

IDENTITY AND ECONOMIC CHANGE IN THE VIKING AGE

AN ANALYSIS OF NINTH AND TENTH CENTURY HOARDS FROM SCANDINAVIA



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Abstract: This project surveys a selection of hoard assemblages in order to scrutinize the changing relationship between economy and identity in Viking Age Scandinavia. A clear picture emerges of a dynamic socio-economic structure in which individuals react in a unique way, yet also follow cultural institutions. The composition of the hoards shows the chronological development of the economic structure and trends in specific item types reveal cultural responses and preferences within an economic context. Hopefully this investigation of the interaction between social and economic change will inspire further study of microeconomic systems in the Viking Age.

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Introduction

“There are two prerequisites for being human: we must each learn to be self-reliant to a high degree and to belong to others, merging our identities in a bewildering variety of social relationships.” –Keith Hart, Professor of Economics and Anthropology

This thesis examines the changing nature of the relationship between exchanged items and how they represent socio-economic structures. In an economy devoid of currency, societies manifest political, social and economic relationships by incorporating gift exchange. These relationships are embodied in the items exchanged between individuals. Exchange is of a deeply personal nature and contracts are upheld by cultural institutions, not written agreements. Each party’s personal standing is a factor in establishing the meaning and value of the exchange, and the items given or received represent each party, their external relationships, and their relationship to each other. The act of exchange is an expression of social structures and represents how people within that society relate to each other.

As the idea of regulated currency is introduced and develops, the social and economic value of an individual gradually diverges. Individuals cease to factor the influence of their own worth, derived from social, political, and economic standing, on the value of items exchanged. Instead, items exchanged are valued through comparison with other items. Value is established through a ranked hierarchy: one of item X is equivalent to four of item Y and so forth. The relationship between the items exchanged and social relationships is modified by the use of coinage and impersonal exchange rather than personal exchange where items

are valued according to the worth of the individuals involved. There is a gradual process in which people and commodities are separated by the developing use of currency.

These processes can be identified in the Viking Age. A shift from personal gift exchange to standardized issue, acceptance and use of coinage can be documented in the ninth and tenth centuries in Scandinavia. This represents a change in the cultural institutions of Scandinavian societies and a fundamental effect on the way people related to culturally valuable items in a world of changing cultural perceptions. Within the community of those who study the Viking Age, there is a consensus that profound cultural change occurred. There is evidence for revision or complete reworking of political, economic and social systems. Debate exists when we attempt to confirm the details of these changes. We must consider the validity of existing evidence and produce working definitions of loaded terms such as culture, society, economy and identity.

Previous studies of the Viking Age in Scandinavia have considered the changes in different spheres, often analyzing one cultural element such as the political structure. This study aims to integrate the analysis of social identity and economic change. The climax of the changing relationship between these two elements occurs in the tenth century in Scandinavia, when technological developments and expanding trade networks brought contact with new cultural systems.

This project aims to examine the shift from personal intimate exchange to impersonal and formal exchange. This shift has an ultimate effect on valuation and personal response towards artifacts in an economic sphere. In a personal exchange, there is an internal valuation process in which participants' knowledge of each other effects the value and meaning of the objects exchanged. In a more formal exchange, objects are more likely to represent an external value. Objects indicating formal exchange include coins and weights as the most obvious examples.

Evidence of this socio-economic change can be found in Scandinavian hoards deposited during the period in question. Hoards are highly relevant evidence because they are a reflection of a personal decision making process and reflect the economic conditions at the time of deposition (Kruse 1988). Unlike grave goods, which may be included in a grave deposit by people other than the deceased individual, hoard components carry direct evidence of human handling and priorities. While reasons for deposition are debatable this project seeks to analyze the handling of the objects, not the values guiding the decision to deposit. Understandably the reasons guiding deposition may affect hoard assemblages but in the Viking Age it is generally regarded that silver and gold objects were largely used in a socio-economic context.

The diversity in hoard composition shows that Scandinavians were highly aware of and curious about other cultures. Their societies had come face to face with novel uncertainties presented by new cultural structures, and in the ninth and tenth centuries their ability to adapt was tested. Hoard deposits are the best way for modern researchers to study that ability.

Therefore, a close study of hoard assemblages and the individual artifacts can shed a new beam of light on the effect of economic change on society and identity. Over time, the role of the individual played a smaller role, as the external value of coinage and currency grew in importance. Specifically, focus on personal ornaments or fragments of ornaments will bring a greater intimacy with individual responses to objects. New understanding of cultural processes and decisions in a changing environment has ramifications not only for Viking Age studies focusing on Scandinavia, but can hopefully give new light to Scandinavian activity in a wide range of regions in this period.

Chapter One: A Change in Cultural Institutions

The pursuit of knowledge can be compared to the process of forging metal. Human beings have always divided, recycled and integrated knowledge, hoping to create something new in the process. In light of this analogy, we can integrate new discussions into the field of Viking studies. While ‘traditional’ analysis of Viking Age metal work and hoards still provides valuable data to the field (Graham-Campbell 1976, Graham-Campbell 1980), the time has come to go beyond listing hoard contents and describing artistic decoration (Hårdh 1996, Samson 1991). Social anthropology and economic anthropology offer many interesting new threads for Viking scholars to weave into their tapestry.

Social anthropology offers many relevant insights to cultural systems in early medieval Scandinavia. When considering the phenomenon of exchange, particularly interesting is the work of Maurice Godelier (1999). Godelier’s emphasis on the social effect of the gift and the act of exchange makes him especially relevant to this project. He bases his discussion in Marcel Mauss’ *‘Essai sur le don’* (1925) yet goes beyond Mauss’ ruminations on the motivation to give. Godelier ponders the relationship of the involved parties before, during, and after the moment of exchange. Mauss sees social rules and structure formed from the personal nature of gift exchange. Mauss turns to obligation when considering social rules, using this as the method which maintains culturally appropriate behavior. Godelier goes past obligation, and instead focuses on things which must be kept out of the cycle of exchange. Things which are deliberately kept out of exchange tend to be related to political power or status, and help reinforce social structures. It is the tension created by things kept and things exchanged which enforces social rules. Also, the motivation to regain equality after the exchange encourages regular exchanges within a society. The continuity of this tension and debt of obligation helps to maintain social structures (Samson 1991a). The time between gifts is an essential factor when determining repayment or the way the exchange shaped the relationship. If there was a period of time between the repayment or the exchange there could be an accumulation of interest. This interest meant that the repayment was bigger and better than the first gift, and this cycle could continue throughout the relationship over time (Samson 1991a).

As the act of a particular exchange gained importance in society, the relationship represented by that exchange would experience a parallel growth in importance (Samson 1991a, 92). Personal ornaments, if part of gift exchange, therefore carried the weight of a social relationship with them. Destruction of socially significant ornaments shows a profound shift of social priorities. This may reflect a fundamental change in the way items are

evaluated within a socio-economic context. If the idea of value shifts from the act of exchange to the commercial value, the items exchanged became the most important element, rather than the act itself. This naturally affects social structure and the way in which individuals participate in the economy.

In a slightly different direction, Douglass C. North (1990, 2005) has closely studied cultural institutions and institutional change in relation to economic anthropology. North takes a much more formalist approach than Godelier or Mauss. He creates patterns of cultural responses in an economic context, yet uses anthropological terminology and cultural analysis to form cultural responses to economic change. North's approach is that social activity is structured to address uncertainty in the environment. Social beliefs lead to the formation of institutional structures, which lead to formal organizations. These beliefs, institutions, and organizations guide change, and one interesting aspect of North's work is that he highlights the human element in economic change, in which the intentionality of human choice influences changes. Organizations guide societal change in accordance with their own priorities. These priorities and options are limited by cultural institutions, and those limitations are guided by the cultural responses to uncertainty in the environment. One of North's main themes is the ability of cultures to respond and adapt to new types of uncertainty (Fig. 1).

North presents five broad cultural responses to novel uncertainty, and like most economists, he evaluates the success of those responses by their effectiveness in keeping society productive. They range from increasing cultural knowledge to radical changes in the founding belief structure of a society. A key moment within North's models is the shift from the physical environment to handling the human environment. This shift is the true test of the effectiveness of a society's institutions and its ability to adapt them to new types of uncertainty. This is especially true within Viking Age Scandinavia, in which exchange was limited to a regional level. As trade expanded, propelled by technological development, society faced new uncertainties within the human world of trade and exchange by meeting new societies. Therefore, how effective were Viking Age cultural institutions at adapting to this new human environment?

North presents a method to determine this effectiveness (Fig. 2). His model of cultural change is interesting, yet lacks a key feedback step. The main weakness of North's model is its lack of flexibility. There must be space allowed for the application of policy and *feedback* to those policies within a community. North's other main weakness is that he highlights informal social rules, yet his overall model does not fully allow for informal social rules to influence cultural response. In a society in which political and economic structures are not

formal or enforced, all of the informal rules, changes, and the *response* to changes must be a crucial element of cultural analysis. An altered version of North's model is presented in Figure 3.

When discussing the impact of Maurice Godelier's *Rationalité et irrationalité en économie* (1972) Kevin Hart acknowledges Godelier's influence in bringing together Lévi-Strauss, Marxism and Mauss (2007). Godelier's discussion of rationality in an economic context nicely incorporates themes from both French and Anglophone socialist approaches, but Hart sees a gap between social structure and social agency (2007). This gap has yet to be filled in analysis of an actively changing society. North's use of structure and cultural institution may be the building blocks to fill Godelier's fissure. 'Essai sur le don' (Mauss 1925) is strongly in support of a socialist approach in opposition to earlier discussions of economic individualism (Hart 2007) and North follows this theme. Mauss and North attempt to view entire social structures-which North links with the idea of institutions-rather than individual decisions. The present thesis attempts to use these theories to shed light on the individual reaction within changing institutions.

It appears that many economists see a gradual progression towards individualistic capitalism, in which an economic structure encourages and rewards individual decisions and action. In the Viking Age, it can be argued that this development towards capitalist exchange did occur. Trade and specialist crafting did increase and there were changes in social, cultural, political and economic structures which correlate to medieval pre-capitalist societies. However, it was not merely a straight progression towards modern capitalism. Throughout the period, the individual gradually became further from deciding how currency was structured and what was valid as means of payment and exchange. Economy became increasingly impersonal as standardized coinage spread. Individuals had much less choice in how material wealth was used and how valuables moved through society since the cultural definition of valuable changed throughout the Viking Age.

This study will attempt to apply the altered model (Fig. 3) to Viking Age Scandinavia. This model will be used to determine the cultural responses to the new influx of silver in the Viking Age, and track cultural responses to new methods of exchange and payment in a socio-economic context. Previous observations drawn on archaeological, literary and historical evidence will be used to create a culturally relevant cycle of response to economic change, and track responses over a chronological period. A key theme will be the role and standing of the individual within exchange, and how that individual affects the meaning of the act of exchange and the valuation process of items. As exchange shifts from personal to

impersonal over time, the role of individual played a more passive role in determining the meaning of the objects involved, while impersonal valuation became more prevalent.

Chapter Two: Historical Context

Recent studies propose that the pre-Viking social structure of southwestern Norway, while using a gift exchange economic structure, had a hierarchical social structure based on military roles. It appears that living spaces were arranged around central farms and court sites which positions socially dependent groups in relatively close living arrangements (Grimm and Stylegar 2004). In the early Viking Period, the economic structure was based on gift exchange. This close social dependency potentially fits closely with Mauss' connection between social structure and exchange, but Mauss' model cannot apply. In the case of southwestern Norway before the onset of the Viking Age, society was based on military hierarchies and not the act of exchange. It was in fact the opposite. Throughout Scandinavia, gift exchange economy was developed in order to uphold the social structure of military loyalties and agreements.

At the end of the Scandinavian Viking Age, economy and society were interacting in a new manner. In many regions, Scandinavian societies were effectively copying the economic structures of continental Europe particularly the Carolingian and English systems. There were political centers in Norway and Denmark, structured around newly created kingdoms. This political restructuring caused changes in economic structure and this is represented by the appearance of politically controlled minted currency. Sweden experienced these developments as well, a few hundred years after its neighbors. With such clear evidence of change in social, political and economic institutions, hoard assemblages best exhibit this transition from gift exchange to monetary economy. Within these assemblages, there are clear artifacts which exemplify how Scandinavian culture responded to economic change and continued to display cultural identity through these changes. By examining first the cultural institutions of Viking Age Scandinavia and then presenting a selection of hoard assemblages, we can unravel the processes of institutional change within society and economy.

Social and Settlement Structures

Within ninth century Scandinavian culture, objects held roles within both social and economic contexts. Gift-exchange coexisted with commercial economic exchange and objects flowed between these contexts. It is generally agreed that political and social hierarchy was regulated by gift exchange in the early Middle Ages (Curta 2006). Lords or political leaders gave gifts in the form of objects or feasts or services, and their group of followers reciprocated with agricultural surplus or services (Curta 2006, Helle 1998,

Ambrosiani 1998). Curta has discussed early medieval gift exchange and the meaning of gifts in a political context (2006). Gift exchange in this context is seen as a form of competition in which aristocrats compete in a subtle battle for status and recognition. One of the tactics would be to commercialize a gift by selling it or exchanging it for wealth which did not carry social obligations such as coin. When coin was used as a measure of wealth instead of unique objects, then the rules of hierarchy within the social structure changed (Curta 2006).

Many think that gift exchange acts as social 'glue' which binds societies together through obligation (Mauss 1925, Godelier 1999) but Curta argues a bit too forcefully that the exchange of gifts was outright warfare for social power (2006, 698). While gift exchange can definitely be used to promote one's social status (see Mauss' discussion of potlatch, 1925), gift exchange in Scandinavia did help bind political regions and social groups. Items would be redistributed according to formal or informal social rules of exchange, or would pass into economic exchange through one of the many localized coastal trading sites (Ulriksen 2004, Myhre 1998). Myhre (1998) has highlighted clear evidence for court sites, complexes in which a large house is surrounded by numerous smaller buildings and cooking areas. These complexes are usually several miles inland from a corresponding coastal trading site. They are presumed to be a chieftain's house surrounded by housing for his men who would centralize as needed. Often boat houses, large grave mounds, and concentrations of farms are found in proximity to these court sites (Myhre 1998, 19). This settlement structure is noted as beginning in the Roman period in Norway and continuing through to modern time, and Grimm and Stylegar (2004) note that site location was based on military and political factors. The relationship between these court sites and the social structure indicates Mauss' assumption that society is based on exchange is in fact incorrect. In the case of southwestern Norway before the onset of the Viking Age, society was structured on military and social hierarchies not the economic structure. The existing economic structure, gift exchange, was developed in order to uphold the social structure of military loyalties and agreements. Myhre (1998) and Grimm and Stylegar's (2004) analyses draw on archaeological investigations in Norway, but note that similar sites can be found in Denmark and Sweden.

John Hines cautions that cultural institutions can limit technological advances which influence institutional change (2004). In the case of the Viking Age, the main technological advance was the sail (Ulriksen 2004). This development propelled Viking aquatic transport and expansion into new territories. The effect of this technology on Scandinavian cultural institutions must be discussed to set the context for economic change throughout the Viking Age.

Hauken (1991) provides evidence for gift exchange functioning within the social hierarchy through a study of Westland cauldron in the late Iron Age in Norway. These distinctive imports are not found in high-status living quarters but in areas with rich agricultural production. By providing a rich imported gift a social superior could gain a debt of obligation from a subordinate, which would be returned with agricultural products, loyalty or both. In Iron Age Scandinavia, Hauken concludes that gift exchange usually functions vertically, between individuals of superior and inferior social standing (1991, 109). Knut Helle's discussion of social structure in the early Viking Age in Norway reveals more complexity in socio-economic structures than previously thought (1998). There is evidence for some regional organizations which may have been kinship-based, but are likely the earliest chiefdoms or petty kingdoms. These regional groups are prevalent in western coastal areas. Also, Helle thinks that Viking expeditions fit best within the context of an aristocratic society and he doubts that kinship would have been solely responsible for forming social structure (1998, 251). When combining these analyses, we can see a ninth century social structure based on aristocratic lords. This structure is only partially organized by kinship relations and likely functioned through gift giving and obligation.

It is also important to note preferences for settlement locations. Usually population clusters were near the coast or had access to water transportation (Helle 1998). In seventh and eighth century Norway, there is evidence for improving methods of using natural resources such as iron. Myhre notes an increase in production in this period not by expanding settlements into marginal areas or a significant population increase but by improved efficiency (Myhre 1998). While some propose an increase in population leading to fragmentation of estates (Helle 1998), there is stronger evidence for wiser use of resources (Myhre 1998). Clearly, there was no shortage of land or natural resources to provide stress within society. This meant that almost all of the population could live in the most preferable areas, which were located on arable land with access to both coastal and inland resources.

Jens Ulriksen's (2004) work on coastal landing sites in Denmark has shown that there were a high number of lower profile regional sites which may have acted as temporary harbors, where local farmers could bring their surplus or a local leader could collect and distribute material. He predicts that this pattern, if studied, would be repeated in Norway and Sweden. In Norway, the well-studied historical text of Ohthere's journey details a similar system along the coast, where many natural harbors allow ships to rest. This pattern of small coastal settlements connected to probable trade routes means that residents would have been highly familiar with each other and this would effectively enforce Mauss' system of obligation to return gifts given. Mauss and Godelier both stress that personal and consistent

interaction with donors enforce the movement of gifts within a society (1925, 1999). Myhre and Ulriksen's work further illustrates a socio-economic structure of the early Viking Age in which chieftains controlled regions of various sizes connected to a chieftain's court site and coastal distribution site (1998, 2004 respectively).

There were corresponding changes in social structures as economic structures changed. These changes placed focus on central nodes better able to accommodate the increasing variety of trade. Material wealth was defined differently as new means of payment emerged and control of trading centres became increasingly important. Increased military action and raiding was propelled by the development of important maritime technology: the sail (Myhre 1998, 27). Myhre theorizes that increased raiding motivated by a need for material wealth and treasure would require political leaders to be away for extended periods of time which was only possible after stabilizing political structure in eighth century Norway (1998, 27). However Myhre fails to acknowledge that it was the changing nature of material culture and the definition of wealth which was truly driving an increase in expeditions, not a changing political structure. As Scandinavians were exposed to other systems of value and economic structures this fueled changes in their own cultural institutions.

Gender Roles in an Economic Context

When addressing identity, it must be recognized that men and women had separate cultural identities. There is evidence for differences in dress, ornaments, social role and economic role in the archaeological and literary records. These gender roles were a key question during the 1991 'Social Approaches to Viking Studies' conference and is an important theme in the resulting publication. Not only were the roles and position of men and women defined but more importantly these roles in a social and economic context were also discussed.

Drawing from a variety of sources, Liv Helga Dommasnes (1991) makes a bold statement about the ability of women to hold a high status in both a social and economic sphere. Women held a semi-public role of influence and authority through their roles in fertility cults and managing the budgets of family property, and possibly producing their own consumer items such as cloth. According to her evidence, women are active players in the economic sphere. Women's status was gained through several channels. A woman could take status from the family's social power but she could also be recognized for successful management of family holdings when she was solely responsible such as when the men were away. These economic achievements were often rewarded by receiving or obtaining special

personal objects (1991, 70). During the later Viking Age, these roles were confined to a more private sphere within the family yet a hierarchy in female status was still recognized and rewarded. Despite recognizing this, Dommasnes does not give clear reasons for these changes within Norse social structure, only observing that these changes are evident in the archaeological and literary records. If her conclusions are set within the context of changing economic structures and contact with new cultures, we can see that the changing role of women was one way that the Norse culture was responding to changes within their economic institutions.

Anne Stalsberg also considers women to be active participants in Viking Age economy (1991). She directly associates the presence of weights and scales with economic activity rather than functioning as a symbolic inclusion and from this involves Viking Age women in commercial economic activity. Stalsberg rightly points out that scales associated with women are not treated the same as other objects with clear feminine associations. Others are quick to assign ownership to anyone except women but Stalsberg frankly promotes a direct ownership and the implication which follows: women were actively involved in economic transactions (1991, 77). There is bountiful evidence showing that women were heavily involved in economic activity. Stalsberg points out female ownership of scales and potential textile production. Throughout the Viking Age, hacksilver becomes increasingly fragmented into smaller pieces which represent use in daily transactions. As women were regulated to a more private role, they were increasingly responsible for daily transactions required for managing family resources. This accounts for their need for scales and access to increasing pieces of hacksilver in circulation.

Here we can connect Dommasnes' conclusion that female status was recognized through personal possessions (1991). Not only were women performing economic transactions on a regular basis, but their personal ornaments and gifts received from their family were used as a way to promote the family influence. Thus, the role and identity of women was thoroughly connected with economic institutions and this role changed as social and economic structures changed throughout the Viking Age. As trade and economic growth marked the Viking Age, women's influence and authority grew as well. Matronly power within the household or family was already an established part of Scandinavian culture, and even though it changed throughout the period it remained a part of the social and economic structure.

The discussion over defining men's social and economic roles is less active, mostly because the stereotypical Viking warrior is still holding the debate hostage. There is an acknowledgement that Scandinavians were peacefully trading (Samson 1991b) and work is

emerging on trade routes and cultural networks, but there exists a huge volume of excavated evidence showing diverse male roles (Samson 1991b). It appears that as material from the last thirty years' of excavation in Scandinavia is slowly being analyzed, this will intensify discussion about the men of Viking Age Scandinavia as traders, farmers, warriors, raiders, nobility and peasants among other roles.

Nature of Economic Activity

Since metal survives relatively well in the archaeological record, there is a large quantity of Viking Age silver and gold in relation to other forms of material culture. While it is true that metal was only one component in the economic system, it gives modern archaeologists a view of Viking Age economy with a rather high resolution. Christoph Kilger and Unn Pedersen, among others, have attempted to place the exchange of silver in a new context than previously done (Kilger 2008a, Kilger 2008b, Pedersen 2008). Pedersen (2008) focuses on the weights and balances excavated at the Viking Age trading centre Kaupang, and Kilger (2008a) discusses the role of Arabic coins and hacksilver in Viking Age social and economic contexts. Both hint at the connection between these contexts and discuss chronological changes and regional differences, but do not go into great detail. Is this because they feel it irrelevant, or because they lack the tools to incorporate this in their analyses? This project hopes to develop a model to facilitate discussions of this nature. Kilger highlights that it is relatively easy to recycle metal, and that central trading places of Viking Age Scandinavia exhibit archaeological evidence for metal working (2008a). He suggests that Arabic coins and hacksilver would have been reshaped, yet does not go into detail about what forms would have been preferred. Even though it does apply three different categories of objects to extremely broad geographic areas on a north-south axis, it lacks resolution and intimate discussion about cultural preferences (Kilger 2008b, 254, Fig. 4). Hopefully this thesis will incorporate identity, cultural institutions and economic change in new ways, which will provide a new context for discussion.

Hårdh also acknowledges the different economic systems which co-existed as the basis for different forms of silver and gold objects (1996). However she also does not attribute multiple values to items, and sees a closer link between political and economic structures. This project examines and argues for a stronger connection between social and economic structures. Objects held a social function in western Scandinavia and an economic function in eastern and northern Scandinavia (Hårdh 1996). It may be true that political changes cause change within the economic structure however this discussion focuses on the

interplay between the changing economy and social structure. It will be shown here that objects represented both values simultaneously which again reflects co-existing economic systems.

Ross Samson does recognize the strength of the connection between social and economic structures (1991a). Objects themselves do not form these abstract structures, but they do represent them (1991a, 90). He concludes that “when social inequality exists it is reflected in the nature of exchange” (1991a, 94). Usually the individual with a higher social rank receives more, but when the items exchanged are fundamentally different in nature it can be difficult to quantify. Did the movement towards use of a singular monetary unit heighten social differences by assigning a value to each individual based on possessions? Or did this movement increase the importance of social relationships over a continuum by pushing people to call on social ‘interest’ built up through a debt of obligation? By moving towards a currency-based economic structure in which all items were valued in comparison to a monetary unit, there was an equalizing effect on exchange in which exchanges between socially differing individuals were quantified. Social inequality became separated from economic inequality since an individual or family could potentially gain great economic wealth without requiring great social wealth.

The huge volume of silver which came to Scandinavia in the form of Arabic dirhams indicates that Arabic silver was the commodity sought after, not the means of exchange (Samson 1991b). Foreign coins were recognized for their differences but not as a monetary unit in the early and middle Viking periods. While some of them were clearly appreciated and displayed as pendants or jewelry, presumably most of them were melted down and reshaped into objects which held social meaning (Gaimster 1991). This is an illustrative process showing that exchanged items held both economic value for their material and weight and social value for their form and path of movement within society.

Question of Standard Weight

Some maintain that there was no standard of weight among Viking Age metal objects (Kruse 1988) while others see set units of aurar and öre in the evidence (Kilger 2008b). Theories connect Arabic and Russian weight systems with Scandinavian lead weights and other items (Steuer 1987), but Birgitta Hårdh has the best answer by showing the variety in weight across different Scandinavian regions (1996). By surveying the weight of objects regionally, she successfully shows that similar weight ratios did exist. Despite some similarities, a standardized weight system cannot be confirmed for Scandinavia because of

the likelihood of regional economic systems. The co-existence of different systems within a region is also likely. The widespread distribution of scales and weights confirms an active weight economy (Kruse 1988) but the appearance of personal ornaments in the same regions shows different systems (Hårdh 1996). Kruse notes the necessity to keep hacksilver of various weights and unimportance appearance on hand in order to participate in semi-regular commercial transactions (1988). If hacksilver and weight exchanges were used in different types of situations, there is reason to believe that gift exchange was also used in various situations based on the cultural context. Ulriksen also cautions against assigning specific contexts for types of artifacts (2004, 21). Luxury items and hacksilver may not always be used for gift exchange and trade, respectively. Other situations, such as payment of fines or marriage fees, could be manifested in the exchange of silver (Ulriksen 2004). Without closer scrutiny of the evidence on a regional basis, we cannot confidently establish economic systems based on a specific unit of weight or types of artifacts.

Social and economic structure: a quiet partnership

Trade was not necessary to survival, but trading sites such as Hedeby, Kaupang, Ribe and Birka relied upon imported goods (Clarke and Ambrosiani 1995). Practically all settlement was agrarian, but those who had the means to participate in trade did so, using their surplus production. This could have included free farmers or a smaller group of aristocratic landowners. Jens Ulriksen thinks it unlikely that local farmers could organize gathering at a coastal point to exchange with trade vessels, and that wider organization was required (2004, 24). Ulriksen's (2004) study of coastal sites around the Roskilde fjord and Müller-Wille and Tummuscheit's work around the Schleifjord (2004) has revealed a coastal landscape which reflects to a high resolution both the social and economic structure of the Viking Age. Communication via water was of vital importance for success. Likely surplus goods were collected at a court site, possibly worked by or prepared for craftsmen, then moved to a nearby trade centre. Despite this commercial activity at coastal trade places, the economic activity was also closely linked with social requirements. Ulriksen says that "it was the leading families that carried out trade in Denmark. They were the heads of a society in which alliance-forming gift-giving was far more important than purchases and sales in a market. Their position and social ambitions depended very much upon their ability to share out valuable and prestigious objects" (2004, 24). Lords had resources to access international trade and to contract craftsmen to produce specialty items. Lords were also be better equipped to deal with foreign merchants, especially since lords were directly organizing local

trade activity. Lords would then distribute important items to family, retainers, political allies and other servicemen. (Ulriksen 2004, 24).

These local coastal sites were multifunctional and hosted many different types of activity similar to court sites. Chronologically, the main functions changed as the period progressed reflecting changes within the economy (Müller-Wille and Tummuscheit 2004). Local networks were obvious in both surveys (Ulriksen 2004, Müller-Wille and Tummuscheit 2004) and established the regional nature of economic activity. With their connections to social and economic structure, it was likely that both gift-exchange and weight exchange was used as means of payment and exchange in these locations.

John Sheehan has compared the function of locations for hoard depositions in Hiberno-Norse Ireland, and found a clear correlation between hoard composition and the function of the deposition site (2004). Coinless hoards are never associated with ecclesiastical sites and are usually found within a ring fort or other central place associated with a socially elevated individual. Sheehan's study shows that hoards with different compositions are found in different social environments and thus represent different functions (2004, 183). According to Sheehan, coinless hoards are economically passive but active in political and social contexts. Hoards with ingots, hacksilver and/or coins are active economic units (2004).

Sheehan's study is focused on the Hiberno-Norse material but still exhibits Scandinavian cultural institutions. While it groups hoard composition into clear categories, it fails to account for the ability of hoard assemblages to be multifunctional. By focusing on the continued use of silver, Sheehan acknowledges the continuity of silver as a valuable item in Scandinavian culture but only acknowledges a singular use of this value. Silver was valued in many forms depending on the situation, and these various definitions of value co-existed. Coinless hoards may be associated with ring forts and social hierarchy, but as studies of coastal sites have shown, the same individuals using silver to form political alliances were also involved with commercial trade. Hacksilver hoards likely still held social value while being an active economic unit of value.

Torben A. Vestergaard makes one of the strongest cases for the relationship between exchange and social structure in his discussion of marriage, social structure and economy (1991). Obligatory relationships existed between kin and contractual relations but potential relationships existed with everyone else. The social system was built on the notion of exchange between two parties or individuals, which could be anyone. Formal rules governing the nature of the relationship were enacted once exchange was initiated. The social structure outwardly appears to be based on personal status and existing relationships, but it is the potential relationships and the changing definition of what kind of exchange that relationship

could incorporate which actually played a major role. As Vestergaard says, “The ability of such systems to withstand change depends on which assets are allowed to influence the relative positions of the participants” (1991, 33). There was a contradiction in the social structure, because both rank and equality were preserved. Persons could hold rank based on possessions, but equality could exist based on balanced exchanges. Obligatory relationships are just as important as internal social relations (Vastergaard 1991, 34). While his interpretation of Mauss’ theory of obligation (1925) is interesting, it is this idea of potential relationships as an important element of social structure which is significant.

If potential relationships existed with everyone in a changing economic structure, then an individual would try to be prepared for all potential relationships. A parallel development was the introduction of new means of payment and exchange such as the introduction of a weight economy, coinage and commercial exchange. Multiple economic systems were functioning simultaneously. These all represented a new type of potential relationship in an economic context. This idea of potential relationships also allowed the multiple economic systems to function with minimal tension. As the idea of new types of exchange spread through increased exposure, so did the variety in the type of objects which one needed to possess. Informal rules as proposed by North (2005) must be incorporated. Once the participating parties were defined, then their social relationship dictated the rules for exchange. It is these indistinct social boundaries which are responsible for guiding the participants to formal rules.

While social relationships were relatively ephemeral, the social structure was definitely a competitive one which had become linked to possessions and material wealth by the ninth century. Possessions were linked to status, but personal status and relationships were still very important. There was a contradiction in the social structure, because both rank and equality were preserved. Persons could hold rank based on possessions, but equality could exist based on balanced exchanges. Obligatory relationships are just as important as internal social relations (Vestergaard 1991, 34). This relatively new ability to move more freely within the social structure was an important factor affecting the changing relationship between identity and economy. As previously addressed, exchange was guided by social relationships but in the changing environment of the ninth and tenth centuries this dynamic changed in response. Cultural rules concerning economic and social actions became more distinct as the Viking Age progressed. These rules are evident in the types of artifacts deposited in hoards and chronological trends in composition. By analyzing the composition of hoards and select items, we can highlight social patterns responding to economic changes.

Chapter 3: Methodology

In order to approach intangible themes such as identity and cultural institutions, we must turn to tangible items. Items are manufactured and chosen in response to social preferences for fabric, material, shape, size and decoration. Items become material culture by symbolizing aspects of cultural institutions. Material culture is used to display religious belief, social status, wealth and personality among other intangible ideas. Modern examples include necklaces with Christian crosses as pendants, diamond jewelry and the shape of ladies' handbags. In historical contexts there are many materials which indicate preferences and cultural markers but the majority of these materials such as textiles, leather and wood usually have a relatively short life span. Accessible examples are metal objects which are relatively well-preserved when compared to the majority of the archaeological record. Metal objects can relate much about material culture and cultural institutions of ninth and tenth century Scandinavia in the Viking Age.

This study focuses on the response of a cultural identity to a changing economy during a set chronological period. In order to examine this relationship, a consistent sample of material culture which reflected individual choices was desired. For the Viking Age the best data exists in hoard assemblages deposited in Scandinavia during the period in question (Hårdh 1976, Hårdh 1996, Sheehan 2004). The chronological limits to the data set reflect the period of the most intensive change in economy. In the eighth century, Scandinavian cultures had only just begun to encounter drastically different cultures and economic systems. By 1000 A.D., Scandinavian economic systems were nearing the end of the period's evolution and hoards deposited after 1000 A.D. are markedly different in their composition. While some emphasize the date of manufacture as key evidence when tracing the chronology of a culture (Ambrosiani 1998), it is the date of deposition which is more important in this study. It is the history of the hoard assemblages and included objects which must take precedent since it is the relationship of the hoard's last owner to the objects which is under scrutiny.

Geographically, the study is limited to modern Norway, Sweden and Denmark because outside this area there is significant evidence of influence from other cultures. In England there were pre-existing cultural and economic institutions which heavily affected Viking colonists, such as the English system for designing and minting coinage. The English legal code and coinage systems were adopted by or continued use under Viking control and the hoards deposited in England are of a different composition and nature than those deposited in Scandinavia. Scotland was not considered because of the quantity of Irish hoard material acknowledged and partially analyzed. Overall, archaeological material from this

period in Scotland does not give as much detail and tends to be biased to coastal sites due to the nature of modern research priorities in the country. In future studies, it would be worthwhile to compare the Viking Age hoards of Ireland with those of Scandinavia since Ireland's cultural institutions more closely mirrored Scandinavia at this time. Ireland is also an interesting comparative element because of its relative isolation from Continental or Eastern influences at the time of Viking colonization.

Within hoard assemblages, analysis will focus on personal ornaments. This reflects one of the main goals of the project which is the analysis of personal identity on a microeconomic scale. Both complete and partial silver and gold ornaments will be considered. One of the project's main research questions is encapsulated in the treatment of personal ornaments: why did it become culturally acceptable to destroy personal possessions which also indicated status or personality? What cultural or economic forces led to ornaments becoming valued for weight alone?

In order to do this, a survey of hoard composition was undertaken using Birgitta Hårdh's 1976 study of hoards from southern Sweden. This survey looked at the ratio of complete to partial objects and what percentage of the assemblage was complete and incomplete. Personal objects, complete and incomplete, were studied for the way they were handled. If they were cut or modified, did the division appear to be calculated and carefully done, with regard for any decoration or design? If there are both complete and incomplete ornaments in the same hoard, is there a preference shown for certain types of ornaments? These observations reveal much about personal decisions in response to objects in an economic context. The analysis of this research will incorporate and review Hårdh's (1996) analysis of hoards and assemblages from Norway, Sweden and Denmark.

'Personal object' includes jewelry such as neck and arm rings, finger rings and anything which was functioning as a personal item at the time of deposition. Examples of this include ingots formed into arm rings and sword belt mounts converted to brooches. Fragments of chain or mail were not counted unless there was surviving evidence that the chain was used as a personal ornament or jewelry such as having rings attached. Ingots were not counted unless they had been shaped to be used as a personal object.¹

¹ A note on the method of counting personal objects within Hårdh's catalogue: Even if an item is fragmented into several pieces, each piece is counted individually. To maintain her tallies, I have also counted each piece of the same object as an individual item. This means that the percentage of incomplete personal ornaments may be slightly higher than the actual count of objects, but this method proved to be the best way to work with the data available. See Appendix A for catalogue of hoards referenced and table.

The Phenomenon of Hoarding

Some maintain that the existence of hoards means that they were not functional in social or economic contexts but were deposited for religious purposes (Hedeager 1990). Hoards are reserves of precious metals, and their existence means that it was not circulated. If large amounts of valuable materials were deposited, then society did not require them for continuous exchange (Gaimster 1991). This argument does hold a certain amount of logic, but how do hacksilver hoards address this? Gaimster does not give an alternate explanation for their existence if their components were socially and economically obsolete. Sheehan assumes that the creation of hacksilver transforms socially valuable objects into economically functional objects (1995, 2004). If hacksilver hoards were not widely circulated, then why do they exist? This specific category of hoard assemblages will be highlighted below. While hoards may represent occasional gift exchange rather than continuous circulation, valuable items were very active in cultural exchanges. Even if foreign coins and imported items were not recognized for their original unit of value, they gained social and personal values when in new contexts (Gaimster 1991, Thurborg 1988).

Material culture is produced by human activity. If there is a distinct change in the form of material culture such as in the Viking Age, then it is responding to changes in the culture. The chronological change in hoard composition indicates that silver and gold items were used in different ways responding to social and economic pressures. Therefore, let us briefly discuss what cultural institutions dictated concerning hoarding as a social practice. In her discussion of economic activity in sagas, Elisabeth Vestergaard shows that members of society were socially bound to repay gifts received with return gifts and that hoarding is a 'bad' social activity (1991, 100-101). If valuable items were hoarded, chaos erupted. Valuable items should be given as gifts or in later periods distributed through trade. In the sagas she presents, Vestergaard makes the point that hoarding was not encouraged by cultural institutions but giving gifts was expected. If gift exchange was a social rule, then an individual needed to be prepared for this interaction.

From these conclusions several things should be questioned. If valuable items should be distributed by trade or gift exchange rather than hoarded, what constituted a valuable item? This definition may have changed as hacksilver gained value with the rise of a weight economy, explaining the change in composition. Also, considering the disputed reliability of sagas there may be evidence that hoarding was an informally accepted activity and the growth of commercial trade and exchange created a formal social rule which frowned upon hoarding. Conversely, a rising commercial element in the economy may have promoted

hoarding alongside the notion that an individual's social position was based on personal wealth and possessions. This debate will be revisited below.

Hoard Composition

Concerning hoard composition, there are distinct changes in composition over time. Chronologically, hoard composition becomes more diverse over time (Thurborg 1988, 303). It is generally acknowledged that differences in composition reflect differences in function (Graham-Campbell 1976, Sheehan 2004, Thurborg 1988). With a growing diversity in hoard composition, Thurborg notes an increase in economically active items in the tenth century (1988). This includes weight-adjusted ingots and bars which were likely functioning as currency in an economic system based upon weight. These regular weights were used as an economically distinct means of exchange and Thurborg sees bars and ingots as primitive money (1988, 313). She also includes hacksilver as primitive money, but reflects special regional types due to its diverse form. The weight ratios of bars and ingots also reflect regional differences in systems of exchange. The existence of primitive money suggests the development of commercial market exchange and a way to equalize exchange between participants.

Birgitta Hårdh's (1996) study of Viking Age silver considers the importance of the contents of hoards and their relationship to each other, spatially across regions.² By comparing the weight of complete neck rings found with hoards, she finds a clear correlation between a high volume of hacksilver and lighter neck rings in southern and eastern Scandinavia and between complete objects and heavier neck rings in northern and western Scandinavia (1996). In western Norway, hoards typically include several large and heavy complete items. Silver and gold are frequently deposited together and there are recurring combinations of one or more silver neck rings, penannular brooches and gold arm rings. She concludes that this repeated combination indicates a "formalized prestige" (Hårdh 1996, 163). Hoards deposited in southern Norway, Denmark, and southern Sweden usually include a much higher quantity of hacksilver. If complete ornaments are present, they are lighter and smaller assemblages. There is also a difference in manufacturing technique in which the western rings are carefully constructed and the southern items incorporate simpler manufacturing (Hårdh 1996, 164). Eastern Scandinavia sees a higher proportion of weight-adjusted items such as ingots and bars and a smaller proportion of hacksilver assemblages.

² For a description of different artifact types see below.

Clearly, there was less need for small units of silver in exchanges along the Baltic coast (Hårdh 1996, 164).

Hårdh's survey is an excellent example of what type of information can be garnered from a detailed hoard comparison. Her work acts as an example for this study, but with a slightly different approach. Hårdh discusses the relationship between developing political structure and economy while this project looks at social structure in relation to economy. Also, this project will not be discussing weight ratios or the implication of regional weight systems.

Not only can a geographic survey of hoard contents yield information, but a comparison of contents which includes chronology can also be productive. Ninth and tenth century depositions are generally accepted to have an economic function but differences in composition may indicate different levels of activity in an economic context (Kruse 1988, Sheehan 2004). John Sheehan has proposed a class structure for coinless hoards based on content (2004). A hoard's classification also indicates how active it is in an economic sense. His classifications are presented in Table 1.

In his presentation of the classification system, Sheehan (2004) supports James Graham-Campbell's (1989) conclusions regarding hoards composed of complete ornaments. They agree that ornament hoards represent political and military relationships and label these assemblages as economically passive, noting that they were "not intended for everyday circulation, having been converted into artifacts that conferred status" (Graham-Campbell 1989, 54). What both fail to recognize is that even though these objects were not literally exchanged on a daily basis, they maintained an active status within the society. Since the gift exchange economy of the early ninth century was closely tied to personal status, wealth and value, ornaments simultaneously held active value by representing social relationships and economic wealth. It is unlikely that daily exchange of valuable personal ornaments was occurring but these items were constantly active and therefore it is unfair to discount their level of economic importance.

Returning to the phenomenon of hacksilver, Sheehan defines complete ornaments as economically passive and hacksilver as economically active (2004). Hacksilver was society's response to a changing economy in which coinage was preferred but not widely available. In the transition period between a weight and coinage economy, bullion of any form is in high demand. In Hiberno-Norse³ Ireland, this meant that items which had represented values of status and wealth now only represented commercial wealth value. The desired means of both payment and exchange were changing based on shifting priorities in social and economic

³ 'Hiberno-Norse' refers to the hybrid culture which arose in Ireland during the Viking Age.

contexts. The social and economic structures began to fracture apart and if an individual wanted to be economically active, then appropriate material was necessary. This situation represents a fundamental difference in the way people defined their relationships with other people. The changes in these cultural structures heralded a new way to define identity.

Sheehan does acknowledge that differences in composition addressed different purposes (2004, 184). He attempts to correlate classes of composition to identified find spots using Irish hoards and excavations as his evidence pool. Class 1 is economically passive, 2 and 3 are potentially active due to the weight ratios of the ingots and 4 and 5 are definitely economically active due to the presence of hacksilver (2004, 185). Class 4 hoards receive special attention if they contain ornaments and hacksilver derived from ornaments. Sheehan notes this as a special sub-class which was economically passive yet became active due to cultural and economic pressures (2004, 186). He makes a fairly strong argument connecting the function of hoards to the function of the find spot, but does not account for changing cultural institutions except in the case of special Class 4 assemblages. When one reviews the considerable evidence for cultural blending in Hiberno-Norse Ireland this seems to be an important element.

Each of Sheehan's five classes serves a distinct function (2004). Function is assigned based on the likely economic function of the items and the find location of the assemblage. Drawing from James Graham-Campbell's significant corpus, Sheehan designates classes as economically active and passive (2004). If assemblages are economically passive, then they are socially active and vice versa. This seems too simple an explanation for the multitude of forms and difference in hoard composition. It does not appear that the function of silver was as limited as Sheehan would try to reduce. Since multiple systems co-existed, the function changed when necessary to address the situation.

While Sheehan's conclusions (2004) are based on Hiberno-Norse material and most of the hoards examined in this project did have coins included, his system carries important ramifications for this project. His five classes of hoards are linked to sites with a strong role in upholding social hierarchy. Examples include ring forts with political functions and farmsteads of various sizes representing a range of social levels (2004, 187). If the variety in Scandinavian hoard composition is similar to the Irish material, then it can show an equally diverse social structure. Viking Age hoard material from Scandinavia and other colonized areas such as Scotland, Ireland, Russia, the Faroe Islands, Greenland and northern Europe could be compared with data concerning find spots to test Sheehan's theory in the future. This may prove difficult since a great number of hoards do not have detailed records of deposition context. This would be a valid avenue to pursue in future research.

Common Artifact Types

While each hoard assemblage is unique there are several common types of artifacts. The outstanding majority of the material is silver but gold was occasionally included, especially in ninth century deposits. Even when one material is preferred or an assemblage is mixed, the forms tend to be consistent. These categories have been described in great detail (Stenberger 1947, Graham-Campbell 1980, Hårdh 1976, Hårdh 1996, Kruse 1988, Sheehan 2004) and will be briefly introduced here. The most frequent types of personal ornaments are arm and neck rings. These have three primary methods of manufacture. The most common is to have a body of twisted or plaited strands ending with terminals of various forms and clasps of various styles. It is also extremely common to see a single round strand which ends in blunt terminals without a clasp or a simple clasp. Bodies and terminals may or may not be decorated. If they are decorated, it is usually simple and repetitive punched or incised decorative motifs such as circles and triangles.

Clasp mechanisms tend to be relatively simple without any serious engineering but there are a few which are decorative as well as functional. The simplest type of clasping mechanism is merely to twist the terminals together and this is seen in neck rings, arm rings and in cases where the terminals have been removed but the object is still functioning as a personal ornaments. The most common types of manufactured clasps for neck rings are a hook and eyelet, a hook and loop and a hook and curved catch. Arm rings are not always manufactured with clasps but the artifacts with clasps tend to have decoration integrated. This usually takes two common forms. The first is wire wrapped around the terminals to add decoration or be used to form the clasp. The second is the spiral knot clasp. If the arm ring does not have a clasp, it may have decoration which imitates one of these clasps. This imitation clasp decoration is commonly seen in arm and finger rings.

Other objects which are counted as personal ornaments are brooches and pendants. Viking Age brooches take many forms and sizes. The most common forms in ninth and tenth century Scandinavian hoards are disc brooches and penannular brooches but these are usually fragmentary. Burials have produced a high volume of oval, box, bow and cruciform brooches but these forms are not as common in hoard assemblages.

Pendants also take a wide range of forms and sizes. Some are clearly manufactured to be pendants such as Thor's Hammer pendants. In the selected data, this recognizable shape is always used as a pendant. These may be attached to either arm or neck rings. Others are adapted from a different original purpose. Typical items adapted into pendants include foreign coins, book binding decorations, harness mounts and pieces from religious items.

Many of the hoards examined in this project include pendants with a Carolingian origin. Some were manufactured as pendants but again some have pendant loops which were added post-manufacture possibly in Scandinavia. The selected assemblages contain very few examples of these pendants still mounted on chains, arm rings or neck rings but most retain their pendant loops.

The hoards studied here also contain fragments of chain. Some of these were counted as personal ornaments because they were attached to small rings or decorated discs. These small rings usually hosted several short fragments or a single long fragment. The small rings are may be twisted strand construction or simple wire with twisted terminals to form a rough clasp. The chain and disc assembly consists of a single long chain or chain fragment and the disc is a large pendant with highly detailed and intricate decoration. When chain and chain fragments are presented this way, they have been interpreted as personal ornaments and are tallied as such.

Ingots, which are shaped bars usually cast using a mold, are frequently included in hoard assemblages. Ingots are usually made to certain weight ratios which vary with geographic location and have various shapes and sizes. Since ingots are not a vital element to this project they will receive less attention yet still must be acknowledged, as they contain a large percentage of known Viking Age silver.

Hacksilver and hackgold refers to worked or shaped silver or gold which has been cut into smaller pieces. It is one of the vital categories for this project and can reveal much about thought processes in the Viking Age. Since silver is the predominant material in the archaeological record, hacksilver will be used to refer to both hacksilver and hackgold unless describing specific gold artifacts. Gold objects are almost always complete and hackgold is rare.

Hacksilver can take nearly any form since it can derive from any object. This includes coins as well as all of the categories defined above. Coins are typically counted as hacksilver when they have been treated as something other than a representation of a currency value. Examples include piercing to make coins into pendants, curling or wrapping around a ring to act as a decoration and cutting or clipping coins into smaller pieces to address the needs of a weight economy. It is also characteristic to see unshaped silver such as ingots which have been cut into pieces or trimmed to fit certain weight ratios and bundles of silver wire included in hoards. These are also counted as hacksilver items.

When hacksilver derived from personal ornaments appears, it is frequently taken from the body of rings. One of the terminals may be remaining but usually both are missing. This means that the majority of hacksilver is fragments of twisted/plaited strands or shaped

sections from smooth arm and neck rings. It should be mentioned that in hoards composed of both complete items and hacksilver derived from ornaments, the hacksilver is not customarily sourced from the same item. Most of the hacksilver consists of highly mixed pieces sourced from various types of artifacts and of a wide range of sizes. Despite this diversity, hacksilver was still regarded as individual objects in some cases and not only as a form of currency by weight. Numerous examples exist of incomplete pieces which continue to be functional. Neck rings missing one or both terminals can be slightly bent to overlap the blunt ends, new clasps can be formed from the loose ends of twisted strand fragments, or pins looped onto arm rings can form penannular brooches.

Aside from the high number of twisted or plaited strand and ring fragments, hoards frequently contain hacksilver comprised of clasp-ends, pendants and various types of attached decorations. In these cases the shape of the clasp is retained, likely since that is the most convenient cut, but decoration is not accounted for when the object is fragmented. Of course there are a few exceptions in which objects are carefully cut or part of the original shape is only trimmed, in the interest of adapting these items to a new function.

The presence of hacksilver in hoards represents an active process. There was a decision in the past to transform a complete object into an incomplete object. This may have been by accident or to give a new function carried by a new form. Its existence shows an individual's decision which was invariably influenced by cultural institutions and structures. It is also commonly thought to indicate that a wider percentage of the population was engaging in a higher number of smaller transactions (Hårdh 1996). This is a direct result of economic structure pressuring social structure and decisions. Discussing the reasoning behind this action may lead to new and exciting information about Viking Age individuals.

Chapter 4: Description of Data

The majority of the artifacts studied in this project are from modern Sweden. The main reason for this decision is the accessibility of information. Sweden is especially rich in hoards and these have been extensively catalogued. While most of these efforts at cataloguing the overwhelming amount of material are not published in English, at least it is possible to obtain the publications. Much of the Norwegian and Danish material requires additional attention and lacks publication. Birgitta Hårdh's regional economic study (1996) surveys a great deal of this material but strives to define regional variety rather focusing on the interaction between social structure and economy.

Birgitta Hårdh's earlier survey of hoards from southern Sweden (1976) served as the main source of data for this project. Her catalogue was scanned for ninth and tenth century deposits and these were analyzed based on composition (complete versus fragmentary) and the type of personal ornaments which were complete versus fragmentary (Table 2). While this is a small data set when one considers the total amount of recovered eligible material, it is representative of Viking Age hoards and should be taken as such.

Geographically, there was a higher occurrence of deposits in the Schonen region when compared to the data from Blekinge and Halland. Chronologically, there were an overwhelming majority of deposits in the tenth century compared to the ninth century (Table 3). Since Hårdh's catalogue did not have a large number of assemblages deposited in the ninth century, more focus was given to the tenth century deposits. The ninth century hoards will be mentioned and included in analyses as outlined in the project's methodology although ninth century deposits account for only 9% of the hoards surveyed.

Hoards deposited in the ninth century were relatively small compared to the number of objects in most of the tenth century deposits. The ninth century hoards have high percentages of complete personal objects. There is also more gold in these hoards. In the tenth century evidence, there is an obvious increase in size after 915 A.D. There are several hoards which did not have a *Terminus post quem* (T.p.q.) date assigned, but due to the nature of their composition they have been assigned tentative deposition dates and are discussed below. The tenth century begins to see items which have been imported or traveled farther distances such as thistle brooches.

Noteworthy Assemblages

The collections described here are presented in chronological order based on date of T.p.q. Their contents are briefly described and the significant elements are highlighted. Images, if they were possible to obtain, are found in Appendix B. The majority of these hoards were deposited with coins, but the coins are not discussed here due to the focus on personal ornaments. The coins deposited with these hoards can be found in the hoard catalogue presented in Appendix A.

Hoard J has the earliest T.p.q. date out of the hoards studied being deposited in or after 810 A.D. Its composition is 100% complete silver personal objects. There are four arm rings and two small rings. One of the arm rings is undecorated but has a spiral clasp with wire decoration adjacent to the clasp. The other three arm rings are cruder and lack the simple but elegant shape of the other arm ring. They appear to be slim ingots which have been shaped into a ring. These three lack any sort of clasp mechanism-they only have blunt terminals. The two small rings exhibit a higher level of workmanship than the crude arm rings and have spiral clasps. The arm ring with the spiral clasp and the small rings are of the same type as seen in later assemblages.

Hoard Q (Fig. 5) is another illustrative example of a ninth century assemblage with a tentative T.p.q. of 811 A.D. Nearly all of its fifteen objects are complete, the only exception being two small fragments from a bead which appear to be fragmentary from ground pressures after deposition. This is the only assemblage to include a container in the form of a finely made and decorated silver bowl. There are six complete gold personal objects and six complete silver personal objects. These are all of a high quality and the gold pieces are likely Carolingian imports. The gold pieces include three pendants of unusual shape and design, a gold plated trefoil brooch, a bead and a disc brooch (Fig. 6). The silver items include three decorated beads and three arm rings. Two of these arm rings have small rings attached. One arm ring has fourteen smaller rings and two of these have hacksilver fragments bent around them. One hacksilver fragment is from a dirham and the other is an inscribed decorated sheet. The second arm ring has eight smaller rings looped on and these smaller rings have no additional decorations or added pieces. The third arm ring is of a similar type but without small rings or additional pieces.

In comparison to the other collections, it is clear that Hoard Q is much different from the tenth century hoards. There is a much larger amount of gold and the objects are complete. The presence of a container and complete objects perhaps infers a different function than economic accumulation, but the presence of the arm rings with smaller rings attached

supports the economic function of this assemblage. The relatively high percentage of complete gold objects reflects the nature of the ninth century economy as being focused on import rather than manufacture. Tenth century assemblages form an obvious contrast which is discussed below.

The majority of complete items in ninth century hoards are imported as complete objects which already hold a recognized value. They may be changed or amended once in Scandinavia, such as having a pendant loop added, but many of the ninth century imports are seen as valuable in their own right. This is different from the tenth century when Arabic silver comes in from the east and allows for the manufacture of valuable items within Scandinavian culture. The change to manufacturing valuable items within the home culture would have an effect on identity. This hoard in particular shows the beginning of the change in economic structure. It contains the arm rings with additional smaller rings which are popular in the tenth century hoards as well as a high number of Carolingian imports and complete personal items.

Hoard S (Fig. 7) does not have a T.p.q. assigned but was likely deposited in the ninth century. It is a small but unique hoard composed of a single gold arm ring with six small gold rings attached. The entire assemblage is unique, but there are certain elements which set it apart. The shape of the cross section of the arm ring is a distinctive shape, having a ridge running its entire length. Also, it has a very crude clasp and may have had a decorated clasp removed. Since the majority of gold items are complete or carefully fragmented, this is an anomaly. When looking at the small gold rings, most of them are carefully constructed except for one, which has a crude clasp similar to that of the arm ring.

Hoard G (Fig. 8) has a T.p.q. of 916 A.D. and is composed of fifty-four silver items. There are fifteen hacksilver pieces derived from personal objects and one complete personal item. The single complete item is a small ring which is typically found with silver arm rings. Overall, 29.7% of this assemblage is derived from personal ornaments.

A likely contemporary is Hoard FF to which Hårdh does not give a T.p.q. but was likely deposited in the early or mid-tenth century. This hoard contains a plaited neck ring and an arm ring with small rings attached. The neck ring is missing a terminal and part of the body, but has been unraveled to form a crude clasp and the circumference decreased in order to form a functional arm ring. The arm ring (Fig. 9) is the same type as others with rings attached and has seven small rings attached. Four of these rings have Arabic dirhams curled around them. The dirhams were minted between 902 A.D. and 916 A.D., so the hoard was deposited after this date. When comparing the type of the neck ring and the compilation of

the arm ring and small rings, the T.p.q. for this hoard is liable to be close to Hoard G or Hoard K.

Hoard K (Fig. 10) has a T.p.q. of 925 A.D. and includes 117 silver items. 47.9% of this collection is from personal objects. Both the complete and fragmentary personal items exhibit a greater diversity than previously seen. The collection includes another occurrence of a ring with smaller rings looped on, although this item appears to be an arm ring with finger rings and wire and fragments of sheet looped on, rather than a neck ring with smaller rings or actual arm ring. This is a rougher version of the arm ring and smaller ring collections since the clasp on this item appears to just be the terminals twisted together. There several small rings of the type usually attached to an arm ring but are loose. Many of the complete items appear to be functional and are only slightly misshapen due to ground pressure. Others, such as the arm ring formed from an ingot, appear to have been misshapen before deposition. There are several neck and arm rings which have had the terminals detached but are bent in a way that indicates they are still functional. There is one plaited arm ring which had the terminals removed and was later unraveled to create strands to form new clasps.

The chains and chain fragments are interesting as well. One section is a relatively long and complete section of chain with what looks like finger rings attached to the ends. How was this artifact used? Did it have a functional purpose with a piece of clothing we cannot see in the archaeological record? There is another fragment of chain with a smaller and cruder ring attached in the same assemblage. This hoard also has several pendants and fragments of pendants. One is a plain undecorated Thor's Hammer (Fig. 11) and the others are Carolingian based on the type of construction and decoration. One of the Carolingian pendants was created to be a pendant while the other seems to have had a pendant loop attached at a later time since the loop is not perfectly aligned with the decoration on the disc.

Hoard M with a T.p.q. date of 928 A.D. is contemporary with Hoard K and an intriguing comparison. This hoard is 100% hacksilver and 28.3% is derived from personal items.

Hoard D (Fig. 12) has a T.p.q. of 942 A.D. It is composed of fifty-six silver objects. Out of this assemblage, there are only five fragmentary personal objects and one complete personal object. The remaining fifty items are hacksilver derived from non-personal objects. The only complete personal item is a silver arm ring with five smaller silver rings looped on. This artifact type is typically found complete within the context of a highly fragmented assemblage deposited in the tenth century. These arm rings with smaller rings attached will be discussed further below.

Hoard B (Fig. 13) has a T.p.q. of 955 A.D. and contains six objects. All of these are personal items and only one is incomplete. It contains two silver arm rings, one gold arm ring, one silver neck ring, one ingot formed into a spiral to wear as armlet and one broken neck chain with a large incomplete pendant attached. The chain and fragmented pendant are the only incomplete items. One of the silver arm rings has had the clasp broken or removed but has been coiled into a smaller diameter so that it is still functional. The other silver arm ring has two smaller rings attached. The gold arm ring is unusual as the only gold item in a predominately silver assemblage, but gold items are more frequently found complete in tenth century deposits (Hårdh 1996, Graham-Campbell 1980). There was no hacksilver derived from coins, ingots or bars in this assemblage. The complete personal ornaments account for 83.3% of the assemblage. This is a relatively high percentage of complete personal items in the mid-tenth century.

Hoard P (Fig. 14) provides a contemporary comparison with another T.p.q. date of 955 A.D. It is a large assemblage containing 116 pieces. Fifty-five of those pieces are hacksilver derived from personal objects and twelve are complete objects. Therefore, 57.7% of this hoard is composed of personal objects. Despite this high percentage, the majority of these pieces are fragmented. When compared with Hoard B, this is a drastically different type of composition. Also, several of its complete items deserve particular attention.

Again there is a complete arm ring with smaller rings attached, as well as fragments of chain with small crude rings attached to one end. One of these has a small crude ring with three chain fragments coming down off it. This assemblage also has two groupings of small wire rings, a group of three and a group of four, looped together on small rings which have been twisted. They give the appearance of earrings. Much of the chain and ingots are highly fragmented, but some of the Carolingian pieces are cut very carefully and still functional. The tongue shaped pieces in particular are fragmented in a way which follows their original decoration and may be intended for conversion or adaptation. Many of the arm rings are still functional as well, including the arm ring with multiple smaller rings looped on. This arm ring and small ring collection is similar to others but the small rings have additional wire attached by twisting around them.

Hoard I (Fig. 15) has a T.p.q. of 983 A.D. and is composed of 146 silver items. Personal objects both complete and fragmentary make up 28.3% of the assemblage, but only three items (2.1% of the assemblage) are complete. The complete items are two beads highly decorated with granulated wire and incised decoration, and a silver arm ring with four small rings attached. The arm ring and small rings are undecorated except for simple clasps. The fragmented items derived from personal objects are a typical mix of arm and neck rings

terminals and body sections but there is also a fragment from a penannular brooch. This fragment bears a Celtic design and may have been manufactured in Hiberno-Norse Ireland or Scotland. There is also a fragment of a brooch pin which bears incised decoration of a similar style. Its international elements and diversity is especially heightened when compared to Hoard K (discussed above).

A contemporary hoard with a comparable volume is Hoard X (Fig. 16) with a T.p.q. date of 983 A.D. This collection of 142 items has forty-one hacksilver fragments derived from personal ornaments and eleven complete personal objects. This accounts for 36.6% being composed of complete and incomplete personal objects. Complete items include a neck ring made of two twisted strands with an undecorated Thor's Hammer pendant. There is an arm ring with two smaller rings and a fragment of a small ring looped on. There is a plaited fragment of a chain with a small ring attached to one end and this small ring has a pierced decorated pendant made from sheet metal. There are also three complete arm rings and several fragments of arm rings. Decorated pendants are present, in complete and incomplete form. There is one neck ring which is missing a terminal but is still functional. There are several decorated beads in various states but at least three are still functional. Other ornamental fragments include twisted strands, Permian rings, terminals and various fragments of decorated Carolingian items. There are several fragments of hammered ingots which appear to be prototypes for arm rings or in the early stages of manufacturing for arm rings.

Hoard O has a T.p.q. of 1000 A.D. and hacksilver derived from personal objects forms 46.5% of this collection. The total assemblage has 114 pieces. Complete items include beads, a pendant and a silver arm ring contributing towards 3.5% of the assemblage. The arm ring has unusual inscribed decoration and is of a distinct shape. It is possible that the distinctive nature of the arm ring meant that it was not eligible to be hacksilver while the beads and pendant are similar to those in Hoard K and were already considered hacksilver due to their small size. As the collection with the latest definite T.p.q., it is worthwhile drawing a connection to Hoard V (Fig. 17), which is roughly contemporary (T.p.q. 996 A.D.) and is composed of eight silver objects, 87.5% of which are complete items. Hoard V includes one plaited neck ring with rhomboid decorated terminals, three arm rings and four small rings. Two of the arm rings are similar to those in other assemblages which have small rings attached, and the small rings are the same type as those attached to arm rings. It should be noted that these were part of the same assemblage but were not attached. The majority of the late tenth century deposits which include arm rings of this type have small rings attached so Hoard V may have been accumulated under special circumstances.

Another contemporary collection which seems similar to Hoard V is Hoard CC with a T.p.q. of 996 A.D. It is composed of two gold arm rings, two fragments of twisted strands likely derived from arm rings, one silver decorated bead and one ingot. Gold items are more likely to be complete, but are not usually deposited with hacksilver. In addition, the style and inscribed decoration on the arm rings is highly unusual (Fig. 18, 19).

Hoard N (Fig. 10) does not have an assigned T.p.q. date but was likely deposited in the early tenth century. This hoard is a relatively small collection composed of two silver arm rings which are connected by seven small rings. They are of a relatively high level of manufacturing. All of the rings have spiral knot clasps or imitation spiral clasps. Hoard EE (Fig. 20) does not have a T.p.q. date assigned but it was likely deposited in the tenth century. It is composed of three fragments of silver neck rings and a silver arm ring with three small rings attached. The arm ring and small rings are plain, but display high quality workmanship in their form and imitation clasps.

Noteworthy objects

Within the pool of evidence there are certain types of objects which deserve special attention. As hoard size increases in the mid-tenth century, so does the degree of fragmentation (Graham-Campbell 1976, Hårdh 1996). The thirty-two hoards studied here also display this tendency. As size and fragmentation increases, it is difficult to see preferences but a closer look reveals some preferences for keeping certain items complete. In 47% of the hoards surveyed, there are complete arm rings which have smaller rings attached. These are included in hoards of all sizes and composition types and almost all of the examples presented here are stylistically identical. Chronologically, these collections display the typical size increase in the mid-tenth century however the presence of these arm rings is consistent throughout the period. In addition to their consistent appearance, they are frequently the only or one of a few complete objects in an assemblage which is mostly fragmented.

The small rings are typically made of silver. The majority of the arm rings are silver but there are a few examples made of gold. These ring collections are found in other hoard assemblages from other regions in Scandinavia. They exhibit quality workmanship and carefully shaped clasps or imitation clasps. Mårten Stenberger (1947, 1958) has found them in his detailed survey of the hoard material recovered in Gotland, and James Graham-Campbell (1980) has also included examples in his corpus of publications concerning Viking artifacts. The significance of these objects will be discussed in more detail below.

Another significant artifact type is the neck chain. This category has more diversity in appearance, but usually consists of at least one chain ending in small rings or a brooch. In the hoards investigated, chains or fragments of chains were counted as personal objects if they were attached to small rings, brooch fragments or supported pendants. With a T.p.q. of 918 A.D., Hoard BB (Fig. 21) has an illuminating example. This piece has a small crude ring created from wire with five fragments of chain attached. It appears to be nothing more than a convenient way to keep the chain fragments organized, until it is compared to other examples. Figure 22 presents an example from Stenberger's (1958) catalogue of finds from Gotland. Note that this particular piece was attached to a highly decorated disc brooch and deposited with complete items including a silver arm ring with a small ring attached. Within this object category, numerous bronze examples exist as well. The Historiska Museet in Stockholm holds quite a few examples. Figures 23 and 24 present two examples of many brooch and chain arrangements in the museum's extensive collection.

In the museum's catalogue, these brooch and chain assemblages are referred to as jewelry in Swedish further indicating their function as personal ornamentation. The cruder examples with wire rings and chain fragments may be an attempt to copy these more elaborate models. In addition, these finer models frequently have pendants and acknowledged social symbols such as keys attached. Keys have long been established in Viking studies as women's status symbols, so perhaps collections of chain fragments carry implications of social roles in an economic context. This possibility will be discussed in the following chapter.

Chapter 5: Analysis and Discussion

There are several conclusions which can be drawn from this evidence. First it must be established that there is a fundamental difference between desiring complete objects to participate in gift exchange for social reasons, and desiring appropriate material to participate in an economic structure with newly evolved priorities. Secondly, the evidence distinctly shows the co-existence of different types of exchange. These types of exchange were closely tied to the use and display of personal ornaments. Here, these conclusions will be applied to the model of cultural change presented above to produce an analysis of socio-economic interaction in ninth and tenth century Scandinavia.

Considering the relatively small amount of data presented here, it proves to be remarkably valid when compared to other studies (Hårdh 1996, Thurborg 1988, Kruse 1988, Graham-Campbell 1980, Graham-Campbell 1976). It displays similar trends and there are several assemblages which are excellent representatives of typical ninth and tenth assemblages. The thirty-two examples clearly capture the point when exchange reduces its links with personal status, identity, social status and obligation. This is correlated with an increase in impersonal exchange connected to objects.

The evidence for reclaiming and continuing to use incomplete but functional personal ornaments shows the co-existence of two functioning economic systems. This sub-group of artifacts clearly shows cultural responses since an obvious chain of events can be determined. These decisions displayed in the state of specific artifacts highlight the cultural requirement of adaptability. Since potential relationships existed with everyone and the changing economic system expanded the pool of candidates, it likely literally paid to be prepared for a gift exchange or a weight exchange.

It is also possible to draw some stylistic conclusions based on the evidence. Perhaps wearing rings and chains on your person was a 'trendy' way to display wealth. Chains are essentially rings connected together, which allow for looping and draping additional rings on the body. Chains and ring jewelry both display wealth in a personal way. Many of the smaller rings which are attached to these items are very small and thin and would likely not have an economic value on their own. The alternative is that the resolution of the economy had changed by the late tenth century so that the majority of the population needed small currency items to participate in economic activity. This paints an interesting picture when these two ideas are combined. Rather than have a pocket full of clinking coins, one wore an arm ring or neck ring or earrings with multiple small rings to show your ability to be an active participant in the market place. An individual's value would be judged visually based on the number of

small rings displayed. This valuation would be relatively impersonal compared to the valuation process at the beginning of the ninth century, when the resolution of the economy was focused on exchange within small personal groups.

These different desires co-existed for a short period and led to the multifunctional nature of objects as social symbols and as economic symbols. Objects functioned in two different contexts simultaneously. They still indicated status when complete and held an economic and social value when exchanged as gifts for loyalty or alliance forming. When they became hacksilver, their multifunctional nature changed. Objects conferred commercial wealth and thus status upon the individual, rather than the social status of the individual conferring a value of wealth upon the item.

Certain domestic items are frequently associated with gender roles and status in the Viking Age. Common examples include keys for women and whetstones for men. It is assumed that a larger key corresponds to higher status for women. Status has also been linked to personal ornaments and display in the Viking Age. The arm rings with smaller rings looped on may be similar items. They display the key moment when weight became the main priority in measuring the value of an exchange. In gift exchange it is the complete item which is emphasized and its relationship to the individuals participating in the exchange. In a weight economy, it is the mass of the item. The small rings looped onto other rings display the response to this new demand. People are still dealing with complete items, but they are valued in a new way. The value of items is now solely based on weight rather than the weight which is carried by a donor's social status.

The increase in imported items also carries a message about social status. In the tenth century collections there are a higher number of international items such as thistle brooches and Permian rings⁴ which means that individuals are traveling more. Whether this means that they were traveling to Ireland and Russia or that they were traveling to an accessible urban centre, these items were distributed more widely. The fact that they are fragmented means that imported items have perhaps lost their value as a novelty item. If imported personal objects lost novelty value, then cultural priorities had shifted. Native items such as neck rings were manufactured to fit cultural standards or imported items became hacksilver in order to participate in the local economic structure.

This raises several interesting dilemmas. Individuals were traveling further abroad whether it was into neighboring regions or across the North Sea. This would have implications on the social structure since individuals would be missing for significant periods of time. This would also heavily impact the regional economy since new items were

⁴ From Ireland or Scotland and western Russia, respectively.

introduced. If personal objects were being imported, then for what purpose if they became hacksilver? This represents a fundamental shift from the economic structure of the ninth century. Ninth century hoards are mostly composed of complete items which represent socially important gift exchange and close social relationships. Since tenth century deposits contain novelty imported items as hacksilver, one can see a noticeable difference in the way they were handled.

It appears that in the tenth century, gift exchange was no longer the typical mode of exchange. If gift exchange had ceased to govern socio-economic interaction, then society was now structured according to the rules governing weight exchange. Within a weight economy, then socio-economic transactions were more impersonal. The dynamic between individuals would be very different. Exchange would carry fewer obligations, since value would now be determined through a weight comparison. Exchanges and debts could now be paid with an amount of silver rather than an abstract service or loyalty debt. While gift exchange was no longer the dominant form of exchange, it did still occur since the hoard assemblages do still contain a percentage of complete elaborate items. There is strong evidence for the existence of both systems but the increase in fragmentation shows the prevalence of a weight exchange system.

If there were different economic structures coexisting, and various natures of potential relationships, then it could be proposed that there were multiple identities to which individuals concurrently belonged. This is not at all unlikely when compared to the idea of modern identity. People can belong to multiple nationalities, follow assorted passions, befriend a range of personalities and engage in multiple forms of exchange. An individual living in Viking Age Scandinavia may have multiple family associations and be interested in raiding, farming, trading and practicing a craft. People identify themselves based upon context and comparing themselves to their immediate situation. A Viking Age individual may be a warrior or trader or family matriarch based upon the situation at hand. If the trader travels to Birka or Kaupang and requires hacksilver, he may travel home and require a pendant as a gift for his local lord. A woman may require hacksilver to purchase goods yet give her daughter a fine neck ring to maintain the family's status and contain that wealth within the family group. Each individual plays multiple roles within Viking Age society and therefore has multiple identities. It is this association with multiple identities which is represented in Viking Age hoards from the ninth and tenth century.

The change in economic structure during the Viking Age means that the possible identities of individuals changed. People now had to be prepared for the potential of trading with hacksilver which meant they had to adjust their behavior. Any adjustment in behavior

affects identity and in this case it also affected personal status. At a certain point, personal status was not guaranteed to be a part of every transaction. It is impossible to pinpoint exactly when this occurred, but it had a dramatic effect on identity. When personal status stopped affecting the valuation process inherent in gift exchange, then transactions became impersonal and hacksilver became a viable element.

Applying a Model of Cultural Change

If identity, cultural distinction and value are formed through comparison, then nowhere are these processes more dynamic than in Viking Age Scandinavia. There is a clear change when tracing the economic structure chronologically. Potential relationships of various natures existed with a constantly growing pool of individuals. The nature of these potential relationships was diversifying as society expanded its geographic boundaries. If cultural identity and value is formed through comparison, then Scandinavian culture was experiencing an increase in transactions and comparisons. Naturally, there would be a cultural response. During the ninth and tenth centuries, it appears that the cultural response was to utilize two economic systems simultaneously: gift exchange and exchange by weight.

This becomes clear when our model of cultural change (Fig. 3) is applied to this discussion. At the top of pyramid the first stage is the perceived reality of a culture. In the ninth and tenth century, growing trade centres and expanding international trade resulted in the growth of economic exchange which was governed by weight, not gift exchange. This was a novel situation in a society using gift exchange to distribute wealth within a relatively contained social group. According to North (2005), when a society is faced with uncertainty, it will reflect on its beliefs to address that uncertainty. In this case, objects were inherently connected to the individuals participating in the gift exchange. With the introduction of a weight economy, this belief was challenged. This belief changed in the tenth century with the appearance and increasing use of hacksilver.

Following North's model, cultural institutions are formed from cultural beliefs. Tracing the composition of hoards one can see the developing function of hacksilver in the economy as a cultural institution. The use of hacksilver as a means of payment developed into an economic institution. The social hierarchy experienced a leveling effect since there were now opportunities to directly pay a debt rather than deal in abstract ideas of exchange such as loyalty and service. Here is where North's outline requires extra steps, since the formation and application of policies in a culture must be considered. Balances and weights become very prevalent in tenth century burials. However, these burials continue to include complete personal objects as well. The hoard deposits mirror this. The weight of hacksilver

became the formal rule for impersonal exchange, but the hoard assemblages point to the continuing use of informal exchange.

Once policies are active, then there will inevitably be feedback. Society's responses to these policies are visible in its material culture. Items such as arm rings with small rings attached and brooches with multiple chains worn on the body were the tangible response to intangible changes in cultural institutions. This cycle of policy formation and cultural feedback results in an altered perceived reality. The inclusion of these items in hoard assemblages shows society's adaptation to the introduction of a new economic system. Using a weight economy presented Viking Age Scandinavia with a challenge. The result was an increase in the manner of interaction between social institutions and economic institutions. With the growth of impersonal exchange came the growth of formal rules governing exchange. Value was now determined through comparison by weight. The continued use of gift exchange is seen in the way items were adapted to be functional in all possible situations. A finely crafted arm ring could be a gift, it could hold small rings to be weighed, or it could be worn as a display of personal wealth and status. Individuals had less influence on determining the value of items but personal objects continued to hold both social and economic value.

Individuals needed to be open minded and resourceful. They had to be prepared to evaluate the nature of potential relationships and respond appropriately. However, the materials involved in an individual's response changed dramatically in the tenth century. Status was still closely related to objects, but a person's place in the social hierarchy began to be defined by the number of rings on their arm ring or belt. In the eighth and early ninth century, objects represented the value of social status in a transaction. By the tenth century, there is significant evidence that objects gain inherent value. The shape and more significantly, the owner of the object has less impact on the object's role in the transaction. Tenth century transactions involved a greater number of defined economic transactions while ninth century transactions involve the exchange of abstract social value.

The role of an individual's personal status gradually decreases its role in the act of exchange. Transactions are first occasionally and then regularly impersonal. When exchange becomes impersonal, then obligation plays a much smaller role. If exchange is gradually more impersonal, then the way people relate to others also changes. Therefore identity as formed through comparison must change. Changes and trends in hoard composition present not only a change in socio-economic institutions but a revolution in the way identity was formed. By analyzing material culture, we are ultimately hoping to recover the identity of a society in order to paint its individuals' personalities in brighter and crisper colors.

Chapter 6: Conclusion

Areas for Future Investigation

This project has only dipped a rhetorical toe in the Scandinavian hoard material and there are numerous other tasks which await pursuit. In the course of this survey several of these became apparent. First, there are multiple ways to compare composition. Imported objects were briefly discussed but deserve further attention. The effect of imports on cultural identity and change and the visibility of this effect is one way to approach the international inclusions in hoard assemblages. The methodology used in this project could be expanded geographically to consider hoard composition in Norway, Denmark, the Netherlands, northern Europe, Ireland, or any other relevant areas. It would also benefit from analysis of additional ninth century assemblages. Chronologically, there are not as many known deposits from the ninth century but the data presented here would benefit from additional ninth century collections.

Secondly, there are specific types of artifacts which also merit additional study. One example would be Thor's Hammer pendants in relation to hoard composition. There were several hoards merely within the evidence presented here which were highly fragmented yet had complete Thor's Hammer pendants. Comparing the percent of fragmentation with Thor's Hammer pendants could produce interesting results. Perhaps in large hacksilver hoards these pendants were included as a protective measure to prevent the hoard form being disturbed or looted. An alternate explanation is that hacksilver hoards carried more religious significance than previously thought and the presence of complete Thor's Hammer pendants represents this significance.

Further analysis of the arm rings with small rings attached would also be valuable. Statistical analysis of the weight of these items could yield helpful information on the purpose for their manufacture and use. Also, it may be interesting to incorporate a linguistic study. The online database of the Historiska Museet (Stockholm, Sweden) refers to these as amulet rings. Perhaps they carry a religious implication. There is a wide range in quality of these arm rings which may represent class hierarchies, or different functions for items of differing quality. Some of these rings may carry evidence of peck marks or testing for purity, so a study of metal purity compared to peck marks may yield data towards social hierarchies or function. A closer study of these objects in a wider cultural and geographic context may be rewarding.

Difficulties and Shortcomings

The fruitful results of this study were not easily gathered. One of the main barriers was language. There is a corpus of work on Viking Age hoards published in English, but much of the discussion on social, economic and political contexts is published in Norwegian, Danish, Swedish and German. Also, most of the English publications focus on hoard deposits in the British Isles and Ireland. These deposits were not considered appropriate for this project since this represents the identity of Scandinavian colonies which carries different cultural distinctions from those groups on the peninsula. The non-English work is slowly becoming more accessible through the use of online library databases, translation pages and e-mail but the majority of these continue to be difficult to use for non-speakers of these languages.

Another hurdle is the physical location of much of the hoard material. The majority of it is in museums related to find location, but a large quantity is spread around Europe. The British Museum in London (England) contains hoard assemblages from Gotland (Sweden) in the Baltic Sea and the Historiska Museet in Stockholm (Sweden) has pieces from western Russia. The Walters Art Museum in Baltimore (Maryland, United States) has silver neck rings from Norway. Even if comprehensive catalogues are published by a museum or organization, they likely do not survey the complete body of recovered hoard material. This makes it extremely difficult to confidently select data since one may never be sure if there is additional unknown data.

When attempting to closely analyze small repetitive elements in hoard assemblages such as hacksilver the geographic location is again a barrier, but online databases are helpful in finding these items. However, due to the nature of hacksilver to be small, numerous and repetitive it is not well represented graphically even in extensive databases such as that of the British Museum. This makes it difficult to perform a basic survey of form, purity or other evidence of function without traveling to the object(s) in question.

Final Thoughts

Any of the potential projects proposed and all of the barriers described above would be interesting elements to include in the present thesis. Due to logical restraints, some decisions had to be made. The time schedule of the project meant that traveling to inspect and photograph items was not an option. The original project proposal covered a wider area geographically, but this was not feasible due to available publications. Birgitta Hårdh's

catalogue (1976) was the most accessible and concise source available, even though it was not ideal to use since it is only available in German.

Overall, the final project succeeds in surveying a selection of hoard assemblages in order to scrutinize the changing relationship between economy and identity in Viking Age Scandinavia. A clear picture emerges of a dynamic socio-economic structure in which individuals react in a unique way, yet also follow cultural institutions. The composition of the hoards shows the chronological development of the economic structure and specific item types reveal cultural responses and preferences within an economic context. Hopefully this investigation of the interaction between social and economic change will inspire further study of microeconomic systems in the Viking Age.

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Appendix A: List of Selected Hoards & Contents from *Wikingzeitliche Depotfunde aus Südschweden: Katalog und Tafeln* (Hårdh 1976)

As per Hårdh's system, hoard descriptions are organized geographically. The letter labels (A, B, etc.) are my labeling system since the hoard listed here are only a small selection of those from Hårdh's full catalogue. Tafeln (Taf.) refers to the original plate numbers. Page numbers refer to the original catalogue descriptions in Hårdh 1976.

Example:

Hoard label) Find location. Museum number. Plate number.

Contents

Description of coins (if present)

T.p.q.

Page number in Hårdh 1976

Description and notes

Blekinge

A) Gem. Hällaryd, Tärnö. SHM 3004. Taf. 7:II, 8, 9:I

118 pieces assorted jewelry and hacksilver with 5 + 1 coins.

T.p.q. 936 A.D.-

P19-21

All hacksilver, mixture of ingots, chain, neck and arm ring fragments. 4 fragments of sheets decorated with granulated wire, some granulated wire decorations separated from original mounting. Ornament fragments are mostly terminals and clasps. Majority is fragmented ingots and fragments of twisted strands.

B) Gem. Listerby, Yxnarum. SHM 11618. Taf. 10:I

6 pieces assorted jewelry and hacksilver (including 1 Gold item) with 113 + 42 coins.

Coins date 784-955 A.D.. All Arabic.

T.p.q. 955 A.D.-

P21

2 silver arm rings (one with 2 finger rings looped on), 1 gold arm ring, 1 neck ring, 1 ingot formed into a spiral to wear as armlet, 1 broken neck chain with large broken pendant plate attached. The chain and fragmented pendant are the only incomplete items. One of the silver arm rings has had the clasp broken or removed but has been coiled into a smaller diameter so that it is still functional.

C) Stadt Sölvesborg. SHM 2291. Taf. 11:I

19 pieces assorted jewelry and hacksilver with 21 + ? coins.

Coins:

Arab 1+5, 900-933 A.D.

English 4+10, Ethelred, Sigtrygg Seidenbart, 978-1013 A.D.

Carolingian 16+?, 991 A.D.-

T.p.q. 991 A.D.-

P23-24

All silver. 1 complete arm ring, 4 pieces twisted strands, remainder all ingots or hacked ingots. (Arm ring is of type to have smaller rings looped on.)

Halland

D) Gem. Grimeton, Torstorp Nr. 4. SHM 2633. Taf. 13:II
56 pieces assorted jewelry and hacksilver with 2 + 16 coins.

Coins:

Arabian 2+16, 895-942 A.D.

T.p.q. 942 A.D.

P26

2 fragmentary neck rings, thin wire chain, 45 'runde Zaine', 1 'Runder Zain' (looks like ingot curved into arm ring with finger or arm rings looped on), ingots, wire, frag. neck and arm rings. The ingot/arm ring has 5 smaller rings looped on. One of the smaller rings appears to be a twisted finger ring and the other 4 are undecorated rings with clasps. One of the chain fragments has a crude wire ring attached to one end but this was not counted as a personal object because of its crude nature. It looks more like an attempt to repair the chain rather than be used to attach to clothing. This item not counted as personal object.

E) Stadt Halmstad. An der Schlossmühle. SHM 1315. Taf. 15:I

22 pieces assorted jewelry and hacksilver with 15+14 coins.

Coins:

Arabian 15+14, 864-931 A.D.

T.p.q. 931 A.D.-

P27

All hacksilver. Mix of twisted pieces, fragments of same arm ring, bars, shaped ingots. Arm ring is from hammered silver with punched decoration and forms rhomboid at widest point in the center. Terminals are undecorated and blunt, roughly rectangular. Twisted pieces are of a range of sizes.

F) Gem. Kvibille, Kvibille Nr 3. SHM 13390, 13449. Taf. 15:II, 16:I.

19 pieces assorted jewelry and hacksilver with 70+8 coins.

Coins:

SHM 13390 Arabian 22, 854-949 A.D.

SHM 13449 Arabian 48+8, 848-956 A.D.

T.p.q. 956 A.D.-

P28-29

5 arm rings complete, three are twisted and two are plaited. All have worked clasps. Remainder is assemblage of arm rings, twisted fragments, pendant fragments, 1 bar, 3 ingots, wire chain. 1 arm ring fragment has a blunt end but is highly decorated with punched decoration. 1 arm ring fragment is undecorated but ends with nail head terminal.

G) Gem. Stafsinge, Dorf Stafsinge. SHM 614. Taf. 17:I

54 pieces assorted jewelry and hacksilver with 7+18 coins.

Coins:

Arabian 7+18, 882-916 A.D.

T.p.q. 916 A.D.-

P29-30

Fragments of neck rings, arm rings, ingots, chain, wire chain, bars, and 1 complete small ring. Fragments of personal ornaments are taken from terminals and body pieces, no preference shown.

(Small ring is of type seen looped on arm rings in other assemblages.)

H) Halland o.F. SHM 6123. Taf. 19.

81 pieces assorted jewelry and hacksilver with 39 + 96 coins.

Coins:

Arabian 35+96, 764-ca940 A.D.

Norwegian 1

Unprovenanced 2

T.p.q. 940 A.D.-

Small number of complete items, rest is assemblage of incomplete ingots, bars, chain, wire, mounts, fittings. Complete items include one decorated ring from a penannular brooch and one crude small arm? ring. The complete large ring has punched decoration around the entire circumference and curled terminals. There is one small ring with 1 piece of wire and fragment of a sheet attached.

DD) Stadt Halmstad, Schlossmühle. SHM 1603. Taf. 14

20 pieces assorted jewelry and hacksilver with 0+2 coins.

Coins:

Arabian 0+2, 10th century

T.p.q. 10th century.

P27-28

Majority is fragments of chain and twisted strand fragments. 1 complete functional plaited arm ring, 1 complete bent plaited arm ring, both are very elaborate with worked clasps. 1 square Zain with triangular punched decoration and blunt terminals, may be misshapen ring of penannular brooch. 1 undecorated Thor's Hammer pendant (counted as complete personal object). 1 decorated Thor's Hammer pendant attached to long chain fragment by means of three small rings with worked clasps (counted as incomplete personal object due to broken chain).

EE) Gem. Vapnö, Bjällbo. SHM 5020. Taf. 18:I

3 fragments of neck rings and 1 arm ring. No coins, no t.p.q. date given.

P30

Neck ring fragments: 1 terminal (of hook style), 2 body pieces of twisted strands which likely formed the majority of the original object.

Arm ring: Undecorated arm ring with imitation clasp and three small rings looped on. All three small rings have worked clasps.

Schonen

I) Gem. Baldringe, Baldringe Hof. LUHM 28773. Taf. 20, 21.

146 pieces assorted jewelry and hacksilver with 315 coins.

Coins:

Arabian 4+56

Byzantine 1+1

Carolingian 29+1, 983-

English1, Ethelred II, 975-1016, A

Norwegian 188

T.p.q. 983 A.D.-

P33-36

All silver. Composed of 1 complete arm ring with small rings looped on, 2 complete beads. 1 bead has granulated wire decoration and the other is incised decoration. All other items are fragmented. Significantly higher number of coins with this assemblage, but this could also be due to the fact that it is a larger assemblage of silver than most of the other hoards.

J) Gem. Barkåkra, Valhall Nr 1/153 Skälderviken. HM 168-47 – 175-47. Taf. 22:I

6 Teilen Schmuck und Hacksilber sowie 2 Münzen. Ca 140 g.

Coins:

Arab. 2, 749-ca810

T.p.q. 810-

P36

All silver. 1 arm ring, 2 small rings, decorated clasps. (These are of the same type as others which are looped together in other assemblages.) 2 ingot arm rings undecorated with blunt terminals.

K) Gem. Brunnby, Bräcke Nr 11. SHM 5881, 5885, 5891. Taf. 24, 25, 26:I

117 pieces assorted jewelry and hacksilver with 130 coins.

Coins:

Arabian 65+62, 805-925 A.D.

English 1, Edward I, 899-924 A.D.

Norwegian 1

T.p.q. 925 A.D.-

P37-39

L) Gem. Brunnby, Mölle. HM 838-13 – 846-13. Taf. 23:I

8 pieces assorted jewelry and hacksilver with 3 coins

Coins:

Arabian 3, 905-906 A.D.

T.p.q. 906 A.D.-

P39-40

1 complete armring, 1 neck ring with terminals cut off. Remainder is fragments of chain.

M) Gem. Bunkeflo, Bunkeflo 1/3. Taf. 27

60 pieces assorted jewelry and hacksilver with 1+53 coins.

Coins:

Arabian 1+53, 780-928/9 A.D.

T.p.q. 928 A.D.-

P40

All highly fragmented hacksilver.

N) Gem. Bunkeflo, Naffentorp Nr 5. SHM 1848. Taf. 26:II

2 arm rings connected by 7 smaller rings looped onto the arm rings and used to connect them.

No T.p.q. given. Arm rings are close in diameter, 4,3 and 4,7 units in diameter.

O) Gem. Glemminge, Glemminge Nr 39, SHM 14452, LUHM. Taf. 29, 30.

114 pieces assorted jewelry and hacksilver with 870 coins.

Coins:

Arabian 1+7, 749-934 A.D.

Byzantine 0+1

English 198+21, Edward the Martyr, Ethelred II, A, B1, B2, C, D, E, Knut, 1016-1035 A.D.,
A, B, D, E

Norwegian 24

Carolingian 574 + 39, 1000 A.D.

Unminted blank coins 9

T.p.q. 1000 A.D.-

P42-45

P) Helsingborg, Filborna Nr 2 1/8. SHM 7858. Taf. 35, 36, 37:I

116 pieces assorted jewelry and hacksilver with 131 coins.

Coins:

Arabian 33+96, 809-953 A.D.

English 1, Eadred, 946-955 A.D.

Norwegian 1

T.p.q. 955 A.D.-

Q) Gem. Lackalänga, Lackalänga. SHM 431. Taf. 39.

15 pieces assorted gold and silver jewelry and other items.

Coins:

Arab. 2, 800, 809-811 A.D.. The coins are attached to the arm ring.

P55-56

R) Gem. Oppmanna, Oppmannasee. SHM 2429. Taf. 40:II.

6 pieces assorted jewelry and hacksilver with 19+15 coins.

Coins:

Arabian 19+15, 895-927 A.D.

T.p.q. 927 A.D.-

P58

1 Carolingian disc brooch, 2 fragments twisted arm rings decorated with twisted granulated wire, 2 bent ingots (appear to be partially shaped to be neck rings), 1 section of two twisted wires. Larger number of coins than fragments or worked silver. Circular brooch is similar to that in hoard Q.

S) Gem. Husie, Husie. SHM 7143. Taf. 41:II

1 gold arm ring with 6 smaller gold rings looped on. No T.p.q. but style is contemporary with other arm ring assemblages. May be late ninth or early tenth century since it is gold and not silver like majority of others of this style. Also, the clasp of the arm ring is different. It is bent into a simple hook and loop clasp instead of a spiral knot clasp like most of the silver arm rings. The smaller rings show a variety of styles and workmanship, some have worked clasps and some are merely have the terminals twisted together to fasten them on the arm ring.

P54

T) Gem. Osby, Holmö. SHM 3978. Taf. 41:I

5 pieces assorted jewelry and hacksilver with 8 coins.

Coins:

Arabian 7, 895-934 A.D.

Bulgars 1, 950 A.D.

T.p.q. 950 A.D.-

1 fragment of Permian ring, 1 fragment twisted ornament, 1 complete arm ring, 1 terminal of neck ring from ingot, and unusable ring of penannular thistle brooch with pin head still attached. Assemblage is more 'international' than other assemblages.

U) Gem. Raus, Pålstorp Nr 6. SHM 4313. Taf. 41:IV, 42, 43:I.

86 pieces assorted jewelry and hacksilver with 38 coins.

Coins:

Arabian 7+28, 778-918 A.D.

Carolingian 1 (Otto)

Norwegian 2

T.p.q. 918 A.D.-

P59-61

V) Gem. Reslöv, Reslöv Nr 22. SHM 1025. Taf. 43:II.

8 pieces assorted jewelry with 546 coins.

Coins:

Arabian 3, 806-897 A.D.

English 160+1, Edgar, Edward the Martyr, Ethelred II, 978-1013 A.D., A, B1, B2, B3, C

Carolingian 382, Otto, Otto-Adelheid

*Among the German coins there are two types of counterfeit coins, up to 125 pieces.
T.p.q. 996 A.D.-
P61

W) Gem. Stävie, Ramså kern. LUHM 3390, 3827. Taf. 44:II, 45.
160 pieces assorted jewelry and hacksilver with 15 coins.

Coins:

Arabian 0+12, 904-955 A.D.

Carolingian 0+1, Endes 887-898 A.D. and Raoul 923-935 A.D.

T.p.q. 955 A.D.-

P63-66

Highly fragmented. Majority of hoard is twisted ingots, clipped ingots and bars. There are a few pieces of ornaments and three small wire rings looped together. These are very crudely made. Most of the hacksilver derived from ornaments appears to have been finely made and decorated. This includes the head of a thistle brooch pin, several Carolingian pendant fragments, and an arm ring with elaborate punched decoration. Extremely high number of fragments from shaped ingots (round, square, etc. in cross-section).

X) Gem. S. Sandby Friedhof. SHM 6997. Taf. 46, 47.

142 pieces assorted jewelry and hacksilver with 145 coins.

Coins:

Arabian 3+22, 865-ca960 A.D.

Carolingian 46, 983 A.D.-

English 1, Eadgar, 959-975 A.D.

Norwegian 70

T.p.q. 983 A.D.-

P67-70

High number of fragmentary shaped ingots and fragments of personal objects but also some interesting complete objects. Counted as complete objects: 1 neck ring with missing clasp terminal, 3 arm rings, 1 pendant, 1 arm ring with smaller rings looped on, 1 neck ring with Thor's Hammer, 4 beads.

Y) Gem. Tofta, Häljarp. LUHM 15035-15041. Taf. 48:I

6 pieces assorted jewelry with approximately 30 coins.

Coins:

Carolingian 30, Ludwig der Fromme, 814-840 A.D.

T.p.q. 814 A.D.-

P70

Hoard composed of 5 complete, 1 incomplete objects. Incomplete object is gold plated. Appears to be a mount or book decoration of some type. Cut does not respect decoration. Complete objects include a gold plated trefoil brooch with elaborate plant decoration. The center has a circle where a gem or decorated element is missing. There is one complete bead decorated with applied wire spirals. There are three arm rings formed from plates with plain terminals. There is no decoration but they have been hammered to form rhomboids in the center of the rings at the widest points opposite the terminals. For its relatively early deposition date, this hoard has a relatively high number of coins.

Z) Gem. Tolånga, Näsby Nr 2. SHM 6147, 6238. Taf. 48:II, 49:I.

18 pieces assorted jewelry and hacksilver with 150 coins.

Coins:

Arabian 4+2, 904-ca954 A.D.

Carolingian Approx. 50, Otto-Adelheid, 996 A.D.-

English 90+3, Edgar, Ethelred II, 978-1016 A.D., A, B1, B2, B3, C

T.p.q. 996 A.D.-

Hoard has four complete functional arm rings, two complete and bent arm rings. Has a simple decorated penannular brooch with the pin still attached. The pin is bent so the brooch is not functional, but this may be a result of deposition. The remainder is fragmented. There are two fragments of twisted strands, likely from neck rings, one small fragment from an arm ring, three fragments from hammered sheets, and several fragments from ingots. There is a description for a fragmentary piece of jewelry with two small wire rings attached but no image.

AA) Gem. Tottarp, Kabbarp. Taf. 50.

13 pieces assorted jewelry and hacksilver with coins. 18 Lot = ca 240 g.

T.p.q. 983 A.D.-

P71

Composed of complete neck ring with decorated rhomboid terminals and decorated Thor's Hammer pendant, complete plain arm ring formed from hammered plate and forming rhomboid at widest point, complete undecorated penannular brooch, a decorated clamp or mount, a pin from a penannular brooch which has broken in half, 6 fragments of shaped ingots, 2 fragments of twisted strands (one is much larger in length and diameter than the other).

BB) Gem. Ö. Herrestad, Ö. Herrestad Nr 12. SHM 6998. Taf. 53:I

14 pieces assorted jewelry and hacksilver with 8+23 coins.

Coins:

Arabian 8+23, 772-918 A.D.

T.p.q. 918 A.D.-

P74-75

Has complete trefoil brooch with zoomorphic decoration, gold plating and niello. There is a complete bent neck ring, a nearly complete undecorated arm ring manufactured from an ingot, a small ring, decorated pin head with gold plating and niello, a small ring with 5 fragments of chain attached, and fragments of shaped ingots.

CC) Gem. Ö. Torp, Ö. Torp Nr 5. SHM 3799. Taf. 53:II.

6 pieces assorted jewelry and hacksilver with 78+32 coins.

Coins:

Carolingian 29+12, T.p.q. 966 A.D.-

English 49+20, Ethelred II, 978-1013 A.D., B1, B2, C

T.p.q. 996 A.D.-

P75

Composed of two unusual complete and functional gold arm rings, two fragments of twisted strands (likely arm rings), 1 bead decorated with granulated wire and one shaped ingot.

FF) Gem. Brunnby, Krapperrup. SHM 92. Schloss Krapperrup. Taf. 22:II.

1 arm ring, 1 neck ring, 4 Arabic coins (902-916 A.D.).

No t.p.q. but likely deposited in mid-10th century based on coin dates.

P39

Neck ring: elaborate plaited strands with granulated wire interwoven. One terminal cut off, but the remaining terminal has been attached to the plait so it is still a functional ornament. Arm ring: Undecorated with spiral clasp. Has 7 smaller rings with worked clasps looped on. 4 of these smaller rings have the 4 Arabic coins curled around them. Smaller rings look nearly identical in size and the nature of the clasp design.