1 (90°/180°). Pecks.



Inv nr: SHM 20275

Ref: SML 4 Up:254; Malmer 1991:29; Malmer 1997:276.

98. Lovö parish, Söderby 13:31. Excavated in 1979. Cremation with urn covered by a circular stone setting (c.3.75m in diam).

Tpq: c.825

Phase: IA?

Content: 2 coin-pendants, c.600 beads, equal-armed brooch, bronze chain, 2 ceramic vessels, iron rings, iron fragments, seeds.

The two coin-pendants and most of the beads were scattered in the cremation layer. A set of c.200 beads was discovered inside the urn, with the second ceramic vessel placed on top of it.

-Nordic, Malmer KG3, c.825. 1.05g. H1 (0°/90°), H1 (105°/345°). Traces of loop, central hole.

-Nordic, Malmer KG3, c.825. 0.65g. Lr- (180°/0°), H1(90°/90°).



Inv nr: SHM 35013; KMK dnr 711-1243-2002

Ref: SML 4 Up:346A; Petré 1986:64, 75–6, 95–6; Elfver 2004.

99. Lovö parish, Söderby RAÄ 16:21. Excavated in 1987.

Cremation with urn covered by a circular mound (c.11m in diam).

Tpq: 814/5

Phase: IA

Osteology: Female?, adultus

Content: 2 coin-pendants, 256 beads, oval brooch (frg), bronze rings (frg), needle? (frg), comb (frg), 4 crampons, ceramic vessel (frg), ceramic sherds, bronze fragments, flint, rivets, nails, cereal grains, hazelnuts.

Almost all the artefacts, including the two coin-pendants, were found in the cremation layer.

-Islamic, Abbasid, Madinat al-Salam, 814/5. 2.51g, 25mm. Lr- (0°/285°). Broken loop, nick.



-Islamic. 0.56g. Lr1A (unknown). Very damaged.



Inv nr: KMK 103233

Ref: SML 4 Up:346B; Petré 1999:31–2, 72–6, 122; Elfver 2004.

100. Lovö parish, Söderby 44. Excavated in 1999–2007.

Cremation with urn covered by an almost circular mound (16x15m). Two burials?

Tpq: c.822

Phase: IA?

Content: Coin-pendant, shield-shaped pendant, 2 rider pendants, 68 beads, 2 rings with Thor's hammers, silver finger-ring, key, comb (frg), crampon, bronze ring, bronze chain, silver fragment, bronze fragments, 2 ceramic vessels, nuts.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. Lr- (180°/0°). Corroded



Inv nr: -

Ref: Petré 2011:72–4.

101. Löt parish, Fånö. Discovered in 1903.

From a cremation grave?

Tpq: 809/10

Phase: I-

Content: Coin-pendant, ornamented plate (frg), sword (frg), needle, whetstone, playing-piece, Islamic bronze vessel (frg).

-Islamic, Abbasid, Balkh, 809/10. 2.35g, 23mm. H4 (0°/240°). Damaged by fire.



Inv nr: SHM 11763

Ref: SML 4 Up:357; Jansson 1988:646.

102. Norrsunda parish, Valsta 18. Excavated in 1992.

Cremation with urn covered by a damaged rectangular stone-setting (c.6.6x4.2m), with stone kerb.

Tpq: -

Phase: -

Content: Coin-pendant, bronze fragment.

-Italian?, Milano. H-. Dispersed?

Inv nr: KMK 104199

Ref: Andersson 2005b

103. Skuttunge parish, Grävsta 7. Excavated in 1930.

Cremation with urn covered by a cairn with stone kerb.

Tpq: 682/3

Phase: IB

Content: Coin-pendant, 2 circular pendants (Callmer type A3), 2 oriental pendants with rosette decoration, 68 beads (BP XI), 2 oval brooches (P51), 2 strap joiners, sword, spearhead, shield boss, comb (frg), ceramic vessel, ceramic sherds, bronze mounts, iron mounts, iron ring (frg), iron fragments, glass fragment, ornamented bone fragments, harness-bow mount, horse crampon.

The coin-pendant was found inside the urn with a few iron fragments, one bead, some ornamented bones and c.20 ceramic sherds.

-Islamic, Arab-Sasanian, 682/3. Lr- (0°/270°). Very damaged, lost?

Inv nr: SHM 19464

Ref: SML 4 Up:565; Linder Welin 1974:26–7; Callmer 1976:177; Callmer 1977:nr192; Jansson 1985:209; Jansson 1988.

104. Skuttunge parish, Grävsta 24. Excavated in 1930.

Cremation with urn covered by a cairn.

Tpq: 718

Phase: IB?

Content: Coin-pendant, 10 beads, oval brooch (frg), penannular brooch (frg), crampon, ceramic sherds, rivet, nail.

-Islamic, Umayyad, [718–49]. Lr- (180°/unknown). Very corroded, broken loop.



Inv nr: SHM 19464

Ref: SML 4 Up:565; Linder Welin 1974:27; Callmer 1976:177.

105. Sollentuna parish, Nytorp 6. Excavated in 1980.

Inhumation with coffin, orientated south/north, covered by a circular stone-setting (3.5m in diam), with stone kerb.

Tpq: 965

Phase: II-

Content: Coin-pendant, 5 beads, knife (?), ear-spoon, key, awl (?), needle case, spoon (?), bronze ring (frg), nails.

The coin-pendant and most of the beads were found somewhat dispersed in the northern part of the grave.

-German, Köln, Kr Otto I/II, 965–83, Dbg 333. 1.21g, 19mm. dH1 (330°/135°). Pecks.



Inv nr: KMK dnr 173/83

Ref: SML 4 Up:576

106. Stavby parish, Kommunalhuset 28. Excavated in 1953–4.

Inhumation with coffin, orientated south-east/north-west, covered by a circular stone-setting (6m in diam).

Tpq: 900

Phase: IIA?

Osteology: Female, adultus.

Content: Coin-pendant, half-moon shaped earring reused as a pendant, circular pendant with filigree decoration, bead-pendant, 12 beads, nails.

All the ornaments were clustered under the chin of the skeleton.

-Islamic, Abbasid, Isbahan, 900. 23mm. Lr1A (270°/unknown). Nick, dispersed.

Inv nr: SHM 24988

Ref: SML 4 Up:635; Lundström 1955.

107. Täby parish, Arninge 4. Excavated in 1981.

Cremation with urn covered by a circular stone-setting (5.5m in diam).

Tpq: 795/6

Phase: -

Osteology: Adultus.

Content: Coin-pendant, knife, needle, crampon, ceramic sherds, bronze fragments, iron fragments, rivets, nails.

Most of the artefacts, including the coin-pendants, were scattered in the cremation layer.

-Islamic, Abbasid, Madinat al-Salam, 795/6. 2.53g, 28mm. H1 (45°/270°). Nicks, damaged, corroded.



Inv nr: KMK 103677

Ref: SML 4 Up:669B

108. Vaksala parish, Eke Äng 4. Excavated in 1957.

Inhumation with coffin, orientated east/west, without external marking.

Tpq: 899/900

Phase: IIA?

Content: Coin-pendant, 5 beads, finger-ring, 2 earrings, silver threads, silver fragments, hazelnut, shell fragment.

The coin-pendant, the beads and the silver fragments were clustered in the centre of the grave, probably in the hip area.

-Islamic, Samanid, Samarkand, 899/900. 2.66g, 25mm. Lr2bB+R1B (75°/0°), H1 (165°/270°).



Inv nr: SHM 25879
Ref: SML 4 Up:755

109. Västland parish, Bolstan 1. Excavated in 1923. Inhumation with coffin, orientated north-east/south-west, covered by a mound of irregular outline (c.6.5m in diam).

Tpq: c.1050

Phase: IIB

Content: Coin-pendant, shield-shaped pendant, loop (pendant?), 6 beads, 2 ring brooches, coin-pendant, knife (frg), needle case, bronze chain (frg), wooden vessel (remains), bucket (remains), iron fragments, leather fragment, nails.

The coin was part of a set of beads and pendants located at the head of the grave, probably in the neck area.

-German, Gittelde, Dbg 1310a, c.1050. 0.49g, 19mm. H4 (285°/unknown). Very damaged.



Inv nr: SHM 17289
Ref: SML 4 Up:801; Hatz, G. 1974:nr271.

110. Västland parish, Bolstan. Discovered in 1934. Destroyed mound.

Tpq: c.1035

Phase: II-

Content: Coin-pendant, 2 beads, arm-ring, finger-ring, knife, needle case.

-English, Harthacnut, Jewel Cross type, c.1035–8, Rochester. 0.95g, 17mm. H4 (225°/45°).



Inv nr: SHM 20703
Ref: SML 4 Up:802; Jonsson, K. 1987:S77.

Västergötland

111. Eggby parish, Sântorp 341. Excavated in 1965–6.

Inhumation, orientated north-east/south-west, without external marking.

Tpq: c.977

Phase: IIA

Content: Coin-pendant, 10 beads, knife, gold ring, 19 gold foils, bronze fragments, iron fragment.

The coin-pendant was lying in the chest area, together with beads and bronze fragments. Most of the gold foils were also scattered in this same area.

-Byzantine, Basil II and Constantine VIII, Grierson class IIA G.17, c.977–89. 2.43g, 23mm. Lr5B (0°/180°). Flattened coin.



Inv nr: KMK dnr 630/68
Ref: Hammarberg et al. 1989:Find.37; Lundström & Theliander 2004:79–90, 270–1; Audy 2016:160.

Västmanland

112. Badelunda parish, Bjurhovda 12. Excavated in 1968.

Cremation covered by a circular stone-setting (2.5m in diam).

Tpq: c.1009

Phase: II-

Content: 2 coin-pendants, iron fragment.

All the artefacts were found in the cremation layer.

-English, Æthelred II, Last Small Cross type, c.1009–17, Shaftesbury. 1.35g, Lr- (unknown). Remains of bronze loop.

-English, Æthelred II, Last Small Cross type, c.1009–17, London. 1.1g, 19mm, H1 (255°/105°). Damaged edge.



Inv nr: VLM 15571:12
Ref: SML 13 Vs:28

113. Badelunda parish, Bjurhovda 19. Excavated in 1968.

Cremation covered by a circular stone-setting (c.3.5m in diam) with stone kerb. Presence of another cremation.

Tpq: 911/2

Phase: -

Content: Coin-pendant, shield-shaped pendant, 2 beads, annular brooch, knife, knife (frg), whetstone, ceramic vessel, silver ring, bronze wire (frg), iron fittings, iron ring, iron fragments.

Most of the artefacts, including the coin-pendant, the shield pendant, the beads and the brooch, were found in the urn.

-Islamic, Samanid, al-Shash, 911/2. 2.33g, 27mm. Lr- (210°/225°). Bronze loop, broken.



Inv nr: VLM 15571:19
Ref: SML 13 Vs:28

114. Badelunda parish, Bjurhovda 49. Excavated in 1968.

Cremation with urn covered by a stone-setting of irregular outline (2x1m).

Tpq: c.991

Phase: II-

Content: 3 coin-pendants, pendant made from a pin-head, bronze bell, 6 beads, knife, ceramic vessel, iron rings, iron fragments.

One of the coin-pendants was found in the urn, together with a bell, a knife, and some iron fragments. The rest of the grave-goods, including the two other coin-pendants, were found in the cremation layer.

-English, Æthelred II, First Hand type, c.979–85, Derby. 1.21g, 19mm. H1 (255°/285°). Pecks.



-English, Æthelred II, Crux type, c.991–7, Huntingdon. 1.48g. H- (unknown).

-English, Æthelred II, Crux type, c.991–7, London. 1.1g, 20mm. H1 (180°/180°).



Inv nr: VLM 15571:49a
Ref: SML 13 Vs:28; Jaanusson 1971.

115. Badelunda parish, Tuna 37. Excavated in 1952–3.

Cremation with urn covered by a circular stone-setting (c.3m in diam), with stone kerb.

Tpq: 962

Phase: II-

Content: Coin-pendant, silver ring, ring-amulet, 13 beads, knife, needle case, comb (frg), whetstone, scale? (frg), crampons, chain (frg), chest (remains), ceramic vessel, bronze fitting, iron fragments, flint.

Most of the artefacts, including the coin-pendant, were scattered in the southern part of the cremation layer.

-German, Köln, Kr Otto I/II, 962–83, Dbg 333. 19mm. Lr- (195°/75°). Bronze loop, corroded.



Inv nr: VLM 28200

Ref: SML 13 Vs:30; Nylén & Schönback 1994b:50–2, 85.

116. Badelunda parish, Tuna 76. Excavated in 1952–3.

Inhumation with boat covered by a boat-shaped stone-setting (7x2.6m).

Tpq: c.1009

Phase: IIA

Content: Coin-pendant, bead, knife, bronze ring, crampon, wood remains.

About 20cm from the teeth.

-English, Æthelred II, Last Small Cross type, c.1009–17, Roschester. 19mm. Lr- (240°/30°).



Inv nr: VLM 28046

Ref: SML 13 Vs:30; Nylén & Schönback 1994b: 127–9.

117. Badelunda parish, Tuna 84. Excavated in 1952–3.

Inhumation with boat covered by a boat-shaped stone-setting (5.8x1.2m).

Tpq: c.991

Phase: IIA

Content: Coin-pendant, shield-shaped pendant, 18 beads, gold foil, penannular brooch, knife, scissors, iron object, iron rings, horse crampon, rivets, nails.

Close to the penannular brooch, a cluster of beads and pendants.

-German, Goslar, Otto-Adelheid, Hatz II, c.991–1040. 19mm. Lr- (270°/270°). Bronze loop, corroded.



Inv nr: VLM 27402

Ref: SML 13 Vs:30; Nylén & Schönback 1994b: 138–49.

118. Badelunda parish, Tuna. Excavated in 1952–3.

Disturbed grave?

Tpq: -

Phase: -

Content: -

-German, Köln, Kr Otto I/II, 962–83, Dbg 333. 19mm. Lr5A (270°/30°).



Inv nr: VLM 27429

Ref: SML 13 Vs:30; Nylén & Schönback 1994b:191.

119. Badelunda parish, Vedby. Excavated in 1934.

Cremation with urn possibly covered by a stone-setting.

Tpq: 779/80

Phase: I-

Content: 5 coin-pendants, moon-shaped pendant (iron), c.100 beads, 2 bronze rings, comb (frg).

-Islamic, Umayyad, Wasit, 738–43. 1.6g. Pendant?

-Islamic, Umayyad, Marw, 749/50. 1.53g. H4 (270°/180°). Damaged by fire.

-Islamic, Abbasid, Medinat al-Salam, 779/80. 2.06g. H1 (0°/165°). Damaged by fire.

-Islamic. 2.72g. Pendant?

-Islamic. Pendant?

Inv nr: SHM 20671

Ref: SML 13 Vs:31; Anderbjörk 1936.

120. Björskog parish, Åsta 2. Excavated in 1962.

Cremation covered by damaged circular stone-setting (c.3 m in diam).

Tpq: 1024

Phase: II-

Content: Coin-pendant, bead, bronze fragments, iron fragments, nails.

The coin-pendant was found outside of the cremation layer, together with a bead.

-German, Speyer, Kr Konrad II, 1024–39, Dbg 838?. L- (unknown). Bronze loop.

Inv nr: VLM 14641

Ref: Hatz, G. 1974:nr154; Simonsson 1969.

121. Dingtuna parish, Östjädra A1. Excavated in 2002.

Cremation under a damaged grave.

Tpq: 719/20

Phase: I?

Osteology: Adultus

Content: Coin-pendant, 12 beads, armband, comb, needle, bronze chain, 2 ceramic vessels (frg), bronze fragment, iron fragments, rivets, nails.

All the artefacts were found in the cremation layer.

-Islamic, Umayyad, Dimashq, 719/20. 3.5g, 26mm. Lr1A (315°/30°). Gilded?



Inv nr: VLM 28461:47

Ref: SML 13 Vs:39; Hallgren 2005.

122. Västerås city, Vedbo 22. Excavated in 1972–3.

Cremation layer covered by an almost circular stone-setting.

Tpq: c.1035

Phase: II-

Content: Coin-pendant, needle case, ceramic sherds.

All the artefacts were found in the cremation layer.

-German, Mainz, Dbg 648c, c.1035–60. Lr1A (unknown/215°). Very worn.



Inv nr: VLM 22753

Ref: SML 13 Vs:209; Wigren 1974.

Ångermanland

123. Styrnäs parish, Djuped. Discovered in 1922.

Chamber grave with horse?

Tpq: c.830

Phase: IB

Content: 2 coin-pendants, 2 bronze mounts (style E-ornamentation), 2 axe-shaped pendants (slate and amber), ringed cyprea, 93 beads (BP VIII), 2 oval brooches (P51), equal-armed brooch, knife (frg).

-Byzantine, Theophilos, Grierson 3 G.15a, 830–42. 6.54g, 25mm. Lr1A (0°/180°), H1 (90°/90°). Bronze coin.

-Byzantine, Theophilos, Grierson 3 G.16, 830–42. 3g, 23mm. Lr- (90°/90°). Bronze coin.

Inv nr: SHM 19926

Ref: SML 2 Ån:65; Callmer 1977:169; Selinge 1977:293–6; Hammarberg et al. 1989:Find 159; Audy 2016:160.

124. Torsåker parish, Salum. Discovered in 1835.

Circular mound.

Tpq: c.820

Phase: IA

Content: 2 coin-pendants, bead-pendant, 19 beads (BP IV), oval brooch (P42), equal-armed brooch, bronze ring.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 1.37g. H1 (135°/45°). Nick.



-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 1.35g. H1 (315°/270°). Nick.



Inv nr: SHM 764

Ref: SML 2 Ån:65; Callmer 1977:168–9; Selinge 1977:293–6; Garipzanov 2008:79, nr62–3.

125. Tåsjö parish, Långön 10. Excavated in 1906.

Inhumation with coffin under a circular mound (4.5m in diam).

Tpq: 1071

Phase: IIB

Content: 5 coin-pendants, belt buckle, knife (frg), iron fragment, woolen cloth (remains).

-German, Köln, Otto III, 983–1002, Häv 74. 1.15g, 18mm. H2 (225°/150°). Pecks.



-German, Saxony, Herman, 1071–86, Dbg 597. 0.48g, 19mm. H2 (225°/300°).



-German? 0.87g, 19mm. H1 (unknown). Very worn, pecks.



-Norwegian, c.1065–80. 0.68g, 17mm. H2 (330°/180°).



-Norwegian, c.1065–80. 0.66g, 18mm. H2 (195°/120°).



Inv nr: SHM 13316

Ref: SML 2 Ån:78; Arne 1926:90–1; Hatz, G. 1974:nr322; Zachrisson, I. 1994; Zachrisson, I. 1997.

126. Överlänäs parish, Holm 5. Excavated in 1949.

Chamber grave covered by an irregularly circular mound (c.9m in diam).

Tpq: 946

Phase: IIA?

Content: 2 coin-pendants, 16 beads, silver bracteate, slate pendant, knife (frg), scissors, tweezers, 2 needle

cases, chest, bucket, hitch, horse equipment, iron fragments, rivets, nails.

The beads and the coin-pendants were clustered near some dental remains, in the southern part of the main chamber. The bracteate was found 15cm away from this cluster.

-Islamic, Abbasid, Madinat al-Salam, 941/2. E (0°/150°). Broken loop.



-Islamic, Hamdanid, 946–67. E (180°/225°). Broken loop.



Inv nr: SHM 24811; LVN 24811:5

Ref: SML 2 Ån:89; Selinge 1977:303, 316–7.

Öland

127. Gårdby parish, Gårdby kyrka. Discovered in 1844.

Inhumation in a cist-grave, orientated north-east/south-west, covered by a stone-setting.

Tpq: 908/9

Phase: IB

Content: Coin-pendant, 3 circular pendants (Callmer type A3), 23 beads (BP IX), 2 oval brooches (P51), equal-armed brooch, disc brooch.

-Islamic, Samanid (?), 908/9 (?). Lr1A (180°/unknown). Dispersed coin, broken loop.

Inv nr: SHM 1304:20–7

Ref: Callmer 1977:nr120; Hagberg et al. 1991:440; Svanberg 2003:266.

128. Hulterstad parish, Triberga 9. Excavated in 2002.

Inhumation in a cist-grave, orientated south-west/north-east, without external marking.

Tpq: c.980

Phase: IIA

Osteology: Perinatal

Content: Coin-pendant, 5 beads, copper spiral, burnt clay, resin fragments.

The coin-pendant was found under the knees, together with a single bead.

-German, Köln imitation, c.980–1000. 1.05g, 20mm. H1 (15°/180°).



Inv nr: KLM 39576

Ref: Petersson 2006

129. Långlöt parish, Folkeslunda 94. Excavated in 1969–73.

Inhumation with coffin, orientated east/west, covered by rectangular stone-packing (2.45x0.7 m).

Tpq: 797/8

Phase: IB

Osteology: Female, senilis

Content: Coin-pendant, 2 circular pendants (Callmer typ A3), 42 beads, 2 oval brooches (P51), trefoil brooch, textile remains.

The coin-pendant, one of the circular pendants and the beads were all found below the chin of the skeleton. The second circular pendant was lying close to the right clavicle.



-Islamic, Abbasid, 797/8. Lr- (unknown). Exhibited.

Inv nr: SHM 29352

Ref: Hagberg et al. 1991:317–8; Svanberg 2003:262.

130. Vickleby parish, Karlevi. Excavated in 1886.

Cremation with urn covered by a mound.

Tpq: 805/6

Phase: IB

Content: 2 coin-pendants, circular pendant with filigree decoration, c.90 beads (BP VIII), silver wire embroidery, bronze fragments, iron fragments, ceramic sherds, nails.

-Islamic, Abbasid, Arran, 803/4. 2.91g, 26mm. Lr2bA (180°/0°). Corroded.



-Islamic, Abbasid, al-Shash, 805/6. 2.99g, 25mm. Lr- (270°/180°). Bronze loop.



Inv nr: SHM 21589

Ref: Arbman 1937:202–3; Callmer 1977:169; Hagberg et al. 1996: 34; Svanberg 2003:264.

131. Vickleby parish, Karlevi 2. Excavated in 1899.

Cremation covered by a circular mound (c.6.5m in diam).

Tpq: -

Phase: IIA

Content: Coin-pendant, circular pendant (very damaged), 31 beads (BP IXB), bronze mount, chain (fig), bronze ring, silver fragments.

-German, Metz or Mainz? Lr1A? (160°/unknown). Dispersed.

Inv nr: SHM 11008

Ref: Hatz, G. 1974:nr425; Callmer 1977:nr117; Hagberg et al. 1996:31; Svanberg 2003:264.

Östergötland

132. Tjärstad parish, Rimforsa 2. Excavated in 1887.

Cremation with urn covered by a damaged mound.

Tpq: c.822

Phase: I-

Content: Coin-pendant, equal-armed brooch, 3 beads, ceramic vessel.

-Carolingian, Louis the Pious, Cross and Temple type, c.822–40. 1.14g, 19mm. Lr1A (150°/0°). Damaged, bronze loop.



Inv nr: SHM 8238

Ref: SML 1 Ög:127; CNS 1.8.16; Garipzanov 2008:79, nr53.

133. Tjärstad parish, Rimforsa 20. Excavated in 1915.

Cremation with urn covered by an oval-shaped mound (8.2x6.4 m).

Tpq: 871

Phase: IA?

Content: Coin-pendant, shield-shaped pendant, circular pendant (clover motif), c.50 beads (BP IV), bronze ornament, iron band.

The coin-pendant was found in the cremation layer.

-English, Alfred, 871–99. 1.34g, 21mm. Pendant? Damaged, central hole.



Inv nr: SHM 15413

Ref: SML 1 Ög:128; CNS 1.8.17; Schnittger 1917; Callmer 1977:168.

134. Vadstena, Galgebergsgärdet I:1. Excavated in 2005.

Cremation with urn, containing two individuals, covered by a rectangular stone-setting (7.5x4.7 m).

Presence of a secondary burial.

Tpq: 880/1

Phase: IB

Osteology: Female, maturus; female, infans.

Content: 4 coin-pendants, crucifix, 2 Insular mounts adapted as pendants, two Scandinavian-style mounts adapted as pendants, 2 bead-pendants, 79 beads, 4 oval brooches, equal-armed brooch, arm-ring, Islamic coin fragment, knife, needle, ceramic sherds, rings, metal fragments, rivets, nails.

Most of the artefacts, including the coin-pendants, were scattered in the cremation layer of the primary burial. It is not possible to determine to which individual the artefacts were related.

-Sasanian, Khosrau II, Teheran, 627. 2.4g, 25mm. Lr2bA (180°/270°). Corroded.



-Islamic, Umayyad, Wasit, 739/40. 2.74g, 25mm. Lr1A (180°/135°). Corroded.



-Islamic, Abbasid, Madinat al-Salam, 802/3. 2.01g, 25mm. Lr- (180°/270°). Corroded, broken loop.



-Islamic, Abbasid, Arminiya, 880/1. 3.32g, 25mm. Lr1A (195°/105°). Corroded.



Inv nr: ÖLM C4325

Ref: Karlsson 2005; Karlsson 2008.

Catalogue II. The hoard catalogue

Denmark

Bornholm

1. Bodilsker parish, Buddegård. Discovered in 1999.

Container: -

Coins: 47

Reused: 13 (27.7%)

Tpq: 945/6

Phase: IB

Other objects: Trefoil mount, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	37	10	13	0

Suspension: 1 riveted, 12 pierced

Inv nr: MS FP 6003

Ref: von Heijne 2004:nr5.31; GR database.

2. Bodilsker parish, Døvregård. Discovered in 1997ff.

Container: Ceramic vessel

Coins: 116

Reused: 4 (3.4%)

Tpq: 1018

Phase: IIA

Other objects: Hack-silver (c.600g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	1	2	0	0
Blank	1	0	0	0
Danish	1	0	0	0
English	21	3	1	0
German	64	10	0	0
Islamic	8	0	2	0
Swedish	5	0	1	0
Total	101	15	4	0

Suspension: 4 pierced

Inv nr: MS FP 5816, 7517

Ref: von Heijne 2004:nr5.33.

3. Bodilsker parish, Kannikegårdet. Discovered in 1995.

Container: -

Coins: 49

Reused: 40 (81.6%)

Tpq: 940/1

Phase: IB

Other objects: Arm-band, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	47	2	40	0

Suspension: 4 looped, 36 pierced

Inv nr: MS FP 6083

Ref: von Heijne 2004:nr5.35; GR database.

4. Ibsker parish, Skovsholm. Discovered in 2013.

Container: -

Coins: 150

Reused: 7 (4.7%)

Tpq: 854/5

Phase: IA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	17	131	4	2
Sasanian	1	1	1	0
Total	18	132	5	2

Suspension: 1 riveted, 6 pierced

Inv nr: MS FP 9133

Ref: Laursen 2013; GR database.

5. Klemensker parish, Simlegård. Discovered in 1939.

Container: -

Coins: 28

Reused: 0 (0%)

Tpq: 1065

Phase: IIB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	1	0	0	0
Danish	0	1	0	0
German	24	2	0	0
Total	25	3	0	0

Suspension: -

Inv nr: MS FP 1989

Ref: von Heijne 2004:nr5.14; Galster 1980:44.

6. Knudsker parish, Smørbygård. Discovered in 1999.

Container: -

Coins: 99

Reused: 0 (0%)

Tpq: 999

Phase: IIA

Other objects: Hack-silver (19g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Bohemian	3	2	0	0
English	3	1	0	0
German	68	21	0	0
Islamic	1	0	0	0
Total	75	24	0	0

Suspension: -

Inv nr: MS FP 7450, 9143

Ref: von Heijne 2004:nr5.77.

7. Nexø parish, Nørremølle. Discovered in 2006.

Container: Ceramic vessel

Coins: 1189

Reused: 17 (1.4%)

Tpq: 1024

Phase: IIA

Other objects: 2 pendants, 2 earrings, 11 beads, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	36	6	0	0
Blank	10	1	0	0
Bohemian	3	5	0	1
Danish	4	0	0	0
English	137	67	4	0
German	719	127	3	1
Irish	2	0	0	0
Islamic	18	54	4	4
Total	929	260	11	6

Suspension: 17 pierced

Inv nr: MS FP 8165, 8283

Ref: Ingvardson 2012.

Falster

8. Nørre Vedby parish, Lymose skov. Discovered in 1942.

Container: -

Coins: 396

Reused: 1 (0.3%)

Tpq: 999

Phase: IIA

Other objects: Hack-silver (60g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	1	0	0	0
Byzantine	0	1	0	0
English	4	5	0	0
German	294	90	1	0
Islamic	0	1	0	0
Total	299	97	1	0

Suspension: 1 pierced

Inv nr: MS FP 2048, 2064, 2087

Ref: von Heijne 2004:nr6.3; Galster 1944b.

Fyn

9. Brahetrolleborg parish, Hågerup. Discovered in 1943.

Container: -

Coins: 1425

Reused: 9 (0.6%)

Tpq: c.1048

Phase: IIA

Other objects: 2 cross-shaped pendants, finger-ring.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	5	0	0	0
Bohemian	2	0	0	0
Danish	99	4	1	0
English	566	29	4	1
German	640	74	3	0
Hungarian	2	0	0	0
Irish	1	0	0	0
Islamic	1	0	0	0
Italian	1	0	0	0
Polish	1	0	0	0
Total	1318	107	8	1

Suspension: 2 looped with ring, 7 pierced
 Inv nr: MS FP 2113, 4663, 5500
 Ref: von Heijne 2004:nr7.39; Galster 1944a; Jensen, J.S. 1992:nr15.

10. Ringe parish, Herringe. Discovered in 2008.

Container: -

Coins: 57 (2 undocumented: Islamic)

Reused: 4 (7.3%)

Tpq: 954/5

Phase: IB

Other objects: Arm-ring, fragment of Thor's hammer, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	49	6	4	0

Suspension: 4 pierced

Inv nr: -

Ref: Hansen 2010.

Jylland

11. Gjerrild parish, Gjerrild klint. Discovered in 1986.

Container: Ceramic vessel

Coins: 74

Reused: 1 (1.4%)

Tpq: 953/4

Phase: IB

Other objects: Hack-silver (c.45g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	1	0	0	0
German	0	1	0	0
Islamic	4	67	1	0
Nordic	0	1	0	0
Total	5	69	1	0

Suspension: 1 pierced

Inv nr: MS FP 4527

Ref: von Heijne 2004:nr9.15; Asingh & Kromann 1990.

12. Grove parish, Pilhus. Discovered in 1939.

Container:

Coins: 81 (7 undocumented: German, Nordic)

Reused: 0 (0%)

Tpq: c.980

Phase IIA

Other objects: Hack-silver (121.5g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
German	3	2	0	0
Islamic	0	8	0	0
Nordic	43	18	0	0
Total	46	28	0	0

Suspension: -

Inv nr: MS FP 1990

Ref: von Heijne 2004:nr10.1; Moesgaard 2015:226–33.

13. Gunderup parish, Lunby Krat. Discovered in 1980.

Container: -

Coins: 237

Reused: 0 (0%)

Tpq: 1098

Phase: IIB

Other objects: 2 gold finger-ring, gold rod, animal head, bead, hack-silver (441g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Danish	81	37	0	0
English	2	1	0	0
German	43	3	0	0
Norwegian	45	24	0	0
Swiss	1	0	0	0
Total	172	65	0	0

Suspension: -

Inv nr: MS FP 4558

Ref: Bendixen 1993; von Heijne 2004:nr8.17.

14. Hammelev parish, Hammelev. Discovered in 1993.

Container: -

Coins: 122

Reused: 1 (0.8%)

Tpq: 942/3

Phase: IB

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	1	110	0	1
Continental	0	11	0	0
Total	1	121	0	1

Suspension: 1 pierced

Inv nr: MS FP 5376

Ref: von Heijne 2004:nr9.18; GR database.

15. Vester Vedsted parish, Danelund. Discovered in 2002.

Container: Leather bag

Coins: 72

Reused: 0 (0%)

Tpq: 1080

Phase: IIB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Danish	64	6	0	0
German	1	0	0	0
Norwegian	1	0	0	0
Total	66	6	0	0

Suspension: -

Inv nr: -

Ref: von Heijne 2004:nr10.14; Moesgaard 2007.

16. Øster Bjerregrav parish, Bjerregrav Mose. Discovered in 1922.

Container: -

Coins: 33 coins

Reused: 0 (0%)

Tpq: 1080

Phase: IIB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Danish	26	7	0	0

Suspension: -

Inv nr: MS FP 1521

Ref: von Heijne 2004:nr9.13; Galster 1934.

Sjælland

17. Boeslunde parish, Grisebjerggård. Discovered in 1993.

Container: -

Coins: 1103

Reused: 31 (2.8%)

Tpq: 942/3

Phase: IB

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	1	16	0	0
Carolingian	33	37	0	0
English	4	10	0	1
Islamic	58	930	9	20

Nordic	3	9	0	0
Sasanian	0	2	0	1
Total	99	1004	9	22

Suspension: 1 looped, 30 pierced

Inv nr: MS FP 4787

Ref: von Heijne 2004:nr4.101; GR database.

18. Boeslunde, Neble. Discovered in 1988ff.

Container: Ceramic vessel

Coins: 161

Reused: 4 (2.5%)

Tpq: 921/2

Phase: IB

Other objects: Bead, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Carolingian	0	2	0	1
English	1	3	0	0
Islamic	16	138	1	2
Nordic	1	0	0	0
Total	18	143	1	3

Suspension: 4 pierced

Inv nr: MS FP 5103

Ref: von Heijne 2004:nr4.103; Kromann 1990; Bendixen et al. 1990; Treadwell 1997.

19. Nørre Herlev parish, Freerslev. Discovered in 1999.

Container: -

Coins: 57

Reused: 0 (0%)

Tpq: 1065

Phase: IIA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Danish	23	24	0	0
English	2	0	0	0
German	5	2	0	0
Unknown	0	1	0	0
Total	30	27	0	0

Suspension: -

Inv nr: MS FP 6251

Ref: von Heijne 2004:nr4.13; Moesgaard 2014.

20. Ramløse parish, Kræmmergården. Discovered in 1994ff.

Container: Bag of organic material.

Coins: 269

Reused: 6 (2.2%)

Tpq: 932

Phase: IB

Other objects: 2 silver arm-rings, 1 gold arm-ring, hack-gold, hack silver (c.830g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	5	0	0
Carolingian	0	2	0	0
Continental	0	1	0	0
English	0	1	0	0
Islamic	19	241	6	0
Total	19	250	6	0

Suspension: 6 pierced

Inv nr: MS FP 5713

Ref: von Heijne 2004:nr4.1.

21. Roskilde, Jørgensbjerg kyrka. Discovered in 1954.

Container: -

Coins: 110

Reused: 3 (2.7%)

Tpq: c.1029

Phase: IIA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	6	2	0	0
Danish	56	11	0	1
English	18	8	2	0
German	3	6	0	0
Total	83	27	2	1

Suspension: 1 looped with ring, 2 pierced

Inv nr: MS FP 2374A

Ref: von Heijne 2004:nr4.66; NNA 1954.

22. Strø parish, Jernedegård. Discovered in 1996–7.

Container: Wooden bucket

Coins: 53

Reused: 2 (3.8%)

Tpq: 921/2

Phase: IB

Other objects: Hack-silver (965g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
English	1	2	0	0
Islamic	43	7	2	0
Total	44	9	2	0

Suspension: 2 pierced

Inv nr: MS FP 6151

Ref: von Heijne 2004:nr4.18; Rispling 2008b.

23. Værløse parish, Værløse kyrka. Discovered in 1929, c.1040.

Container: Ceramic vessel

Coins: 342

Reused: 1 (0.3%)

Tpq: 1060

Phase: IIB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Danish	217	25	0	0
English	29	7	1	0
German	62	1	0	0
Norwegian	1	0	0	0
Total	309	33	1	0

Suspension: -

Inv nr: MS FP 1725, 2157, 2219

Ref: von Heijne 2004:nr4.30.

Germany

Schleswig

24. Schleswig-Flensburg parish, Steinfeld. Discovered in 1945.

Container: -

Coins: 67 (4 undocumented: Nordic)

Reused: 1 (1.6%)

Tpq: c.900

Phase: IB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Nordic	48	15	1	0

Suspension: 1 pierced

Inv nr: ALM 19624

Ref: Wiechmann 1996:nr39

25. Sylt parish, List. Discovered in 1937.

Container: Cow horn

Coins: 763

Reused: 3 (0.4%)

Tpq: c.1000

Phase: IIA

Other objects: Hack-silver (90g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	7	4	0	0
Bohemian	0	1	0	0
Byzantine	1	0	1	0
English	532	107	2	0
German	46	28	0	0
Irish	24	5	0	0
Islamic	0	8	0	0
Total	610	153	3	0

Suspension: 1 looped with ring, 2 pierced

Inv nr: ALM 72, 487, 510, 549, 555, 601, 670

Ref: Wiechmann 1996:nr16.

Iceland

Árnessýsla

26. Flóahreppur parish, Gaulverjabær. Discovered in 1930.

Container: Wooden box

Coins: 360

Reused: 13 (3.6%)

Tpq: 1002

Phase: IIA

Other objects: Hack-silver (0.5g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	1	3	0	0
Bohemian	1	0	0	0
English	172	8	6	0
German	153	7	4	0
Irish	2	0	0	0
Islamic	2	3	1	1
Nordic	5	0	0	0
Swedish	2	1	1	0
Total	338	22	12	1

Suspension: 13 pierced

Inv nr: Þjms 11.010-16

Ref: Eldjárn 1948:Find G.

Norway

Buskerud

27. Hole parish, Stein. Discovered in 1924.

Container: -

Coins: 55

Reused: 0 (0%)

Tpq: c.1023

Phase: IIA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	1	0	0	0
English	16	2	0	0
German	30	3	0	0
Norwegian	3	0	0	0
Total	50	5	0	0

Suspension: -

Inv nr: FC 200

Ref: Skaare 1976:nr39.

Møre og Romsdal

28. Stranda parish, Sløgstad. Discovered in 1947.

Container: -

Coins: 68

Reused: 3 (4.4%)

Tpq: 1002

Phase: IIA

Other objects: Hack-silver (1.4g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	1	0	0	0
Blank	1	0	0	0
English	28	3	0	0
German	31	0	2	0
Islamic	1	2	0	1
Nordic	0	1	0	0
Total	62	6	2	1

Suspension: 3 pierced

Inv nr: B 9818

Ref: SCBI 65-6:nr12; Holst 1948; Skaare 1976:nr127; Khazaei 2001:nr41.

Nordland

29. Bodin parish, Rønnvik. Discovered in 1919.

Container: Birch bark

Coins: 55

Reused: 2 (3.6%)

Tpq: 949/50

Phase: IB

Other objects: Penannular brooch, rings, bars, hack-silver (1,192g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	3	52	0	2

Suspension: 2 pierced

Inv nr: T 2556-65

Ref: Skaare 1976:nr171; Khazaei 2001:nr64.

Rogaland

30. Tysvær parish, Jøsang. Discovered in 1923.

Container: -

Coins: 352

Reused: 3 (0.9%)

Tpq: 1014

Phase: IIA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	8	1	0	0
English	118	67	1	1
German	139	17	1	0
Irish	1	0	0	0
Islamic	0	1	0	0
Total	266	86	2	1

Suspension: 1 looped, 2 pierced

Inv nr: S 4398

Ref: SCBI 65-6:nr17; Skaare 1976:nr91; Khazaei 2001:nr28.

Sør-Trondelag

31. Trondheim parish, Dronningens gate. Discovered in 1950.

Container: Birch bark

Coins: 964

Reused: 30 (3.1%)

Tpq: 1035

Phase: IIA

Other objects: 2 crucifixes, chains, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	35	5	3	1
Bohemian	2	0	0	0
Danish	10	4	0	0
English	296	76	15	4
German	443	69	6	0
Irish	4	0	0	0
Islamic	0	8	0	1
Swedish	9	3	0	0
Total	799	165	24	6

Suspension: 30 pierced

Inv nr: T 16978

Ref: SCBI 65-6:nr25; Skaare 1976:nr147; Khazaei 2001:nr51.

Vestfold

32. Stokke parish, Grimestad. Discovered in 1936-8.

Container: -

Coins: 77

Reused: 12 (15.6%)

Tpq: 921/2

Phase: IB

Other objects: Rings, bars, hack-silver (1684g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	66	11	12	0

Suspension: 1 looped, 10 pierced

Inv nr: FC 368

Ref: Skaare 1976:nr43; Khazaei 2001:nr9.

Sweden

Blekinge

33. Mörrum parish, Norragården. Discovered in 1999.

Container: -

Coins: 139

Reused: 2 (1.4%)

Tpq: 1047

Phase: IIA

Other objects: Hack-silver (16.4g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	1	0	0
Danish	17	17	0	0
English	12	12	0	0
German	46	32	2	0
Hungarian	0	1	0	0
Islamic	0	1	0	0
Total	75	64	2	0

Suspension: 2 pierced

Inv nr: KMK dnr 711-1020-1999

Ref: CNS 4.1.10.

Dalarna

34. Mora parish, Sanda. Discovered in 1977.

Container: Cloth and birch-bark

Coins: 1313

Reused: 15 (1.1%)

Tpq: 1057

Phase: IIA

Other objects: 8 arm-rings, finger-ring, chain with three pendants attached (capsule, ear-spoon, pick), hack-silver (342.3g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	12	0	0	0
Blank	9	0	0	0
Danish	32	0	0	0
English	99	2	1	0
German	1138	15	14	0
Hungarian	1	0	0	0
Irish	1	0	0	0
Islamic	0	1	0	0
Italian	2	0	0	0
Swedish	1	0	0	0
Total	1295	18	15	0

Suspension: 15 pierced

Inv nr: DM 13950

Ref: CNS 16.1.8.

Gotland

35. Akeböck parish, Glammunds I. Discovered in 1986.

Container: Bark box

Coins: 1231

Reused: 30 (2.4%)

Tpq: 1047

Phase: IIA

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	18	3	3	0
Bohemian	1	1	0	0
Byzantine	0	2	0	0
Danish	12	1	0	0
English	180	34	6	1
German	841	99	17	0
Irish	3	1	0	0
Islamic	17	11	1	2
Italian	0	2	0	0
Swedish	5	0	0	0
Total	1077	154	27	3

Suspension: 30 pierced

Inv nr: KMK 101633

Ref: Hammerberg et al. 1989:Find 12.

36. Akeböck parish, Glammunds II. Discovered in 1986.

Container: -

Coins: 746

Reused: 23 (3.1%)

Tpq: 1024

Phase: IIA

Other objects: 2 arm-bands, bronze penannular brooch, finger-ring, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	6	0	0	0
Bohemian	4	0	1	0
Byzantine	1	0	1	0
Danish	1	0	0	0
English	211	24	5	1
German	426	33	11	0
Irish	3	3	0	0
Islamic	3	16	2	1
Italian	1	0	0	0
Swedish	9	5	1	0
Total	665	81	21	2

Suspension: 23 pierced

Inv nr: KMK 101633

Ref: Hammerberg et al. 1989:Find 13.

37. Alskog parish, Bote I. Discovered in 1982.

Container: -

Coins: 100

Reused: 1 (1%)

Tpq: 912/3

Phase: IB

Other objects: gold bracteate, 2 armbands.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	89	11	0	1

Suspension: -

Inv nr: GF C 17467

Ref: -

38. Alskog parish, Bote II. Discovered in 1990.

Container: -

Coins: 72

Reused: 4 (5.6%)

Tpq: 1001

Phase: IIA

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	2	0	0	0
Blank	1	0	0	0
English	13	18	0	0
German	24	4	2	0
Islamic	2	7	0	2
Swedish	0	1	0	0
Total	42	30	2	2

Suspension: 1 looped, 3 pierced
Inv nr: KMK 102042
Ref: Jonsson & Östergren 1991.

39. Alva parish, Binge. Discovered in 1984ff.

Container: -
Coins: 140 (8 undocumented)
Reused: 2 (1.4%)
Tpq: 1075
Phase: IIB
Other objects: Finger-ring, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	1	0	0	0
Blank	2	0	0	0
Danish	3	0	0	0
English	19	3	0	0
German	94	9	2	0
Irish	1	0	0	0
Total	120	12	2	0

Suspension: 2 pierced
Inv nr: KMK 101275, 101376, 101505, 103504
Ref: -

40. Alva parish, Gandarve. Discovered in 1952.

Container: -
Coins: 693
Reused: 19 (2.7%)
Tpq: 1047
Phase: IIA
Other objects: Hack-silver (166.9g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	20	0	0	0
Bohemian	2	0	1	0
Burgundian	1	0	0	0
Danish	8	1	0	0
English	199	13	6	0

German	417	14	11	0
Irish	2	0	0	0
Islamic	5	10	0	1
Swedish	1	0	0	0
Total	655	38	18	1

Suspension: 19 pierced
Inv nr: GF C 9851
Ref: CNS 1.1.9; Hatz, G. 1974:nr263.

41. Alva parish, Rangsarve. Discovered in 1950.

Container: -
Coins: 629
Reused: 18 (2.9%)
Tpq: 953/4
Phase: IB
Other objects: Hack-silver (8.9g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	398	231	13	5

Suspension: 18 pierced
Inv nr: GF C 10013
Ref: CNS 1.1.11.

42. Alva parish, Stumle. Discovered in 1989.

Container: Bronze box
Coins: 1309 (15 undocumented : Danish, English)
Reused: 18 (1.4%)
Tpq: c.1059
Phase: IIB
Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	11	0	0	0
Bohemian	3	0	0	0
Danish	10	0	0	0
English	184	12	6	0
French	1	0	0	0
German	995	47	11	0
Hungarian	9	0	0	0
Irish	2	0	0	0
Islamic	1	11	0	1
Swedish	8	0	0	0
Total	1224	70	17	1

Suspension: 18 pierced
Inv nr: KMK 101844
Ref: Jonsson & Östergren 1990.

43. Ardre parish, Halsgärde. Discovered in 1980ff.

Container: -

Coins: 300

Reused: 4 (1.3%)

Tpq: 1040

Phase: IIA

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	2	1	0	0
Danish	6	2	0	0
English	54	15	2	0
German	165	44	1	0
Irish	2	0	1	0
Islamic	1	8	0	0
Total	230	70	4	0

Suspension: 1 looped, 3 pierced

Inv nr: KMK dnr 711-755-2009

Ref: -

44. Barlingbo parish, Digeråkra. Discovered in 1928.

Container: wooden box

Coins: 1323

Reused: 36 (2.7%)

Tpq: 1002

Phase: IIA

Other objects: Large penannular brooch, hack-silver (651.1g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	5	0	0	0
Blank	5	0	0	0
Bohemian	8	1	1	0
Byzantine	4	1	0	0
Danish	1	0	0	0
English	333	25	1	1
French	1	0	0	0
German	786	35	10	0
Islamic	64	44	19	4
Italian	1	0	0	0
Swedish	9	0	0	0
Total	1217	106	31	5

Suspension: 1 looped, 2 riveted, 33 pierced

Inv nr: SHM 18744

Ref: CNS 1.2.4; Stenberger 1947:nr32; Hatz, G. 1974:nr104; Hammerberg et al. 1989:Find 23.

45. Bunge parish, Hultungs. Discovered in 1980.

Container: -

Coins: 87

Reused: 4 (4.6%)

Tpq: 995

Phase: IIA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
English	49	1	3	0
German	12	0	0	0
Islamic	19	6	1	0
Total	80	7	4	0

Suspension: 4 pierced

Inv nr: KMK 100876, 100984, 101301

Ref: -

46. Burs parish, Häffinds I. Discovered in 1975.

Container: Ceramic vessel

Coins: 1452

Reused: 84 (5.8%)

Tpq: 957/8

Phase: IB

Other objects: 2 spirals (201g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	5	8	0	0
Byzantine	0	1	0	1
Islamic	764	674	51	32
Total	769	683	51	33

Suspension: 1 riveted, 83 pierced

Inv nr: KMK 100150

Ref: CNS 1.2.29; Hammerberg et al. 1989:Find 32.

47. Burs parish, Häffinds II. Discovered in 1984.

Container: Organic material

Coins: 205

Reused: 4 (1.9%)

Tpq: 934/5

Phase: IB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	196	9	3	1

Suspension: 4 pierced

Inv nr: KMK 101274

Ref: Östergren, Brisholm & Rispling 1991.

48. Burs parish, Jugenäs. Discovered in 1929.

Container: -

Coins: 80

Reused: 9 (11.2%)

Tpq: 934/5

Phase: IB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	62	18	8	1

Suspension: 9 pierced

Inv nr: SHM 19277

Ref: CNS 1.2.31; Stenberger 1947:nr72.

49. Buttle parish, Stora Vellinge I. Discovered in 1936.

Container: -

Coins: 2685

Reused: 165 (6.1%)

Tpq: 910/1

Phase: IB

Other objects: Bracelet (98.5g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	2635	50	165	0

Suspension: 11 looped, 11 riveted, 144 pierced

Inv nr: SHM 21612

Ref: CNS 1.2.38; Stenberger 1947:nr83.

50. Buttle parish, Stora Vellinge II. Discovered in 1968, 1971.

Container: Wickerwork basket

Coins: 939

Reused: 51 (5.4%)

Tpq: 955/6

Phase: IB

Other objects: Spirals, twisted rods, hack-silver (c.1694g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	2	5	0	0
Islamic	420	512	27	24
Total	422	517	27	24

Suspension: 2 riveted, 49 pierced

Inv nr: KMK 100238

Ref: CNS 1.2.39; NNA 1970:276-7.

51. Eke parish, Bölske. Discovered in 1935ff.

Container: -

Coins: 138

Reused: 6 (4.3%)

Tpq: 876/7

Phase: IA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	65	73	4	2

Suspension: 6 pierced

Inv nr: SHM 21085; KMK 100500

Ref: CNS 1.3.7; Stenberger 1947:nr96.

52. Eskelhem parish, Unghanse. Discovered in 1922.

Container: -

Coins: 164 (7 undocumented)

Reused: 4 (2.4%)

Tpq: c.1062

Phase: IIB

Other objects: Rod.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	1	0	0	0
Blank	2	0	0	0
Danish	0	0	0	0
English	14	0	1	0
German	140	0	3	0
Total	157	0	4	0

Suspension: 4 pierced

Inv nr: SHM 16978

Ref: CNS 1.3.31; Stenberger 1947:nr132; Hatz, G. 1974:nr305.

53. Eskelhem parish, Övide. Discovered in 2012.

Container: Bronze vessel

Coins: 712

Reused: 16 (2.6%)

Tpq: 1131

Phase: IIB

Other objects: German bracteate, bead, ring, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	5	0	1	0
Bohemian	2	0	0	0
Byzantine	1	2	0	0
Danish	11	4	0	0
English	130	12	8	0
French	1	0	0	0
German	432	82	3	0

Hungarian	3	0	0	0
Irish	0	1	0	0
Islamic	8	8	4	0
Norwegian	0	1	0	0
Roman	1	0	0	0
Swedish	6	2	0	0
Total	600	112	16	0

Suspension: 4 looped, 12 pierced

Inv nr: KMK dnr 431-2358-12

Ref: Langhammer 2013.

54. Etelhem parish, Hemängen. Discovered in 1938–56, 1977–9.

Container: -

Coins: 800

Reused: 29 (3.6%)

Tpq: 1024

Phase: IIA

Other objects: gold cross-shaped pendant, 2 spiral arm-rings, penannular brooch, animal-shaped pendant, 2 rings, hack-silver (544g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	30	3	1	0
Blank	10	1	0	0
Bohemian	1	1	0	0
Byzantine	0	1	0	0
Danish	1	0	0	0
English	216	29	4	0
German	408	54	16	0
Irish	2	0	0	0
Islamic	13	29	3	5
Swedish	1	0	0	0
Total	682	118	24	5

Suspension: 29 pierced

Inv nr: GF C 8919, 10024; KMK 100607

Ref: CNS 1.3.34; Stenberger 1947:nr142, 146; Hatz, G. 1974:nr129, 134, 157; Hammerberg et al. 1989:Find 47.

55. Etelhem parish, Tänglings. Discovered in 1941.

Container: Wooden box

Coins: 318

Reused: 12 (3.8%)

Tpq: 945/6

Phase: IB

Other objects: ring brooch, brooch pin, 2 armlets, finger-ring, hack-silver (551.6g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	3	1	0	0
Islamic	228	86	11	1
Total	231	87	11	1

Suspension: 12 pierced

Inv nr: GF C 9243; SHM 22865

Ref: CNS 1.3.37; Stenberger 1947:nr144, 147.

56. Fole, Stora Tollby. Discovered in 1988.

Container: -

Coins: 155

Reused: 3 (1.9%)

Tpq: 835

Phase: IA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	27	113	1	1
Sasanian	1	14	0	1
Total	28	127	1	2

Suspension: 3 pierced

Inv nr: KMK 102381

Ref: -

57. Fröjel parish, Göstavs. Discovered in 1929, 1980.

Container: -

Coins: 205 (3 undocumented: Islamic)

Reused: 12 (5.9%)

Tpq: 1012/3

Phase: IIA

Other objects: Hack-silver (40.6g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	3	0	0
Islamic	61	137	5	7
Sasanian	0	1	0	0
Total	61	141	5	7

Suspension: 12 pierced

Inv nr: SHM 19090; KMK 100746

Ref: CNS 1.4.30; Stenberger 1947:nr172.

Närke

58. Edsberg parish, Eketorp. Discovered in 1950–7.

Container: -

Coins: 258

Reused: 4 (1.6%)

Tpq: 953/4

Phase: IB

Other objects: 2 neck-rings, 2 finger-rings, 5 rings, 4 tongue-shaped brooches, fragment of a penannular brooch, 2 disc-brooches, gold pendant with cloisonné decoration, 3 pendants with Borre-style ornament, human figure, chair pendant, coiled snake pendant, 2 pendants with filigree decoration, 7 fire-steel pendants, cross-shaped pendant, Thor's hammer, silver plate, fragments of chain, fragment of ear spoon, 24 silver beads, 2 amber beads, 55 glass beads, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
English	1	0	0	0
German	0	1	0	0
Islamic	5	249	3	1
Nordic	1	1	0	0
Total	7	251	3	1

Suspension: 1 looped, 3 pierced

Inv nr: ÖM

Ref: SML 5 Nä:12; Ekelund 1956; Hatz, G. 1974: nr1; Alstertun 1988.

Skåne

59. Baldringe parish, Baldringe gård. Discovered in 1944.

Container: Bronze vessel

Coins: 315

Reused: 9 (2.9%)

Tpq: 983

Phase: IIA

Other objects: Armlet with four pendant rings, 2 beads, hack-silver (550.8g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Byzantine	0	2	0	1
English	1	0	0	0
German	32	9	1	0
Islamic	4	77	2	4
Nordic	160	28	1	0
Unknown	0	2	0	0
Total	197	118	4	5

Suspension: 9 pierced

Inv nr: LUHM 28773; LUHM series

Ref: CNS 3.1.4; Arbman 1946; Hatz, G. 1974: nr17; Hovén 1984; Hammerberg et al. 1989: Find 22.

60. Bomhög parish, Bunkeflo. Discovered in 1973.

Container: -

Coins: 53

Reused: 1 (1.9%)

Tpq: 916/7

Phase: IB

Other objects: Hack-silver (172.2g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	1	0	0
Islamic	1	51	0	1
Total	1	52	0	1

Suspension: 1 pierced

Inv nr: MM

Ref: CNS 3.1.15; Linder Welin 1976.

61. Igelösa parish, Igelösa. Discovered in 1924.

Container: Wooden box

Coins: 2082

Reused: 5 (0.2%)

Tpq: 1003/4

Phase: IIA

Other objects: Fragment of circular ornament.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	97	5	0	0
Carolingian	1	0	0	0
English	1772	15	3	0
German	131	4	0	0
Irish	14	0	0	0
Islamic	12	0	1	0
Nordic	0	1	0	0
Norwegian	1	0	0	0
Swedish	2	0	1	0
Unknown	1	26	0	0
Total	2031	51	5	0

Suspension: 5 pierced

Inv nr: SHM 17532

Ref: Hatz, G. 1974: nr124.

Småland

62. Mönsterås parish, Kåppevik. Discovered in 1960.

Container: -

Coins: 181

Reused: 11 (6.1%)

Tpq: 962

Phase: IB

Other objects: Neck-ring, 6 arm-rings, 2 rings, ear-ring, hack-silver (360g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	4	0	0
German	1	3	0	0
Islamic	34	136	6	5
Nordic	1	2	0	0
Total	36	145	6	5

Suspension: 11 pierced

Inv nr: KLM 28104

Ref: Petersson & Linder Welin 1962; Hatz, G. 1974:nr7.

63. Västra Ed parish, Hellerö. Discovered in 2008.

Container: -

Coins: 52

Reused: 1 (1.9%)

Tpq: 1035

Phase: IIA

Other objects: Armband.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Bohemian	1	0	0	0
Danish	1	0	0	0
English	5	0	0	0
German	41	2	1	0
Islamic	0	1	0	0
Swedish	1	0	0	0
Total	49	3	1	0

Suspension: 1 pierced

Inv nr: KMK 104531

Ref: Palm et al. 2008.

Södermanland

64. Eskilstuna parish, Thuleparken. Discovered in 1977.

Container: Leather purse

Coins: 418

Reused: 3 (0.7%)

Tpq: 1035

Phase: IIA

Other objects: Neck-ring, 3 arm-rings, finger-ring, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	10	0	0	0
Blank	2	2	0	0
Danish	5	1	0	0
English	77	2	0	0
German	298	15	1	0
Islamic	0	4	0	1
Italian	1	0	0	0
Swedish	1	0	1	0
Total	394	24	2	1

Suspension: 3 pierced

Inv nr: ESM

Ref: Jonsson 1981.

65. Salem parish, Lillsved. Discovered in 1936.

Container: Ceramic vessel

Coins: 74

Reused: 11 (14.9%)

Tpq: 969/70

Phase: IB

Other objects: 7 arm-rings, arm-ring with five pendant rings, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	74	0	11	0

Suspension: 1 looped with ring, 11 pierced

Inv nr: SHM 21611

Ref: -

66. Vrena parish, along lake Långhalsen. Discovered in 1946.

Container: Wooden box

Coins: 246

Reused: 21 (8.5%)

Tpq: 862/3

Phase: IA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Carolingian	0	1	0	0
Islamic	186	59	19	2
Total	186	60	19	2

Suspension: 4 looped, 17 pierced

Inv nr: SHM 23603, 26089, 27481

Ref: -

67. Ytterenhörna, Stora Väsby. Discovered in 1924.

Container: -

Coins: 156

Reused: 25 (9.8%)

Tpq: 971/2

Phase: IIA

Other objects: Neck-ring, arm-ring, arm-ring with two pendant rings, ring, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	28	128	13	12

Suspension: 25 pierced

Inv nr: SHM 17529

Ref: -

68. Österhaninge parish, Oppnorrby. Discovered in 1968.

Container: -

Coins: 194 (3 undocumented: Danish)

Reused: 9

Tpq: 1034

Phase: IIA

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	1	0	0	0
Danish	0	0	0	0
English	29	6	2	0
German	142	11	6	0
Islamic	1	1	0	1
Total	173	18	8	1

Suspension: 9 pierced

Inv nr: SHM 28833

Ref: Lundström 1968; Hatz, G. 1974:nr192.

Uppland**69. Adelsö parish, Björkö.** Discovered in 1991.

Container: -

Coins: 21

Reused: 2 (9.5%)

Tpq: 938/9

Phase: IB

Other objects: 7 weights, seal, 2 pieces of amber, 2 beads, bronze fragments.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	1	0	0
Islamic	8	12	2	0
Total	8	13	2	0

Suspension: 2 pierced

Inv nr: SHM 35000

Ref: Rispling 2004.

70. Ekerö parish, Helgö. Discovered in 1976.

Container: -

Coins: 22

Reused: 1 (4.5%)

Tpq: 858/9

Phase: IA

Other objects: 2 silver wires, glass weight, bead.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	3	19	0	1

Suspension: 1 pierced

Inv nr: SHM 30249

Ref: SML 4 Up:153D; Hovén 1986.

71. Estuna parish, Hårnacka. Discovered in 1984.

Container: -

Coins: 185

Reused: 2 (1.1%)

Tpq: 1027

Phase: IIA

Other objects: Arm-ring, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	9	1	0	0
Danish	1	0	0	0
English	75	7	0	0
German	82	2	2	0
Irish	1	0	0	0
Islamic	0	3	0	0
Swedish	4	0	0	0
Total	172	13	2	0

Suspension: 2 pierced

Inv nr: KMK 101227, 101741

Ref: SML 4 Up:176A; Hammerberg et al. 1989:Find 45.

72. Odensala parish, Sundveda. Discovered in 2008.

Container: -

Coins: 482

Reused: 14 (2.9%)

Tpq: 843/4

Phase: IA

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Carolingian	0	1	0	0
Islamic	100	326	9	3
Sasanian	5	50	1	0
Total	105	377	10	3

Suspension: 1 looped, 11 pierced

Inv nr: -

Ref: Rispling 2008; Evanni 2009; Rispling 2012.

73. Vätö parish, Uppveda. Discovered in 1924.

Container: -

Coins: 195 (10 undocumented)

Reused: 9 (4.6%)

Tpq: 1051

Phase: IIA

Other objects: 2 circular pendants, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Danish	5	1	0	0
English	17	2	1	0
German	140	12	3	0
Hungarian	2	0	0	0
Islamic	5	1	5	0
Unknown	0	10	0	0
Total	169	26	9	0

Suspension: 3 riveted, 6 pierced

Inv nr: SHM 17528

Ref: SML 4 Up:806; Hatz, G. 1974:nr289.

Ångermanland

74. Nora parish, Rossvik. Discovered in 1946.

Container: -

Coins: 355

Reused: 2 (0.6%)

Tpq: 1024

Phase: IIA

Other objects: 2 arm-rings, 2 earring, hack-silver (97.46g).

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	7	2	0	0
Blank	1	0	0	0
Danish	6	0	0	0
English	117	11	0	0
French	2	0	0	0

German	197	3	1	0
Irish	2	0	0	0
Islamic	1	0	1	0
Swedish	1	0	0	0
Unknown	4	1	0	0
Total	338	17	2	0

Suspension: 1 looped, 1 pierced

Inv nr: SHM 23695

Ref: SML 2 Ån:43; Hatz, G. 1974:nr161.

75. Styrnäs parish, Djuped. Discovered in 1919.

Container: -

Coins: 1454 (7 undocumented : Islamic)

Reused: 11 (0.7%)

Tpq: 1024

Phase: IIA

Other objects: Pendant, ornament with bird motif, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	17	1	0	0
Blank	38	2	0	0
Bohemian	2	0	0	0
Byzantine	1	0	1	0
English	688	11	5	1
German	654	25	4	0
Hungarian	1	0	0	0
Irish	1	0	0	0
Italian	3	0	0	0
Nordic	1	0	0	0
Swedish	2	0	0	0
Total	1408	39	10	1

Suspension: 11 pierced

Inv nr: SHM 16295

Ref: SML 2 Ån:64; Hatz, G. 1974:nr186; Hammerberg et al. 1989:Find 158; Jonsson, K. 2016.

Öland

76. Alböke parish, Stora Haglunda. Discovered in 1927.

Container: Copper vessel

Coins: 1024 (22 undocumented)

Reused: 35 (3.4%)

Tpq: 1085

Phase: IIB

Other objects: Roman solidus, armband, hack silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	8	0	0	0
Byzantine	1	0	1	0
Danish	10	0	0	0
English	131	4	14	0
German	820	21	19	0
Hungarian	1	0	0	0
Irish	1	0	0	0
Islamic	1	4	1	0
Total	973	29	35	0

Suspension: 3 riveted, 32 pierced

Inv nr: SHM 18287

Ref: Hatz, G. 1974:nr344; Hammerberg et al. 1989:Find 14.

77. Bredsättra parish, Skedstad. Discovered in 2009.

Container: -

Coins: 1089

Reused: 25 (2.3%)

Tpq: c.1029

Phase: IIA

Other objects: Hack silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Anglo-Scandinavian	15	0	2	0
Bohemian	0	1	0	0
Danish	4	1	0	0
English	361	20	8	1
German	673	18	4	0
Indian	1	0	1	0
Irish	7	0	0	0
Islamic	26	12	7	0
Italian	3	0	0	0
Nordic	3	0	0	0
Norwegian	1	0	0	0
Swedish	42	1	2	0
Total	1136	53	24	1

Suspension: 1 pierced with ring, 24 pierced

Inv nr: KMK dnr 711-704-2009

Ref: Jonsson, E. 2013.

78. Hultestad parish, Triberga. Discovered in 1960.

Container: -

Coins: 677

Reused: 64 (9.5%)

Tpq: 951/2

Phase: IB

Other objects: -

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	659	18	62	1
Sasanian	2	0	1	0
Total	661	18	63	1

Suspension: 3 riveted, 61 pierced

Inv nr: KLM 32774

Ref: -

79. Torslunda parish, Björnhovda. Discovered in 2012.

Container: -

Coins: 29

Reused: 0 (0%)

Tpq: 860/1

Phase: IA

Other objects: Hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Islamic	4	25	0	0

Suspension: -

Inv nr: -

Ref: Lindeberg & Rispling 2012.

Östergötland

80. Tingstad parish, Smedby. Discovered in 1968.

Container:

Coins: 552 (2 undocumented)

Reused: 26 (4.7%)

Tpq: 959/60

Phase: IB

Other objects: Arm-ring, ring, hexagonal pendant, shield-shaped pendant, fire-steel pendant, hack-silver.

	Coins		Reused	
	Whole	Frg	Whole	Frg
Blank	0	4	0	0
English	0	1	0	0
Islamic	56	488	8	18
Nordic	0	1	0	0
Total	56	494	8	18

Suspension: 1 looped, 1 pierced with ring, 24 pierced

Inv nr: SHM 28832

Ref: CNS 8.1.15.

Appendix I. Viking-Age jewellery hoards from Scandinavia containing coin-pendants

Denmark

Bornholm

1. Unknown location. Discovered before 1910.

Container: -

Tpq: 913

Phase: IB

Coins: Islamic, 771/2 (Lr1C), Islamic, 901/2 (H1), Islamic, 906/7 (H1), Islamic, 911/2 (H2), Islamic, 911/2 (H1), Islamic, 908–12 (H2), 913–42 (H2).

Other objects: 6 bronze pendants, 9 beads, trefoil brooch.

Inv nr: MS FP 1916

Litt: Brønsdsted 1936:212–3; Kromann 1985:61; von Heijne 2004:nr5.140.

Fyn

2. Harndrup, Harndrup Skov. Discovered in 1866.

Container: Arm-ring

Tpq: Eleventh century

Phase: Post-VA?

Coins: Scandinavian, eleventh century (Lr3B, R2B).

Other objects: Gold arm-ring, two pendants decorated with orant figure.

Inv nr: NM D31–4

Litt: Jensen, J.S. 1992:nr18; von Heijne 2004:nr7.21.

Jylland

3. Vadum, Østerhalne Enge. Discovered in 1887.

Container: unknown

Tpq: 808/9

Phase: IA

Coins: Sasanian, 590–626 (H1), Islamic, 774/5 (Lr1A), Islamic, 775–85 (H1), Islamic, 786/7? (Lr-, H1), Islamic, 799/800? (dH1), Islamic, 801/2 (H1), Islamic (?), Islamic, 808/9 (H1).

Other objects: 42 beads, 2 oval brooches, equal-armed brooch.

Inv nr: MS FP 2343

Litt: Kromann 1985:53; Roesdahl & Kromann 1996; von Heijne 2004:nr8.41; Sindbæk 2011:51.

Norway

Buskerud

4. Øvre Eiker, Hoen. Discovered in 1834.

Container: -

Tpq: 848/9

Phase: IA

Coins: Byzantine, 751–75 (Lr2cA), Byzantine, 843–56 (Lr2cA), Carolingian 818 (Lr2bA), Carolingian 814–22 (Lr2bA), Carolingian, 823 (Lr3B), English, 810 (Lr2bB), Frankish, 816–8 (B), Frankish, 816–8 (Lr3A), Islamic, 778/9 (Ls2cB), Islamic, 796/7 (Ls2cA), Islamic 801/2 (Ls2cA), Islamic 801/2 (Ls2cA), Islamic 804/5, (Ls2cA), Islamic, 806/7 (Ls2bA), Islamic 807/8 (Ls2cA), Islamic, 820/1 (Lr2cA), Islamic, 848/9 (B), Merovingian 582–602 (Ls2cA), Roman, 364–7 (E).

Other objects: 2 gold neck-rings, gold arm-ring, strap-distributor reused as brooch, 7 gold disc-shaped pendants, 5 gold hemispherical bosses, 3 gold miniature strainers, 2 gold spherical pendants, gilded trap-ezoid mount, 2 gold oval settings, 2 gold dome-shaped pendants, gold cloisonné mount, gold link with Greek inscription, gold snake-shaped pendant, 2 gold fragments, 4 gilded fragments, 6 gold beads, 132 beads.

Inv nr: C 719–51, 12210, 13451–4

Litt: Holmboe 1854; Holst 1951; Skaare 1966, 1988; Blackburn 2006; Fuglesang & Wilson 2006; Knirk 2006.

Sweden

Dalsland

5. Färgelanda, Stora Ryk. Discovered in 1936.

Container: Ceramic vessel

Tpq: 909

Phase: IB

Coins: Islamic, 907/8 (Lr-), Islamic, after 909 (Lr4C).

Other objects: 7 (or 8?) circular pendants with filigree decoration, 2 western mounts reused as pendants, 2 pendants with openwork ornament, circular pendant with Jelling animal, circular pendant with geometric ornament, fire-steel pendant, 78 beads, trefoil brooch, silver chain, silver ring, silver spoon.

Inv nr: SHM 21668

Litt: Arbman 1937; Callmer 1989:23; Ragnesten 2000; Odebäck 2016

Gotland

6. Fole, Stora Tollby. Discovered in 1878.

Container: -

Tpq: -

Phase: IB

Coins: Roman, 141–61 (H1, R1A), Roman 161–80 (H1, R1A?).

Other objects: 2 gold bracteates with filigree decoration, 3 gold bracteates with animal motif, gold pendant with cross motif.

Inv nr: SHM 6130, 6142

Litt: Stenberger 1947:nr161; Lind 1981:nr36; Gaimster 1998:nr22.

7. Havdhem, Hejslunds. Discovered in 1882.

Container: -

Container: Copper vessel

Tpq: c.1000

Phase: IIB

Coins: Byzantine imitation, c.1000 (Lr-), Islamic, 933/4 (Lr3A), Islamic, 907/8 (Lr3B), Islamic, 900 (Ls3B).

Other objects: Armband, arm-ring, gold finger-ring, 3 silver finger-rings, 7 rock-crystal pendants, silver pendant, 17 beads, fragments of silver wire.

Inv nr: SHM 6996

Litt: Stenberger 1947:nr256; Hovén & Malmer 1980; Hammarberg et al. 1989; Androshchuk 2016.

Gästrikland

8. Valbo, Allmänninge. Discovered in 1836.

Container: copper vessel?

Tpq: c.1083

Phase: IIB

Coins: Byzantine, 976–1025 (Lr-), Islamic, 709/10 (Lr-), Islamic, 936/7 (Lr-), Islamic, 921/2 (Lr-), Islamic (Lr-), Islamic (Lr-), Germany, 1031–51 (Lr-),

English, 987–1016 (Lr-), English, 987–1016 (Lr-), English, 1016–35 (Lr-), English, 1066–87 (Lr-), English, 1066–87 (Lr-), Swedish, c.995–1020 (Lr-).

Other objects: 4 disc brooches with filigree decoration, annular brooch, neck-ring, 3 armbands, finger-ring, 4 circular pendants, 3 hemispherical pendants, lunula pendant, crucifix, cross-shaped pendant, chain with dragon head, chain with round capsule, 17 silver beads.

Inv nr: SHM 729

Litt: Hatz, G. 1974:nr189; Duczko 1987; Wiséhn 1987.

Södermanland

9. Huddinge, Vårby. Discovered in 1871.

Container: -

Tpq: 937/8

Phase: IB

Coins: Islamic, 916/7 (Lr2bA), Islamic, 937/8 (Lr2bB), Islamic imitation, c.930 (Lr2bA), Islamic imitation, c.930 (Lr2bA), Islamic imitation, c.930 (Lr2bB), Islamic imitation, c.930 (Lr2bA).

Other objects: 2 penannular brooches, gilded disc brooch, 19 gilded square-shaped oriental mounts, 9 gilded pendants with openwork ornament, 5 gilded oriental mounts reused as pendants, 41 silver beads.

Inv nr: SHM 4516

Litt: Stenberger 1959; Arbman 1962:162–3; Wilson and Klindt-Jensen 1966:93; Graham-Campbell 1980: 47; Rispling 1987; Jansson 1992, 1996:49; Graham-Campbell 2007; Lamm & Nyman 2006; Kovalev 2015:169–70.

10. Sorunda, Södra Lövtorp. Discovered in the 1930s.

Container: -

Tpq: 926/7

Phase: IB

Coins: Islamic, 707/8 (Lr2bA), Islamic, 727/8 (Lr2bA), Islamic, 778/9 (Lr1A), Islamic, 900/1 (Lr2bA), Islamic, 908/9 (Lr2cA), Islamic, 915/6 (Lr1A), Islamic, 926/7 (Lr2cA).

Other objects: Animal-head pendant, lunula pendant, circular pendant with openwork ornament.

Inv nr: SHM 23846, 26985

Litt: -

Appendix II. Viking-Age coin chains from Scandinavia combining two coins or more

Denmark

Bornholm

1. Bornholms Öster, Store Frigård. Discovered in 1928.

Context: Mixed hoard

Tpq: 1106

Phase: IIB

Inv nr: MS FP 1701

Chain:

Coins: German, eleventh century (Lr3B), German 1046–56 (Lr3B)

Rings: R3A

Fyn

2. Langelands Sønder, Bjerre Banke. Discovered in 1874.

Context: Single find

Tpq: 1106

Phase: IIB

Inv nr: NM II D885

Chain:

Coins: English, c.1023–6 (Lr3B, Lr3B), English, c.1066–8 (Lr3B, Lr3B), German, 1031–63 (Lr3B, Lr3B), German, 1106–23 (Lr3B, Lr3B)

Rings: R1B, R3A, R3B, R3B

3. Sallinge, Hågerup. Discovered in 1943, 1987, 1995.

Context: Mixed hoard

Tpq: 1048

Phase: IIA

Inv nr: MS FP 2113, 4663, 5500

Chain:

Coins: Danish, 1035–42 (Lr3A), English, c.1009–17 (Lr3B)

Rings: R3A

Sjælland

4. Unknown findspot. Discovered before 1996.

Context: Mixed hoard

Tpq: 1058

Phase: IIA

Inv nr: Private collection

Chain:

Coins: English, c.997–1003 (Lr1A), English, c.997–1003 (Lr3A, Lr3A), English, c.997–1003 (Lr3B, H1), English, c.997–1003 (Lr3B, Lr3C, H1)

Rings: R3A, R3A, R3A, R3A

Blekinge

5. Hjortsberga, Johannishus. Discovered in 1965.

Context: Mixed hoard

Tpq: 1120

Phase: IIB

Inv nr: SHM 3491

Chain A:

Coins: Byzantine, c.977–89 (Lr1B, Lr4B), Islamic, 895/6 (Lr1A, Lr1A), Islamic, 901/2 (Lr1A, Lr1A), Islamic, 904/5 (Lr1A, Lr1A), Islamic, 912/3 (Lr1A, Lr1A), Islamic, 934/5 (Lr3B, Lr3B, Lr3B), Islamic, 935/6 (Lr1A, Lr1B), Islamic, 970/1 (Lr1B, Lr1A).

Rings: R1B, R3A, R3A, R3A, R3A, R3A, R3A, R3A.

Chain B:

Coins: English, c.997–1003 (Lr3B, Lr-), English, c.997–1003 (Lr3B, Lr3A), English, c.997–1003 (Lr3A, Lr1B, H1), English, c.997–1003 (Lr3A, Lr3A), English, c.997–1003 (Lr3B, Lr3A, H1, H1), English, c.1023–9 (Lr3B, Lr3B).

Rings: R2B, R2B, R2B, R2B, R2B, R2B.

Chain C:

Coins: Danish, 1047–74 (Lr3A, Lr3B), English, c.1038–40 (Lr3B, Lr3B), German, 1018–64 (Lr3B, Lr3B), German, 1046–56 (Lr3A, Lr3B).

Rings: R1B, R3A, R3A, R3A

Chain D (dispersed):

Coins: Danish, Danish, Danish, Danish

Rings: -

Chain E (dispersed):

Coins: German, German, German

Rings: -

Chain F:

Coins: English, c.991–7 (Lr1B, Lr1C), English, c.1009–17 (Lr3B, Lr3C), German, c.1025–50 (Lr1B, Lr3B).

Rings: R1B, R1B, R1B

Chain G:

Coins: Anglo-Scandinavian (Lr3B, Lr3B), German, 1002–24 (Lr3B, Lr3B), German, c.1025–50 (Lr3B, Lr3B)

Rings: R3A, R3A, R3A

Chain H:

Coins: English, c.1009–17 (Lr3B, Lr3B), English, c.1009–17 (Lr1B, H1), Swedish, c.995–1020 (Lr2aB, Lr2aB).

Rings: R1B, R2B, R2B

Chain I:

Coins: Danish, 1047–74 (Lr3B, Lr3B), Danish, 1047–74 (Lr3B), German, eleventh century (Lr3B, Lr3B).

Rings: R3A, R3A, R3A

Chain J:

Coins: Byzantine, c.977–89 (Lr3B, Lr-), German (985–95).

Rings: R1A, R3A.

Chain K:

Coins: Anglo-Scandinavian, c.1009–20 (Lr3A, Lr3B), German (undocumented).

Rings: R1A

Chain L:

Coins: German, 1014–24 (Lr3A, Lr-), German, 1027–39 (Lr3B, Lr-)

Rings: R1A

Chain M (undocumented):

Coins: Danish, English.

Rings: -

Chain N:

Coins: English, c.997–1003 (Lr5A), English, c.1003–9 (Lr1B, Lr1B).

Rings: R1B

Gotland

6. Hall, Gannarve. Discovered in 1924ff.

Context: Mixed hoard

Tpq: 1120

Phase: IIB

Inv nr: SHM 17747; GF C 5345

Chain:

Coins: Byzantine, 1059–67 (E), Byzantine, 1059–67 (E).

Rings: R2B

7. Lärbro, Slängs. Discovered in 1924ff.

Context: Mixed hoard

Tpq: c.997

Phase: Post-VA

Inv nr: SHM 2821

Chain:

Coins: English, c.997–1003 (Lr3A, Lr3A), English, c.997–1003 (Lr3A, Lr3A).

Rings: R2B

8. Rone, Enggård. Discovered in 1935ff.

Context: Mixed hoard

Tpq: 1085

Phase: IIB

Inv nr: SHM 21026, KMK 100750

Chain:

Coins: Islamic, 897/8 (Lr1B, Lr1A), Islamic, 906/7 (Lr1A, H1).

Rings: R3A, R3A

Skåne

9. Hurva, Äspinge. Discovered in 1880ff.

Context: Mixed hoard

Tpq: 1047

Phase: IIA

Inv nr: SHM 6620, 23833

Chain:

Coins: English, c.997–1003 (Lr3A, Lr3A), English, c.997–1003 (Lr3A, Lr3A), English, c.997–1003 (Lr3A, Lr3A), English, c.997–1003 (Lr3A, Lr3A, H1), English, c.1003–9 (Lr3A, Lr3A), English, c.1009–17 (Lr3A, Lr3A), English, c.1009–17 (Lr3A, Lr3A), English, c.1009–17 (Lr3A, Lr3A).

Rings: R3A, R3A, R3A, R3A, R3A, R3A, R3A, R3A, R3A, R3A.

Öland

10. Föra, Södvik. Discovered in 1840.

Context: Mixed hoard

Tpq: c.1140

Phase: Post-VA

Inv nr: SHM 900

Chain A:

Coins: Danish, 1047–74 (Lr1B, Lr3A), English, c.997–1003 (Lr1B, Lr1B), English, c.997–1003 (Lr1B, Lr1B), English, c.1050–3 (Lr1B, Lr1B)

Rings: R3A, R3A, R3A, R3A.

Chain B:

Coins: English, c.1050–3 (Lr3B, H1), German, 1024–39 (Lr1B, Lr1B).

Rings: R3A.

List I. Loops and rings contained in Catalogues I–II and Appendixes I–II

Reference	Tpq	Phase	Origin	Minting	Suspension type	Comment
Cat.I:1	-	IB	Islamic	712/3	Lr1A	-
Cat.I:7	-	IIA?	German	c.965–85	H1, R3C	-
Cat.I:7	-	IIA?	German	c.965–85	H1, R3C	-
Cat.I:8	-	I-	Islamic	807/8	Lr1B	-
Cat.I:13	-	IIB	Swedish	after 997	Lr1B, R3A	-
Cat.I:15	-	IIB	Bohemian	1037–55	Lr1B, H1	-
Cat.I:28	-	IIB	Danish	1047–74	Lr1B	-
Cat.I:28	-	IIB	English	c.1023–9	Lr1B	-
Cat.I:31	-	x	Byzantine	963–9	Lr1A, R1A	-
Cat.I:32	-	II-	Byzantine	c.977–89	Lr1B, R3A	-
Cat.I:35	-	x	German	x	Lr1B	-
Cat.I:37	-	Post	Byzantine	c.977–89	Lr2bA	-
Cat.I:39	-	IIB	Swedish	after 997	Lr1A	-
Cat.I:39	-	IIB	Swedish	after 997	Lr1A	-
Cat.I:40	-	IIB	English	c.1009–17	Lr1A	-
Cat.I:40	-	IIB	Byzantine	963–9	Lr1B	-
Cat.I:40	-	IIB	English	c.1086–9	Lr3A	-
Cat.I:40	-	IIB	English	c.997–1003	Lr4B	-
Cat.I:44	-	IB	Islamic	915/6	Lr2bA	-
Cat.I:48	-	IIA	English	c.991–7	Lr1A	-
Cat.I:53	-	IA	Islamic	715/6	Lr2bA	-
Cat.I:53	-	IA	Islamic	744/5	Lr2bA	-
Cat.I:55	-	IA	Carolingian	812–814	Lr2bA	Gilded
Cat.I:56	-	IB	Nordic	c.825	Lr2bA	-
Cat.I:56	-	IB	Carolingian	822–40	Lr2bA	-
Cat.I:57	-	IB	Nordic	c.850	Lr1A	-
Cat.I:57	-	IB	Nordic	c.850	Lr1A	-
Cat.I:57	-	IB	Nordic	c.850	Lr1B	-
Cat.I:57	-	IB	Nordic	c.850	Lr2bA	-
Cat.I:59	-	I-	Islamic	786?	Lr2bB	-
Cat.I:61	-	IA	Islamic	793/4	Lr1A	-
Cat.I:62	-	IA	Nordic	c.850	Lr2bA	-
Cat.I:62	-	IA	Nordic	c.850	Lr2bB	-
Cat.I:63	-	IA	Nordic	c.825	Lr2bA	-
Cat.I:65	-	IB	Byzantine	c.838–40	Lr2bA, H1	-
Cat.I:66	-	IA	Nordic	c.850	Lr1B	-

Reference	Tpq	Phase	Origin	Minting	Suspension type	Comment
Cat.I:67	-	IA	Nordic	c.825	Lr2bA	-
Cat.I:67	-	IA	Nordic	c.825	Lr2bA	-
Cat.I:68	-	IB	Islamic	860/1	Lr2bA	-
Cat.I:69	-	IB	Islamic	908/9	Lr1A	-
Cat.I:70	-	IB	Nordic	c.900–50	Lr2bA	-
Cat.I:72	-	IB	Roman	176–80	Lr1A	Gilded
Cat.I:73	-	I-	Nordic	c.825	Lr2bA	-
Cat.I:74	-	IB	Islamic	818/9	Lr2bA	-
Cat.I:75	-	IB	Islamic	911/2	Lr1B	-
Cat.I:75	-	IB	Nordic	c.850	Lr1A	Gilded
Cat.I:76	-	IB	Islamic	c.785–800	Lr1A	-
Cat.I:77	-	IB	Islamic	812–15	Lr2bA	Gilded
Cat.I:79	-	IB	Nordic	c.900–50	Lr1A	-
Cat.I:79	-	IB	Nordic	c.900–50	Lr1A	-
Cat.I:80	-	IB	Nordic	c.850	Lr1A	-
Cat.I:80	-	IB	Nordic	c.850	Lr2bA	-
Cat.I:81	-	IB	Nordic	c.900–950	Lr2bA	-
Cat.I:81	-	IB	Nordic	c.850	Lr5B	-
Cat.I:82	-	IB	Islamic	771/2	Lr2bA	-
Cat.I:83	-	IB	Nordic	c.850	Lr2bA	-
Cat.I:84	-	IB	English	901–24	Lr1A	-
Cat.I:84	-	IB	Islamic	742/3	Lr2bA	Gilded
Cat.I:86	-	IB	Carolingian	822–40	Lr2bA	Gilded
Cat.I:87	-	IB	Carolingian	822–40	Lr2bA	-
Cat.I:90	-	IA	Islamic	745/6	Lr1A	-
Cat.I:90	-	IA	Islamic	784/5	Lr1A	-
Cat.I:90	-	IA	Islamic	779/80	Lr1B	-
Cat.I:90	-	IA	Islamic	769/70	Lr1A	-
Cat.I:90	-	IA	Islamic	770/1	Lr1A	-
Cat.I:90	-	IA	Islamic	708–17	Ls1A	-
Cat.I:90	-	IA	Islamic	765/6	Ls1B	-
Cat.I:91	-	IB	English	c.921–7	Lr2bA	-
Cat.I:93	-	IA	Islamic	774/5	Lr1B	-
Cat.I:93	-	IA	Nordic	c.775–800	Lr1A	-
Cat.I:95	-	IA	Islamic	763/4	Lr1A	-
Cat.I:95	-	IA	Islamic	?	Ls1A	-
Cat.I:99	-	IA	Islamic	x	Lr1A	-
Cat.I:106	-	IIA	Islamic	900/1	Lr1A	-
Cat.I:108	-	IIA	Islamic	899/900	Lr2bB, R1B	-
Cat.I:111	-	IIA	Byzantine	c.977–89	Lr5B	-
Cat.I:118	-	x	German	962–83	Lr5A	-
Cat.I:121	-	I-	Islamic	719/20	Lr1A	Gilded
Cat.I:122	-	II-	German	c.1035–60	Lr1A	-
Cat.I:123	-	IB	Byzantine	830/1–842	Lr1A, H1	-

Reference	Tpq	Phase	Origin	Minting	Suspension type	Comment
Cat.I:127	-	IB	Islamic	908/9	Lr1A	-
Cat.I:130	-	IB	Islamic	803/4	Lr2bA	-
Cat.I:134	-	IB	Islamic	880/1	Lr1A	-
Cat.I:134	-	IB	Islamic	739/40	Lr1A	-
Cat.I:134	-	IB	Sassanid	627	Lr2bA	-
Cat.II:3	940/1	IB	Islamic	906/7	Lr1A	-
Cat.II:3	940/1	IB	Islamic	911/2	Lr1A	-
Cat.II:3	940/1	IB	Islamic	896/7	Lr1A, H1	-
Cat.II:3	940/1	IB	Islamic	x	Lr2bA	-
Cat.II:17	942/3	IB	Islamic	718–50	Lr2bB	-
Cat.II:21	1029	IIA	English	c.997–1003	Lr1B, R3A	-
Cat.II:25	c.1000	IIA	Byzantine	c.977–89	Lr3B, R3B	-
Cat.II:30	1009	IIA	German	962–83	Lr1A	-
Cat.II:32	921/2	IB	Islamic	912/3	Lr2cA	-
Cat.II:38	1001	IIA	Islamic	x	Lr2bA	-
Cat.II:43	1040	IIA	German	c.991–1040	Lr1B	-
Cat.II:49	910/1	IB	Islamic	831/2	Lr1A	-
Cat.II:49	910/1	IB	Islamic	829/30	Lr1A	-
Cat.II:49	910/1	IB	Islamic	835/6	Lr1A	-
Cat.II:49	910/1	IB	Islamic	828–	Lr1A	-
Cat.II:49	910/1	IB	Islamic	723/4	Lr1A	-
Cat.II:49	910/1	IB	Islamic	782/3	Lr1B	-
Cat.II:49	910/1	IB	Islamic	764/5	Lr5B	-
Cat.II:49	910/1	IB	Islamic	740/1	Lr2bA	-
Cat.II:49	910/1	IB	Islamic	708/9	Lr2bA	-
Cat.II:49	910/1	IB	Islamic	713/4	Lr2bA	-
Cat.II:49	910/1	IB	Islamic	862/3	E	-
Cat.II:53	1131	IIB	Islamic	926/7	Lr1A, Lr-	-
Cat.II:53	1131	IIB	Islamic	924–7	Lr1A, Lr-	-
Cat.II:53	1131	IIB	German	11th c.	Lr1B, Lr1B	-
Cat.II:53	1131	IIB	German	1048–65	Lr1B, Lr1B	-
Cat.II:58	953/4	IB	Unknown	x	Lr1A	-
Cat.II:65	969/70	IB	Islamic	917/8	Lr2bA, R3A	-
Cat.II:66	862/3	IA	Islamic	821/2	Lr2bA	Gilded
Cat.II:66	862/3	IA	Islamic	760/1	Lr2bA	Gilded
Cat.II:66	862/3	IA	Islamic	819/20	Lr2bA	Gilded
Cat.II:66	862/3	IA	Islamic	741/2	Lr5A	Gilded
Cat.II:72	843/4	IA	Islamic	713/4	Lr4B	-
Cat.II:74	1024	IIA	Islamic	960/1	Lr1A	-
Cat.II:77	1029	IIA	Indian	c.980–1000	H1, R3A	-
Cat.II:80	959/60	IB	Islamic	899/900	Lr1A	-
Cat.II:80	959/60	IB	Islamic	919/20	H1, R1A	-
App.I:1	913	IB	Islamic	906/7	Lr1A	-
App.I:1	913	IB	Islamic	771/2	Lr1C	-

Reference	Tpq	Phase	Origin	Minting	Suspension type	Comment
App.I:10	926	IB	Islamic	778/9	Lr1A	-
App.I:10	926	IB	Islamic	915/6	Lr1A	-
App.I:10	926	IB	Islamic	707/8	Lr2bA	-
App.I:10	926	IB	Islamic	727/8	Lr2bA	-
App.I:10	926	IB	Islamic	900/1	Lr2bA	-
App.I:10	926	IB	Islamic	908/9	Lr2cA	-
App.I:10	926	IB	Islamic	926/7	Lr2cB	-
App.I:2	-	IIB	Byzantine imitation	11th C.	Lr3B, R2B	Gilded
App.I:3	808	IA	Islamic	775–85	Lr1A	-
App.I:4	848/9	IA	Islamic	848/9	B	Gold
App.I:4	848/9	IA	Frankish	816–8	B	Gold
App.I:4	848/9	IA	Roman	364–7	E	Gold
App.I:4	848/9	IA	Byzantine	751–75	Lr2cA	Gold
App.I:4	848/9	IA	Carolingian	814–22	Lr2bA	Gold
App.I:4	848/9	IA	Carolingian	818	Lr2bA	Gilded
App.I:4	848/9	IA	Byzantine	843–56	Lr2cA	Gold
App.I:4	848/9	IA	Islamic	820/1	Lr2cA	Gold
App.I:4	848/9	IA	Frankish	816–8	Lr3A	Gold
App.I:4	848/9	IA	Carolingian	823	Lr3B	Gilded
App.I:4	848/9	IA	English	810	Lr2bB	Gilded
App.I:4	848/9	IA	Islamic	806/7	Ls2bA	Gilded
App.I:4	848/9	IA	Merovingian	582–602	Ls2cA	Gold
App.I:4	848/9	IA	Islamic	796/7	Ls2cA	Gold
App.I:4	848/9	IA	Islamic	801/2	Ls2cA	Gold
App.I:4	848/9	IA	Islamic	801/2	Ls2cA	Gold
App.I:4	848/9	IA	Islamic	804/5	Ls2cA	Gold
App.I:4	848/9	IA	Islamic	807/8	Ls2cA	Gold
App.I:4	848/9	IA	Islamic	778/9	Ls2cB	Gold
App.I:5	909	IB	Islamic	907/8	Lr4A	-
App.I:6	-	IB	Roman	141–61	H1, R1A	-
App.I:6	-	IB	Roman	161–80	H1, R1A	-
App.I:7	c.977	IIB	Byzantine imitation	11th C.	Lr1A	Gilded
App.I:7	c.977	IIB	Islamic	933/4	Lr3A	Gilded
App.I:7	c.977	IIB	Islamic	907/8	Lr3B	Gilded
App.I:7	c.977	IIB	Islamic	900	Ls3B	Gilded
App.I:9	937	IB	Islamic	c.915	Lr2bA	Gilded
App.I:9	937	IB	Islamic	c.915	Lr2bA	Gilded
App.I:9	937	IB	Islamic	c.915	Lr2bA	Gilded
App.I:9	937	IB	Islamic	916/7	Lr2bA	Gilded
App.I:9	937	IB	Islamic	937/8	Lr2bA	Gilded
App.I:9	937	IB	Islamic	c.915	Lr2bB	Gilded
App.II:1	1106	IIB	German	11th C.	Lr3B, R3A	-
App.II:1	1106	IIB	German	1046–56	Lr3B, R3A	-
App.II:2	1106	IIB	English	1023–6	Lr3B, Lr3B, R3B	-
App.II:2	1106	IIB	English	1066–8	Lr3B, Lr3B, R3A	-

Reference	Tpq	Phase	Origin	Minting	Suspension type	Comment
App.II:2	1106	IIB	German	1031–63	Lr3B, Lr3B, R1B	-
App.II:2	1106	IIB	German	1106–23	Lr3B, Lr3B, R3B	-
App.II:3	1048	IIA	English	c.1009–17	Lr3B, R3A	-
App.II:3	1048	IIA	Danish	c.1035–42	Lr3A, R3A	-
App.II:4	1058	IIA	English	c.997–1003	Lr1A, R3A	-
App.II:4	1058	IIA	English	c.997–1003	Lr3A, Lr3A, R3A	-
App.II:4	1058	IIA	English	c.997–1003	Lr3B, H1, R3A	-
App.II:4	1058	IIA	English	c.997–1003	Lr3B, Lr3C, H1, R3A	-
App.II:5A	1120	IIB	Byzantine	977–89	Lr1B, Lr4B, R3A	-
App.II:5A	1120	IIB	Islamic	935/6	Lr1A, Lr1B, R3A	-
App.II:5A	1120	IIB	Islamic	895/6	Lr1A, Lr1A, R3A	-
App.II:5A	1120	IIB	Islamic	901/2	Lr1A, Lr1A, R3A	-
App.II:5A	1120	IIB	Islamic	904/5	Lr1A, Lr1A, R3A	-
App.II:5A	1120	IIB	Islamic	912/3	Lr1A, Lr1A, R3A	-
App.II:5A	1120	IIB	Islamic	970/1	Lr1B, Lr1A, R3A	-
App.II:5A	1120	IIB	Islamic	934/5	Lr3B, Lr3B, Lr3B, R1B	-
App.II:5B	1120	IIB	English	c.997–1003	Lr3B, Lr-, R2B	-
App.II:5B	1120	IIB	English	c.997–1003	Lr3B, Lr3A, R2B	-
App.II:5B	1120	IIB	English	c.997–1003	Lr3A, Lr1B, H1, R2B	-
App.II:5B	1120	IIB	English	c.1023–9	Lr3B, Lr3B, R2B	-
App.II:5B	1120	IIB	English	c.997–1003	Lr3A, Lr3A, R2B	-
App.II:5B	1120	IIB	English	c.997–1003	Lr3B, Lr3A, H1, H1, R2B	-
App.II:5C	1120	IIB	German	1046–56	Lr3A, Lr3B, R1B	-
App.II:5C	1120	IIB	English	c.1038–40	Lr3B, Lr3B, R3A	-
App.II:5C	1120	IIB	Danish	1047–74	Lr3A, Lr3B, R3A	-
App.II:5C	1120	IIB	German	1018–64	Lr3B, Lr3B, R3A	-
App.II:5F	1120	IIB	English	c.991–7	Lr1B, Lr1C, R1B	-
App.II:5F	1120	IIB	German	c.1025–50	Lr3B, Lr1B, R1B	-
App.II:5F	1120	IIB	English	c.1009–17	Lr3B, Lr3C, R1B	-
App.II:5G	1120	IIB	Anglo-Scandinavian	c.995–1020	Lr3B, Lr3B, R3A	-
App.II:5G	1120	IIB	German	c.1025–50	Lr3B, Lr3B, R3A	-
App.II:5G	1120	IIB	German	1002–24	Lr3B, Lr3B, R3A	-
App.II:5H	1120	IIB	English	c.1009–17	Lr1B, H1, R2B	-
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App.II:5N	1120	IIB	English	c.1003–9	Lr1B, Lr1B, R1B	-
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Reference	Tpq	Phase	Origin	Minting	Suspension type	Comment
App.II:6	1120	IIB	Byzantine	1059–67	E, R2B	Border
App.II:6	1120	IIB	Byzantine	1059–67	E, R2B	Border
App.II:7	12th C.	Post-VA	English	c.997–1003	Lr3A, Lr3A, R2B	Gilded
App.II:7	12th C.	Post-VA	English	c.997–1003	Lr3A, Lr3A, R2B	Gilded
App.II:8	1085	IIB	Islamic	897/8	Lr1B, Lr1A, R3A	-
App.II:8	1085	IIB	Islamic	906/7	Lr1A, H1, R3A	-
App.II:9	1047	IIA	English	c.997–1003	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.997–1003	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.997–1003	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.997–1003	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.997–1003	Lr3A, Lr3A, H1, R3A	-
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App.II:9	1047	IIA	English	c.1009–17	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.1009–17	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.1009–17	Lr3A, Lr3A, R3A	-
App.II:9	1047	IIA	English	c.1009–17	Lr3A, Lr3A, R3A	-
App.II:10A	12th c.	Post-VA	English	c.997–1003	Lr1B, Lr1B, R3A	-
App.II:10A	12th c.	Post-VA	English	c.997–1003	Lr1B, Lr1B, R3A	-
App.II:10A	12th c.	Post-VA	English	c.1050–3	Lr1B, Lr1B, R3A	-
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