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Regional economic structures: an analysis of the Viking Age silver hoards from Öland, Sweden

Märit Thurborg

Background and introduction

The deposits of precious metal in Viking Age Scandinavia have for long been considered as reflections of economic activity rather than as expressions of religious beliefs (cf. Stjernqvist 1963). However, the interpretation of these economic reflections has differed. At first, the hoards were simply regarded as a measure of economic, as well as political, superiority. Thus finds of precious metal indicated central areas, but also — functionally — peaceful trade (cf. Hildebrand 1897). Sture Bolin introduced a new and critical approach, with a shift to concern with causes of deposition, i.e. war and unsettled periods (Bolin 1926). The necessity of distinguishing accumulation from deposition has since been pointed out, as well as the difficulties of combining the two factors (cf. Herschand 1980:34–64). The more violent explanations for hoarding have been somewhat modified through the investigation of the phenomenon of thesaurisation in historical times (Sarvas 1967), although various forms of plundering have regained importance as explanation for the accumulation of precious metal in Scandinavia (Sawyer 1982). By and large, however, the general opinion has been that it accumulated through trade. Since the 1950s there has been a more systematic interest in the composition of the Scandinavian Viking Age silver hoards, with a shift towards problems concerning the function of the metal within the society that hoarded it. Most important for the study of the internal economy has been discussion of the economic significance of hoarding, i.e. its function in a primitive economy (Kiersnowski 1960; Malmer 1985). Thus, the present paper investigates regional Viking Age economy through the composition of the silver hoards. Their complex character is regarded as meaningful, but, as opposed to previous works (Kiersnowski 1956; Tabaczynski 1958; Lundström 1973; Hårdh 1976a), this is not seen as representing a uniform economy.

In studying Viking Age economy (AD 800–1100) there has been an emphasis on the distribution of objects, mainly as a function of trade, dealt with in a variety of ways (Hårdh 1978, for a listing). Trade can be understood as a continuous linear function, but also as a manifold function in which goods can be exchanged in many different ways and in which the formal economic relationship is but one of several possibilities. In the following, this wider concept of trade will be employed and the problems of a diverse economy dealt with using the concept of economic spheres for indicating different

systems of exchange within a society, stressing the close relationship between social and economic functions (Bohannon and Dalton 1962; Callmer 1976). The economic system is thus seen as a structure of different economic spheres, in which different kinds of money, objects and services circulate. Also, the geographical extension of exchange should be considered, involving regional, super-regional and long-distance spheres of circulation. The function of this structure must be searched for in the socio-economic mechanisms within society. In a stratified society the control of critical resources — whether necessary for subsistence or merely attractive — exercised by certain individuals or groups is more rarely physical force than various forms of relationship and dependence. The most important implication being that control and circulation of goods are institutionalised into systems of exchange (Smith 1976).

The aim of this paper is thus to analyse through time the Öland Viking Age silver hoards with regard to these two aspects: an economy that is not uniform; and an economy tied to social control and its mechanisms.

Outline of methodology

The main categories of different kinds of money were introduced by George Dalton (1977), and later considered in a Viking Age context by Richard Hodges (1982). Before dealing with these, however, the more general economic meaning of ‘money’ must be mentioned. Normally, there are four different economic functions to be considered: means of payment; means of exchange; standard of value; and value guarantor. When money has all of these functions it is called ‘all-purpose money’, but if only one or some of the functions are present it is called ‘special-purpose money’. Dalton’s categories are concerned with different kinds of special-purpose money, and the listing below is a short description of the concepts and their implications regarding Scandinavian equivalents. An addition has been made of a category for foreign coins, as these constitute a large and important group within the Scandinavian hoard material.

A Primitive money

This is a uniform medium, not necessarily metal (e.g. blocks of salt or lengths of cloth), with an obvious commercial function in a society with a narrow or peripheral market exchange. A Scandinavian example is provided by the silver bars and ingots in the hoards, but the concept could also be applied to the earliest Scandinavian coinage (the Hedeby-Birka coins; cf. Callmer 1980) as an advanced form of primitive money.

B Early cash

This is the early coinage closely connected to the growth of a state, implying a medium that is both uniform and controlled. It functions economically more as a means of payment (e.g. for taxes and fines) than as a means of exchange. In Scandinavia the early Danish coinage provides an example (Andrén 1983), but other forms are known during the Viking Age, above all the tributes of furs from peripheral populations, as collected

by the Norse merchant Ohthere (Ross 1941:21), or by the Rus (Constantine Porphyrogenitus:63).

C Primitive valuables

These are artefacts used in ceremonial exchange and in political, social and judicial transactions, implying a social structure based on gifts and debts (Mauss 1925; Duby 1973). As a Scandinavian example the arm- and neckrings, with their long tradition and obvious social importance (cf. the Scandinavian saga material), must be considered.

D Foreign coins

This category comprises the imported coins, basically to be interpreted as payment for goods. An important implication of the concept is the functional differences within the economic systems in which the coins are minted versus deposited (cf. the functions of a primitive economy, above).

Finally, the processes by which money changes character and function should be pointed out. A piece of jewellery circulating as a gift, or as tribute, is transformed into another kind of money when cut up into hacksilver. A foreign coin given a loop becomes a trinket, but then can be turned again into a means of payment.

The Öland hoards

The material from Öland, off the Swedish east coast, presents two obvious advantages: it is, with the exception of Gotland, the richest area in Scandinavia for Viking Age silver hoards; and, secondly, as an island, the geographical area is clearly defined. The major disadvantage is that the find material has been only partly dealt with previously, although a survey of the majority of hoards was published by Stenberger in 1933, together with the Viking Age grave finds (and some of the hoards are further commented upon in Stenberger 1958). The historian Nils Blomkvist published the material from Köpinge and Bredsåtra parishes (1974), and some hoards containing hacksilver were treated by Lundström (1973). The present analysis is based on the finds as listed by the Museum of National Antiquities (SHM), in some cases the local Kalmar Museum (KLM) and the Historical Museum in Lund (LUHM). The aim has been to divide the hoards into strata of different kinds of money and four categories are distinguished: coins, bars and ingots, hacksilver and complete objects (Fig. 1).

A Foreign Coins

The publication of a catalogue of Viking Age coins found in Sweden has been in progress since 1975 (CNS: *Corpus nummorum saeculorum IX-XI qui in Suecia reperti sunt*, ed. Brita Malmer), but the Öland material has not yet been published. The identification of the coins has been done with the help of Bengt Hovén (Arabic coins) and Elsa Lindberger (Anglo-Saxon coins) at the Royal Coin Cabinet (KMK), to both of whom I

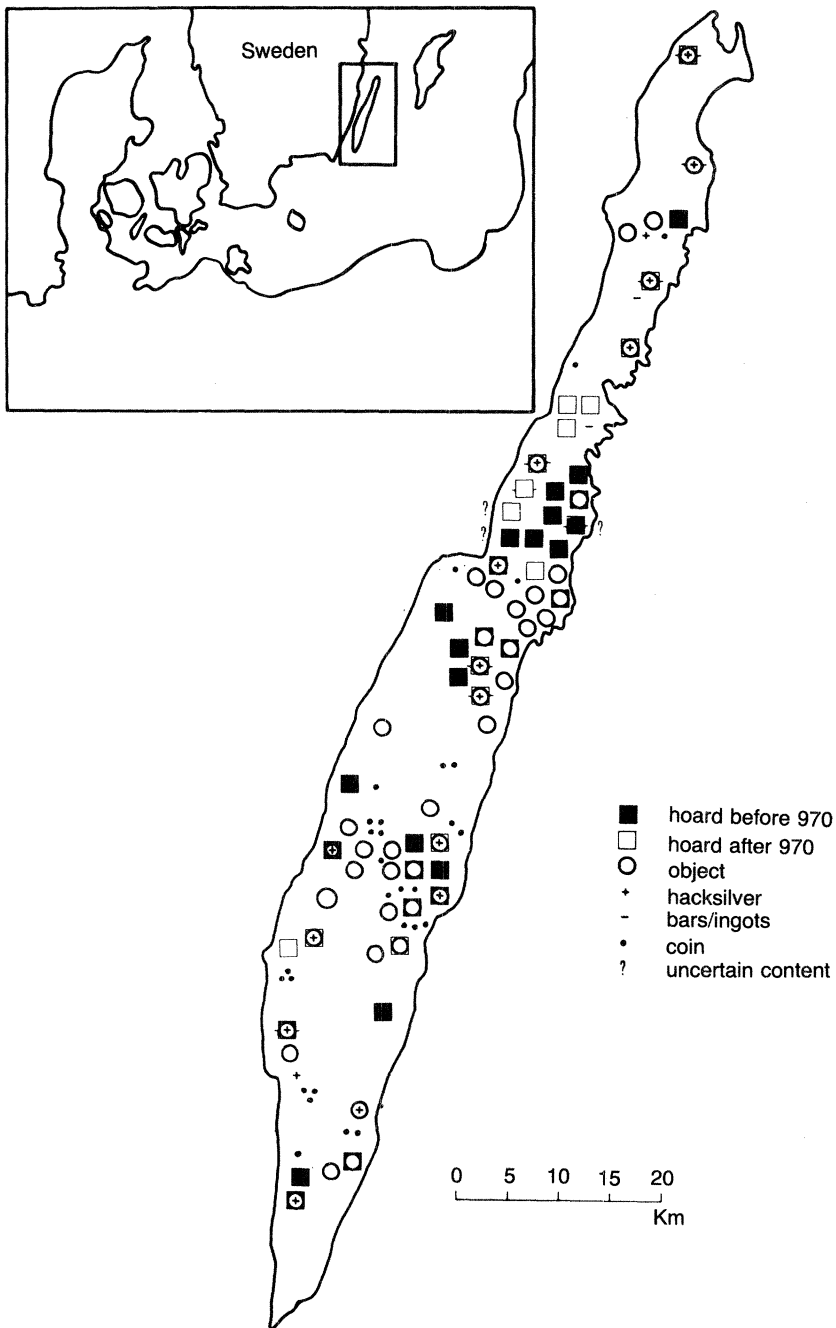


Figure 1 Silver hoards and single coins found on Öland, Sweden.

am greatly in debt. The German coins have been identified by Gert Hatz (1974; with the addition of unpublished listings kept in KMK). The datings used are *terminus post quem* (tpq) for the west European coins, and the year of the latest coin for the Arabic dirhams. Find categories other than hoards have been included, comprising single finds, coins

from graves, and coins from settlements. Coins furnished with a loop have been omitted. The material can be divided into three major groups: (i) Arabic coins before the Samanid inflow (c. 890); (ii) the mainly Samanid coins from before c. 970; and (iii) the west European coins from after c. 970. Together they cover the ninth, tenth and eleventh centuries, the exceptions being a single find of a coin struck in the eighth century and two hoards dated to the early twelfth century.

B Bars and ingots

These are treated as a separate category even though they normally appear as cut-up pieces and so could technically be classified as hacksilver, but are distinguished as ‘cast or worked bullion’. In this category are also included some heavy penannular rings (SHM 15890), and a silver casting (SHM 374F).

C Hacksilver

This comprises all cut-up pieces of objects (other than bars and ingots), including what is referred to in Swedish as *snodder* (twisted rod fragments) which are presumably bits of twisted arm- and neckrings. Terminals and pieces of rings constitute a large group within the Öland hacksilver, although arm- and neckrings with just their terminals cut off are classified here as complete objects.

D Complete objects

Only arm- and neckrings are treated, as these form the most important group of objects (cf. above), easily distinguishable within the hoard material.

Farming intensity and farming areas

A general survey of the relationship between finds and farming intensity has a twofold purpose. Firstly, to show the main farming areas of Öland in earlier times and, secondly, to evaluate the status of the finds of single coins in relation to the hoards. A valuable source is provided by the list of tax-duties from 1571 (Älvsborgs lösen; Forssell 1872), including information on tithes from the individual parishes. Figure 2 is based on the yield of rye and barley in 1571, by parishes. However, there are two major problems to be considered.

The first is that 1571 was not a representative year, for Öland had been severely affected by the Nordic war of 1563–70. Further, this affected mainly the southern *mot* (i.e. the old division of Öland into a southern and a northern *mot*, with the boundary to the south of Högsrum and Runsten parishes), where the yield was reduced to 20 per cent of the normal, in contrast to the northern *mot* where it was only down to 80 per cent (Nordmark 1949:19). These factors have been taken into account but in the calculations we are forced to use the *mot*-division as there is no detailed information available on how

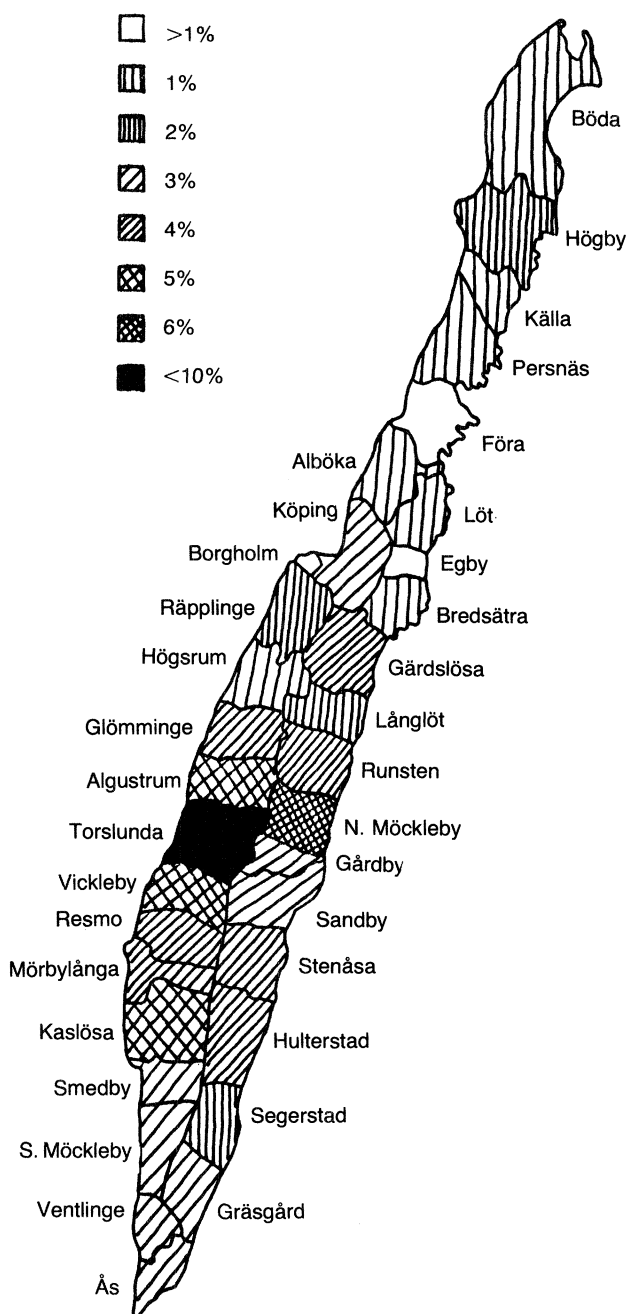


Figure 2 The yield of rye and barley (in per cent) by parish on Öland, in 1571.

the individual parishes were affected. This leaves a somewhat biased picture, particularly in relation to Torslunda parish which seems over represented.

On the other hand, this bias is modified by the second problem; this concerns the distribution of the *alvar* wastelands. These very marginal areas from a cultivation point

of view are mainly found in the south, the Great Alvar covering most of the central parts of the island to the south of Torslunda and Gardby parishes. This therefore implies an intensity of cultivation much greater than is evident from Figure 2, in some parishes the amount of arable land being less than half of the total area.

With regard to these factors, the arable coastal ridges in the south, together with the central area to the north of the Great Alvar, are to be considered the major farming districts of Öland. This is also where the majority of single coins have been found, suggesting that these should be regarded as deriving from scattered hoards (cf. Fig. 1).

Economic spheres I

The four categories of hoard material will be treated separately as regards quantitative, qualitative and/or geographical changes through time. Also, the degree of complexity, i.e. the degree of combination with other kinds of 'money', will be considered. As appears from Figure 1, many of the hoards are composed of more than one medium, indicating both connections between different economic spheres and the general presence of a more complex economy. This is indicated on the Figures by the addition of circles.

A Foreign coins

The distribution of coins over the three periods is shown in Figure 3. The ninth-century coins show not only a quantitative but, above all, a qualitative difference from the following periods (Fig. 3a). This first period is dominated by grave finds mainly comprising the earliest Arabic coins; there is one Carolingian (SHM 6051:26). The single coins can not be used for dating scattered hoards as later Arabic coin hoards usually carry a tail of older coins, but in general there are few deposits in Scandinavia from this period (Hovén 1982). This makes it reasonable to refer undetermined Arabic coins and coin hoards to the tenth century (Fig. 3b). Possibly, the opposite could be true for the undetermined grave coins, as more than half of this find category has been dated to the ninth century. Out of ten determined Arabic coins only one is dated to the tenth century (SHM 1304:20–27).

In the small Öland material it is worth noticing the presence of Omayyad coins. Out of six graves containing ninth-century coins, two contain one Omayyad each (SHM 5682, 21207). The two contemporaneous coin hoards are exclusively composed of Abbasid coins (SHM 1009; Tornberg II:79). Among the single finds is one Omayyad; this is, however, furnished with a loop and must thus be classified as a pendant (SHM 3563).

The heavy presence of Omayyad coins is a distinguishing feature of the Birka graves, where it has also been shown that the grave coins are not in accord with the coin-stock in the contemporary hoards. Further, there is frequently a long period between the coin being struck and its deposition in the burial. These observations indicate diverse circulation, where the grave coins can be related to an economic sphere associated with ports-of-trade, and possibly to a coin-stock comprising also the earliest Scandinavian

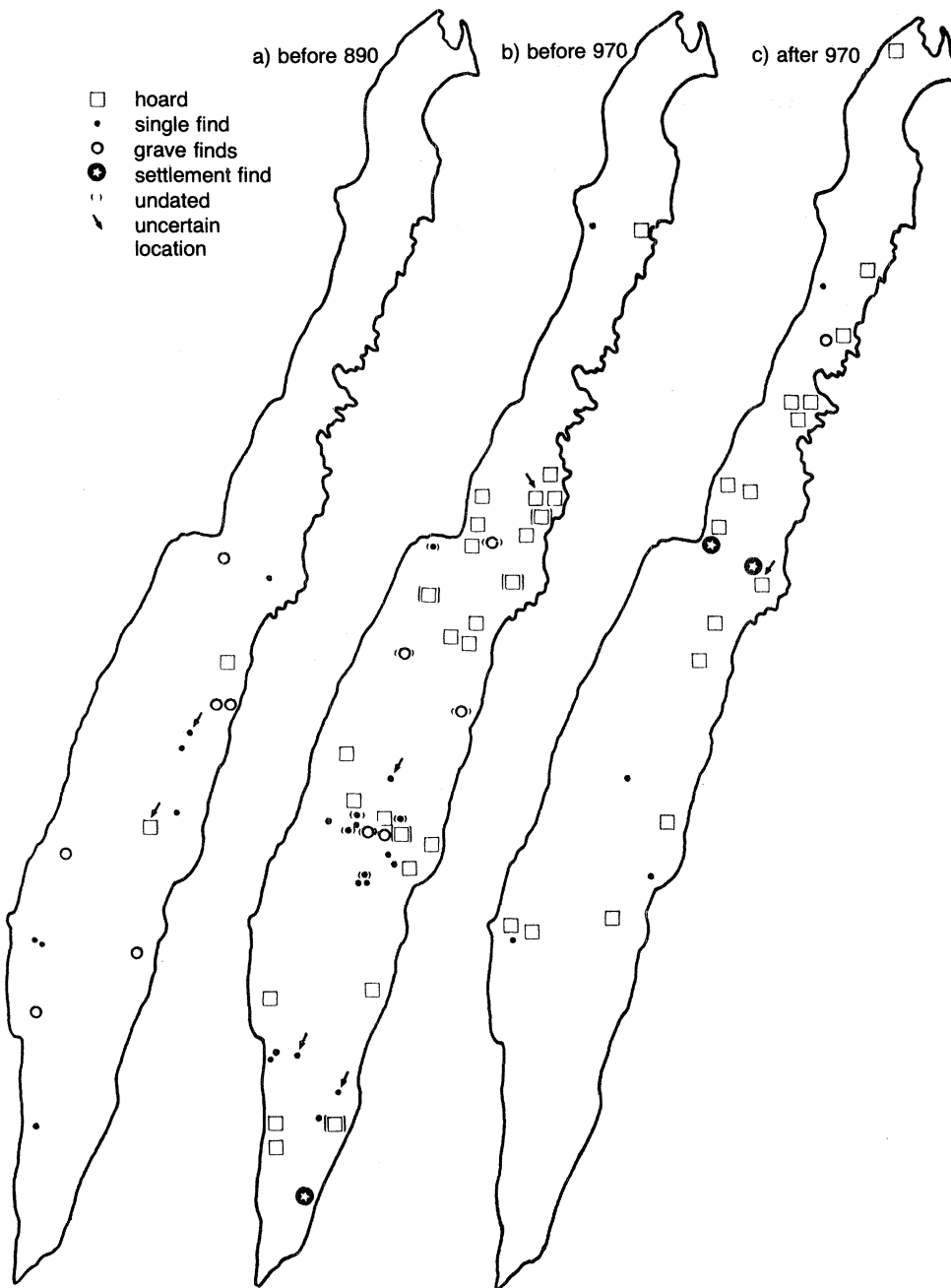


Figure 3 The distribution of Viking Age coins on Öland, by period.

coins (the Hedeby-Birka coins), with a practical and explicit economic function as a means of exchange (Callmer 1980).

The tenth century is characterised by a dramatic rise in the number of Arabic coin hoards (Fig. 3b), representing mainly the great influx of Samanid coins, the presence of

which is also noticeable in the single finds. Twelve out of sixteen identified coins are Samanid, a proportion that further supports the hypothesis of single coins being from scattered hoards. The one identified Arabic grave coin is a Saffarid, uncommon within the hoards; there is one tenth-century German grave coin (SHM 8835). This Arabic influx seems to have been short and intense (Fig. 4), diminishing rapidly after c. 970 due to the silver crisis in the Caliphate somewhat earlier (Callmer 1980:205). The economic context of this limited and intense coin import is likely to be found outside Scandinavia, in the trade of slaves and furs, the Russian coin hoards showing the same Arabic influx at this time. Later Arabic coins appear in a different context, within the mainly west European coin hoards. On Öland there is at present no such hoard dated before c. 1016 (SHM 374F), and the majority date from well into the eleventh century.

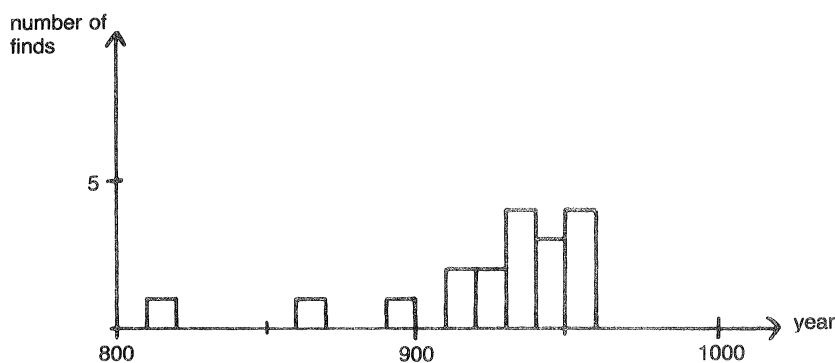


Figure 4 The year of the latest coin in Arabic coin hoards on Öland.

The only coins from a settlement context on Öland during this period should be remarked upon. These comprise a Samanid from the fortified settlement at Eketorp, together with two German coins, in a context of several hundred medieval coins (SHM Dnr 5035/64, 7052/64, 7316/67, 741/68). No doubt these Viking Age coins are best understood as derived from a scattered hoard. It is suggested that the, sometimes large, accumulations of hoarded coins should be regarded as having an economic function as a *means of payment* rather than a *means of exchange*. Their function after import is connected with their fragmentation and will not be discussed here. In general, however, fragmentation of coins must be understood along with hacksilver in the functioning of an economic system based on weight. The relationship between the Arabic coins and the general economic situation is reflected in the composition of the hoards (Fig. 5a). It is obvious from Figure 6 that the majority of hoards contain only one or two different kinds of money. Hoards composed exclusively of coins make up almost 60 per cent, and a very small proportion is composed of more than two categories. In the case of the second largest group, the coins are almost exclusively combined with complete objects. In one case the coins appear together with hacksilver (SHM 611), and in the remaining seven hoards arm- and neckrings are present in five of the finds.

Thus, the *domestic money* connected with the Arabic coins is mainly what should be referred to as *primitive valuables*, although both hacksilver and bars and ingots are

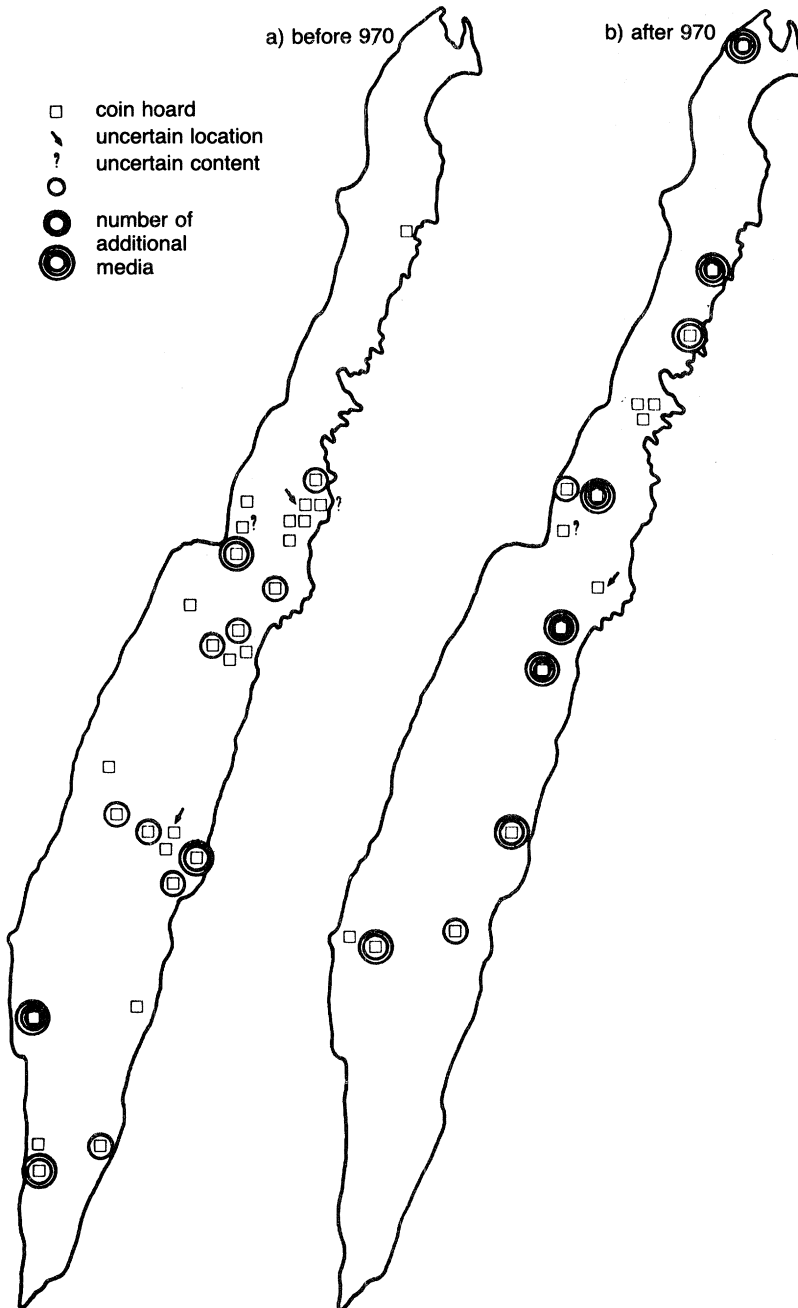


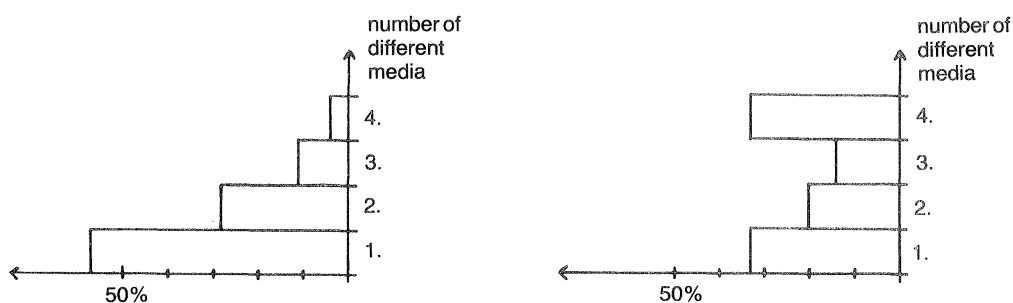
Figure 5 The relationship between foreign coins and the degree of complexity within Öland hoards.

present in the economy. In a context in which more people seem to own foreign coins than previously, these are not connected to a more complex regional economy.

During the eleventh century we can note several changes (Fig. 3c). The number of hoards is lower than previously, and the coins are almost exclusively west European. On Öland, the majority of finds are distributed in the northern part of the island.

In addition, a new category of finds is represented by coins from settlement contexts. These are, however, not ordinary villages, but market and production places with evidence of long-distance exchange. At Köpingsvik, on the west coast of Öland, c. 20 coins appeared in a context of antler, bone, iron, and bronze production; there was also a stone industry. The settlement flourished during the eleventh and twelfth centuries (Hagberg 1973; Schulze 1978) and the coins, dating from the late tenth to the early twelfth century, had been partly cut into pieces and were found together with hacksilver, weights and scales. Although mainly German and Frisian, there were also two Danish coins present (Hatz 1974; SHM Dnr 1533/74).

Further inland, to the east of Köpingsvik, a similar production site was investigated at Gåtebo. Fourteen German coins from the early eleventh century were found together with slag and iron filings, suggesting iron working; in the area there are finds of iron bars (cf. Haglund 1978). At Gåtebo, also, the activities may have continued into the medieval period (Stenholm 1977; Holgersson 1978). German coins also dominate the hoards though these have a larger proportion of other coins as well, particularly Anglo-Saxon and Danish. The relationship between the hoards and the activities connected with the settlements above must be considered important for an understanding of the regional economy, as well as for the significance of long-distance trade within it. This structure remains to be determined, but the geographical distribution of the hoards, with a concentration in the area around Köpingsvik and Gåtebo, must be stressed (cf. Blomkvist 1974). At this period, the hoards reflect a more complex economy (Fig. 5b), as more than half of them are composed of three to four different kinds of 'money' (Fig. 7).



Figures 6 and 7 The relationship between the coins and the composition of Öland hoards before 970 (left), and after 970 (right).

In conclusion, the period AD 800–1100 provides the following picture. During the ninth century *foreign coins* belong mainly to an exclusive economic context connected to ports-of-trade, such as Hedeby and Birka. At the same time, though, Arabic coins are being accumulated as payment for goods. Mainly flourishing during a limited period in the tenth century, this economic sphere is connected with activities outside Scandinavia.

The function of the coins after import is unclear, but circulation as a means of payment along with the hacksilver cannot be excluded. During the eleventh century there is a change in long-distance contact. The coins are mainly west European, and there are finds suggesting exchange taking place within Öland. Also, at least some of the goods in question have a more local connection. At the same time, a more complex regional economy appears in the hoards, as a larger number of the finds are composed of several different kinds of money.

B Bars and ingots

This material is present during two periods, corresponding roughly with the tenth and the eleventh centuries, the majority of finds having been dated from the occurrence of coins (Fig. 8). Exceptions are two finds containing a spiral bar with rhomboid section and specially designed terminals (SHM 4791, 15890). Such bars are characteristic of Gotlandic finds mainly referred to the tenth century (Stenberger 1958:226–33). In one of the Öland hoards the spiral bar is connected with ‘Permian rings’, usually found in Scandinavian silver hoards of the period AD 850–950, which supports a tenth century context for the Öland bars. Finally, an undated find of silver bars has been referred to the eleventh century (KLM 4556); the fact that the four other silver hoards from the same area all contain west European coins makes this dating seem reasonable.

In general, the Öland material accords with the rest of Scandinavia in that nothing suggests the use of silver ingots before the tenth century (Lundström 1973:32). As for chronological distribution, the later period dominates. Out of seventy-eight silver hoards it has been possible to date sixty; bars and ingots appear in 30 per cent of the eleventh century hoards as compared with 11 per cent in the tenth century. The material is not evenly distributed over the island, but is obviously connected with the northern part. This compares well with the west European coins, for such hoards have a high degree of complexity and thus often contain bars and ingots (cf. Fig. 5b). In fact, their complexity is even more obvious, for finds in which bars and ingots are combined with more than one other kind of money strongly dominate the picture (Fig. 9).

In total, bars and ingots constitute the smallest category within the Öland hoards, appearing in 14 per cent of the finds. This should be compared with the proportions of the other domestic categories, with 29 per cent for hacksilver and 37 per cent for arm- and neckrings. Altogether, the category of complete objects is present in more than 60 per cent of the finds. The small element of bars and ingots is also, as we have seen, connected mainly with the more complex hoards.

The chief characteristic of the bar/ingot material is its uniformity and conscious design as cast or worked bullion. Even though a function as raw material for the production of jewellery could be suggested, bars and ingots must be understood mainly as a kind of money. The find contexts, together with the occurrence of fragmentation and of pecks (signs of circulation), strongly support this. Thus follows the hypothesis that bars and ingots are a form of *primitive money*, with an explicit economic function as a means of exchange. The concept *primitive money* implies narrow or peripheral market transactions and suggests an economic relationship between more equal parts. Referring to the groups in control of regional exchange such *primitive money* would be related to a mainly

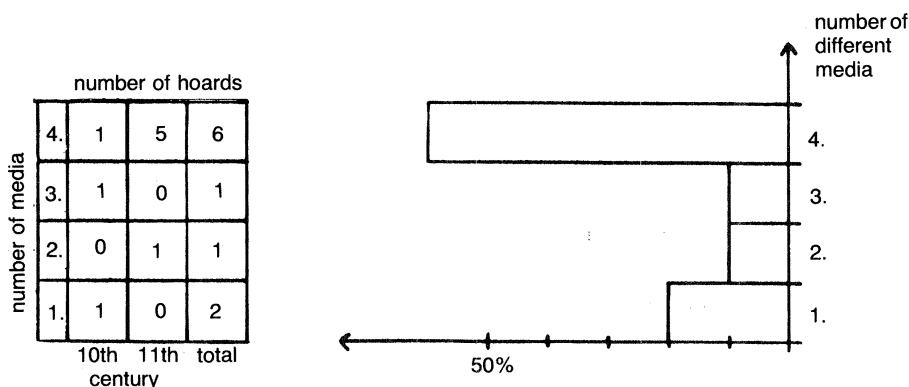


Figure 9 The relationship between bars/ingots and the composition of Öland hoards.

century is worth considering. It could be suggested that it reflects a difference in circulation, i.e. that the northern part of Öland had a more developed economy. However, it is doubtful whether such a qualitatively diverse circulation should be interpreted within a regional exchange. The concentration of bars and ingots in this part of the island, peripheral to the central farming areas, must be regarded in relation to regional conditions as well as to long-distance contacts and here the connection with the west European coins could be emphasised. Iron production has already been remarked upon in discussing the coins, and the extraction of bog ore on the coastal mainland, though mainly medieval, is known already during the Viking Age (Hyenstrand 1977; 1979). This could have formed an important element in the super-regional contacts, linking the different economic spheres.

In general, the hoards reflect a more complex economy during the eleventh century, a context that agrees well with the growing importance of this domestic category with more explicit economic functions. A connection between regional and long-distance interests should be stressed as an important cause of the complexity of the hoards at this point.

C Hacksilver

This material is shown together with bars and ingots (Fig. 8). Three hoards were not datable within the period AD 900–1100, but have been placed in the eleventh century with question marks (KLM 4556, 4975; SHM 5535). In one case it was not possible to judge whether the find contains hacksilver or not, and thus it has been omitted (SHM 802).

The connection with *primitive valuables*, given the fragments of arm- and neckrings, is obvious; such are present in two-thirds of the hacksilver hoards. Here, though, we shall concentrate on the relationship to *primitive money* as represented by bars and ingots in relation to which hacksilver is, above all, more evenly distributed geographically. As for the chronological distribution, hacksilver is present in at least 18 per cent of the tenth-century hoards and in at least 36 per cent of those from the eleventh century; this is greater even than for bars and ingots (cf. above). However, there are also the undated hacksilver hoards to be considered. The degree of complexity, as with the *primitive*

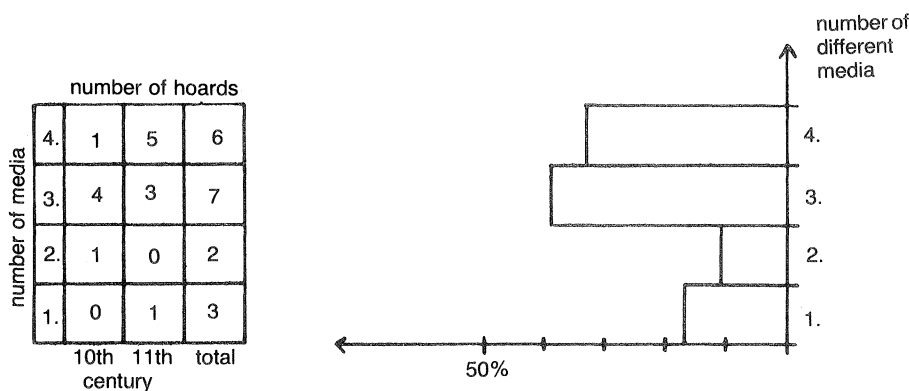


Figure 10 The relationship between hacksilver and the composition of Öland hoards.

money, is high, although hacksilver appears more evenly distributed in hoards composed of three to four different kinds of 'money' (Fig. 10).

In general, hacksilver in its broader definition, i.e. including bars and ingots, has been connected to the decreasing Arabic coin import and understood in terms of objects and jewellery being absorbed into circulation to cover the market shortage of silver thus occurring (Lundström 1973:11). In the Öland material the connection to the cessation of importation is suggested in the tenth-century hoards containing hacksilver. We can compare the distribution of Arabic coin hoards (Fig. 4) with the tpqs of the hacksilver hoards: 956-74 (SHM 611); 949/50 (SHM 7589); 951/52 (SHM 4326); and 953/54 (SHM 23964). As already mentioned, the import of west European coins, as reflected in the hoards, takes place well into the eleventh century and thus the Öland material could be explained by a shortage of silver.

The truth of such a connection must, however, be questioned. It is doubtful whether the coin import and the function of hacksilver should be related to the same economic context. Instead, we must stress the casual character of hacksilver — as compared to complete objects and to bars and ingots — indicating an exchange that is neither continuous nor uniform. Such an exchange, as reflected in the distribution of *primitive money*, seems also rather limited and should be referred mainly to a super-regional economic sphere. The hacksilver, on the other hand, must be considered as the reflection of a casual regional circulation where personal belongings, when needed, were transformed into a more practical economic medium. In that context it is hard to find any obvious connection with a practically motivated coin import.

On Öland the hacksilver mainly consists of relatively large units, but the material sometimes shows a strong fragmentation. This is particularly true of the hacksilver hoards from the southwestern part of Sweden (Hårdh 1976b). However, it is necessary to make a distinction between the process of fragmentation and the original transformation of an object into hacksilver. Within the material there are signs of circulation across long distances. A type of heavy armring found on Gotland and Öland occurs as hacksilver, and only as hacksilver, in south Scandinavian silver hoards (Skovmand 1942:217). Further, more than 40 per cent of the Öland hacksilver hoards

also contain bars and ingots, thus showing a connection between regionally-based personal objects and a super-regional exchange.

Considering this, it can be argued that the primary function of hacksilver is as a medium of exchange in a casual regional sphere, but secondarily, when absorbed into the super-regional sphere, it will function along with *primitive money* as a more explicit economic medium. The fragmentation of hacksilver must be referred to this secondary process. Thus we must argue that the introduction of hacksilver is an expression of the proper functioning of an economic system, rather than the result of a lack of silver.

D Arm- and neckrings

Complete objects are the dominant group of *domestic money* in the Öland hoards. Within this category arm- and neckrings constitute the most common form, present in at least 58 per cent of hoards containing objects. One find where the composition could not be determined is omitted (SHM 802).

The arm- and neckrings belong almost exclusively to the tenth and eleventh centuries, but are generally difficult to date within this period (Skovmand 1942; Stenberger 1958:85). The rings often appear alone and thus there are no obvious changes in the material apparent through time. Instead, the number of arm/neckrings in the individual finds will be considered in relation to the complexity of the hoards. The rings normally appear singly, but there are examples of hoards with several, sometimes many, units (e.g. SHM 15890, containing thirteen armrings).

In general, complete objects have an even geographical distribution, as is true for the arm- and neckrings (Fig. 11b). The relationship to other kinds of money is reflected in the large number of hoards where the rings are not combined with other categories (Fig. 11a). In total, almost 50 per cent of the finds are hoards composed exclusively of rings (Fig. 12), which should be contrasted with the high degree of hoard complexity within hacksilver and bars and ingots (Figs 9–10). The rings are best compared with the Arabic coins, whereas the west European coins are more evenly distributed (Figs 6–7).

The connection between *foreign coins* and *domestic primitive valuables* has already been pointed out, the combination with complete objects being the second largest group within the Arabic coin hoards. Similarly the rings, when combined with one additional category, show a connection with the Arabic coins. Out of six such hoards, Arabic coins are present in at least four. In one case it is unclear whether the ring is combined with Arabic or west European coins (SHM 84/130), and in the final case hacksilver is the second component (KLM 4975).

The distribution of arm/neckrings, seemingly contrary to that of the other domestic categories, must be understood in terms of a different context of circulation. The rings in the Scandinavian silver hoards are generally considered to be a form of money, arm/neckrings having been metrologically analysed for a standard unit of weight (Skovmand 1942; Stenberger 1958; Lundström 1973; Hårdh 1975). Although correspondences can be pointed out, particularly as applied to the heavy gold armrings (Skovmand 1942:42), it must be doubted whether the rings should be judged from such a strictly economic point of view (see also S. E. Kruse, this issue). In general, it is also stated that whatever the original function of the rings, they could be transformed into a means of payment when

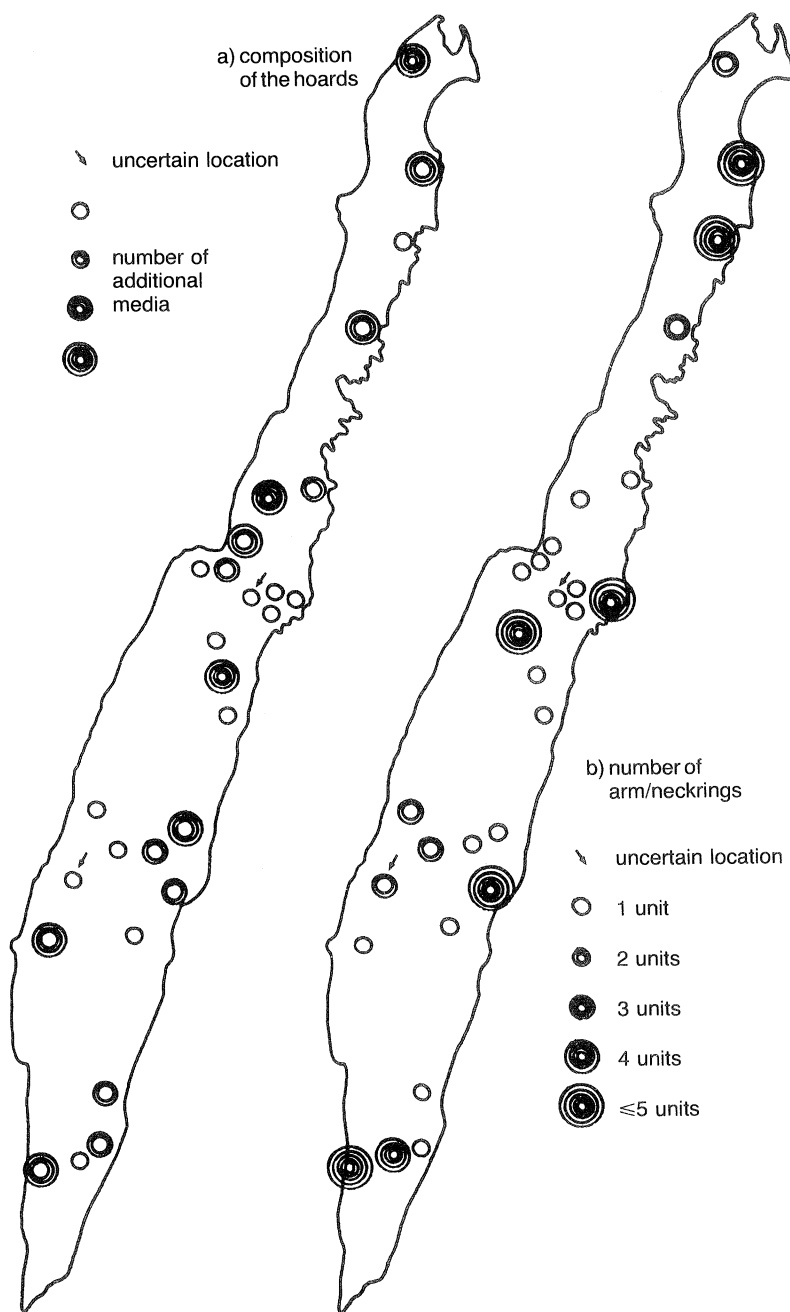


Figure 11 The relationship between arm/neckrings and the degree of complexity with Öland hoards.

necessary (Lundström 1973:37). However, to understand Viking Age economic structures the original function of the rings must be considered important.

Arm- and neckrings appear in the Norse and Icelandic sagas, on the eighth- and ninth-century Gotlandic picture-stones, in the world of *Beowulf*, and in older symbolic

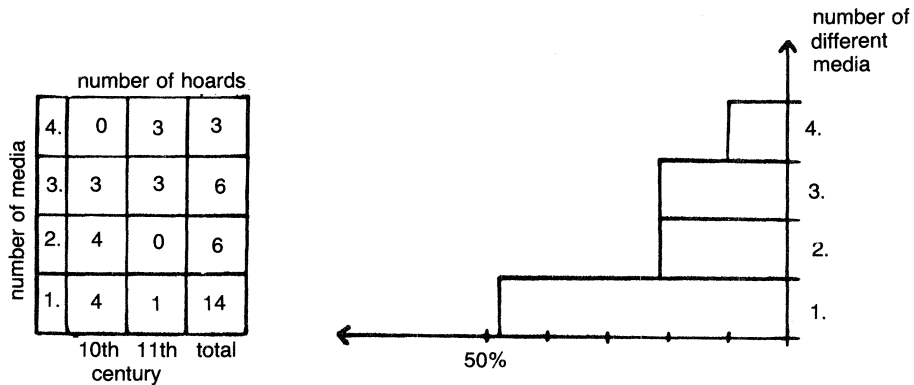


Figure 12 The relationship between arm/neckrings and the composition of Öland hoards.

representations (e.g. Bronze Age rock carvings). The ring is regarded both as a symbol of gods and a sign of social importance (Vierck 1981). The *primitive valuables* represented by arm/neckrings could thus be termed *status money*, implying payment within social transactions, such ‘*générosités nécessaires*’ (Duby 1973:68), constituting the base of the socio-economic structure.

As already pointed out, the hoarded arm- and neckrings mainly belong to the tenth and eleventh centuries. Such large-scale deposition could reflect a change in function. Thus an increasing and more widespread use of *status money* could mean that more rings were produced and in circulation than before, explaining the accumulation of rings in some hoards which have a low degree of complexity. Out of six finds containing more than four arm/neckrings, three are composed exclusively of rings (SHM 2594, 4082, 13334). Of the remaining finds two also contain Arabic coins (SHM 936, 7589), an interesting relationship as the ring accumulations seem to belong mainly to the tenth century. The latest hoard could not be dated closer than to the period AD 950–1050 (SHM 2594).

A similar circulation, isolated from the more complex hoards, has been pointed out within the Arabic coins, as well as the connection between the two different kinds of money. The rings carry a double function as both social and (through their transformation into hacksilver) economic transactions. This double function must be considered the main link within the economic structure between the tenth-century *foreign coins* and *domestic status money*.

Economic spheres II

The hoards seem to reflect an economic system where much silver is wasted, but this is what is termed a *primitive economy*, where the silver does not have a function within a daily, continuous exchange. As we have seen, the diversity of *domestic money* shows a regional exchange that is not uniform. The implication of a *primitive economy*, however, is not simply of a self-supporting society or the use of barter. Instead, the control of circulation and the existence of systems of exchange forming a continuous function

within society must be stressed. It is within these systems, and largely within the upper social strata, that we find Viking Age silver. The 'générosités nécessaires' applied in particular to the princes, for whom it was fundamental (Duby 1973:60–9). Thus, the socio-economic system is the essential implication of a primitive economy and the hoarding of precious metal.

Within a diverse economy the inter-relationship between the different economic spheres must be considered, not only concerning the various domestic kinds of money but also the relationship between regional economy and foreign contacts. A continuous domestic exchange, as reflected in the bars and ingots (*primitive money*), appears narrow and mainly refers to a super-regional exchange. In this more sophisticated economic context we must also expect to find any continuous long-distance contacts.

During the ninth century the emporia constituted these meeting points, while the eleventh century sees the presence of smaller and regionally situated places. The implications of these changes remain largely to be determined, but must be regarded as highly important. The significance of places like Köpingsvik and Gåtebo must be stated, as well as the structure of regional circulation. The situation as reflected by the *domestic money* implies a very restricted regional exchange in terms of more economic transactions, a situation further supported by the problems around the south Scandinavian 'Köpinge-places' (cf. Cinthio 1972; Ersgård 1986). Activities outside the domestic regional system, like the eastern contacts reflected in the tenth-century coin hoards, also seem peripheral to this. The contact with domestic exchange is established only within the regional socio-economic system, and through the categories functioning within it. Involvement in this exchange was important and thus restricted. Raids must have formed an opportunity to become powerful, through access to goods in foreign countries or on the seas, and the Arabic coins can be seen as reflecting such activities. However, plundering must be considered the most casual way of reaching or keeping a social position, and it is doubtful whether the accumulation of Arabic coins should be understood in terms of systematic raiding. Instead we must consider the possibilities of active participation, however forceful, in a foreign economic system. Constantine Porphyrogenitus describes how the Rus from Kiev spent the winters travelling around to collect tributes from their subjects (Constantine Porphyrogenitus:63), and within Scandinavia we know of the tributes of furs collected by the Norse merchant Ohthere (Ross 1940:21).

The motives behind activities in foreign areas must be sought for within the socio-economic structure, as reflecting the limited possibilities of establishing a position and the competition for power (cf. Carlsson 1983:118–26). The period relating to the Arabic coins also sees the hoarding of arm- and neckrings, indicating a change in function in the latter category during this time. The accumulation of rings in hoards must be regarded as an unrealised social, as well as an economic, potential and thus might reflect a situation of conflict and change within society.

Thus, on looking at regional Viking Age economy, we must stress again the importance of the social structure. In the main, an economy where money was peripheral to subsistence continued for a long time. Even when silver was put into continuous circulation through domestic coinage this does not automatically imply a market economy, for the early coinages were strongly connected to the growth of royal power, to

systems of dependence and to an economic function as a means of payment rather than as a means of exchange (cf. Andréén 1983).

Conclusions

Based on the qualitative differences within the Viking Age silver hoards from Öland in Sweden, an economic structure with diverse spheres has been pointed out, with the presence of three different kinds of *domestic money* showing diverse systems of circulation. *Primitive money*, in the form of bars and ingots, reflects continuous and explicit economic transactions from the early tenth century onwards. This economic sphere was mainly connected to a super-regional exchange, in which iron and iron production may have constituted an important element. The circulation of *primitive money* also included hacksilver which, originating in the cutting up of personal valuables, reflects casual transactions made with the super-regional sphere; its presence implies that continuous exchange did not exist on the regional level. Regionally, there was instead a circulation of *primitive valuables* or *status money*, especially in the form of arm- and neckrings, which constituted the predominant form of *domestic money*, mainly dating to the tenth and eleventh centuries, a period when these social transactions may have become increasingly important.

Long-distance contacts are reflected in the large number of *foreign coins*. During the ninth century two separate economic spheres are discerned within the Arabic coins. One, reflected by coins found in graves, can be connected to Hedeby, Birka and the larger ports-of-trade. The other, mainly flourishing in the tenth century, is connected to activities outside Scandinavia, above all the trade in furs and slaves, and is peripheral to the domestic economic system. During the eleventh century there is evidence of continuous production, including iron, found in association with west European coins at centres on Öland. At the same time the hoards reflect a more complex economy than previously. The circulation reflected in the *domestic money* indicates that regional circulation was not continuous and open, but bound to the systems of exchange forming part of the general socio-economic structure. The more continuous long-distance contacts are also related to these systems and to the higher levels of control within society.

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Appendix

Catalogue of finds

Silver hoards:

SHM 55, 77, 84, 95, 99, 100, 101, 120, 124, 128, 129, 130, 374F, 515, 600, 611, 798, 802, 936, 957, 1009, 1271, 1304:8, 1304:11, 1304:46–9, 1383a, 1639½, 1647, 1672, 1742, 1913, 1985:12, 2005,

2594, 2767, 3137, 4082, 4205, 4326, 4432, 4791, 4860, 5535, 5964, 6162, 6825, 7399, 7589, 8513, 8879, 10957, 11493, 11945, 12080, 13534, 13630, 15737, 15890, 16047, 16470:88–9, 17412, 17735, 18287, 19757, 20390, 23289, 24668; SHM Dnr 7387/60; KLM 3040, 4556, 4975, 7941, 16515, 21278, 23964; Gothenburg 1667–8; Ahlqvist 1825:119, 142; Tornberg 1848:nr 55–6; and unpublished sources: Tornberg I:1; Tornberg II:79; J. Wallman; topographic catalogue at KMK; inventory list at KLM.

Single coins:

SHM 1177, 1304:55, 1552, 2415, 3669, 3841, 4265, 4772, 4803, 5292, 6051:26, 7201, 7210, 8556, 10039:308, 11494, 11759, 13152, 17439, 18049, 18214, 23424, 25229, 26199, 26480; KLM 15894, 17900, 27304; and unpublished sources: Tornberg II:183; inventory lists at KLM and LUHM.

Coins from graves:

SHM 1304:20–7, 5682, 8835, 12321:6, 21207, 21589, 22101, 25840; SHM Dnr 4958/69; and KLM 4687.

Settlement finds:

SHM Dnr 5035/64, 7052/64, 7316/67, 741/68, 1533/74, 6214/75, 2507/77; Hatz 1974; and unpublished sources: topographic catalogue at KMK.

Abbreviations:

KLM: Kalmar Länsmuseum, Kalmar; KMK: Kungliga Myntkabinettet, Statens Museum för Mynt, Medalj och Penninghistoria, Stockholm; LUHM: Lunds Universitets Historiska Museum, Lund; SHM: Statens Historiska Museum, Stockholm.

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Abstract

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Regional economic structures: an analysis of the Viking Age silver hoards from Öland, Sweden

Regional Viking Age economy (AD 800–1100) is investigated through an analysis of the silver hoards on the island of Öland, off the Swedish east coast. The complex character of the hoards, i.e. their mixture of foreign coins, bars and ingots, hacksilver and complete objects, is regarded as being particularly meaningful, reflecting a non-uniform economy. This is related to social structure in which control of exchange is an essential factor, the different kinds of ‘money’ circulating in different economic spheres within society. Continuous and more explicit economic activities are restricted and mainly connected to super-regional and long-distance exchange.