Silver Economies, Monetisation and Society in Scandinavia AD 800–1100

Aarhus University Press

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CHAPTER 3

Commodity Money, Silver and Coinage in Viking-Age Scandinavia

DAGFINN SKRE

'The "rise of a money economy" is one of the residual hypotheses of economic history: a deus ex machina to be called upon when no other explanation is available.'

POSTAN 1973, 28

The minting of coins in Scandinavia, which started in Ribe in the mid-eighth century, was taken up in Hedeby from the early ninth and in Sweden and Norway from just before AD 1000. The use of cut silver as a medium of payment started in Kaupang, probably also in Birka, in the early ninth century, and in the mid-tenth century hoards containing cut silver were deposited in most of Scandinavia.

In many studies of Viking-age economy and society these two developments are bestowed with major importance. Is that justified? In my opinion: no. As I see it, the understanding of Viking-age economy has, for many years now, suffered from two problems: an exaggerated belief in the significance of silver and coinage; and an over-reliance on gift-giving being the main type of exchange in the early Viking Age and before. The consequence of both is that trade in that period is underestimated and underinvestigated.

Regarding the first problem, the study of early medieval media of payment has for too long relied on results from the study of coins. Although such studies are absolutely indispensable when exploring Viking-age economy and politics, the understanding of coinage as a medium of payment in the past has developed from the study of economies with a developed coinage, the Roman Empire in particular. Numismatists have produced few tools aimed at encircling the social and economic role of coinage where it was just one among several media of payment. In this paper it will be argued that commodities were the normal medium of payment in Scandinavia throughout the Viking Age and in many regions also during the following centuries. It makes more sense, therefore, to consider the use of silver and coins from a commodity-money perspective (see below, sections 2 and 4), than from the perspective of a coin economy.[1]

Regarding the second problem, it has for several decades been *Stand der Forschung* that, in Viking-age Scandinavia, gift-giving was the dominant type of exchange, supplemented with plunder outside Scandinavia, with a modest market-trade emerging in the course of the period (e.g. Hodges 1982; Lindkvist 1988; Christophersen 1989; Samson 1991; Hedeager 1993). The gradual increase in the use of silver as a medium of payment, in the form of coins and hack-silver, has been seen as indicative of an emerging market-trade which was gradually to replace gift giving. As I see it, this understanding of Viking-age economy is lacking in several respects. The giving of gifts was a highly important custom, particularly for creating and maintaining political alliances and a group of followers, as was the wealth available through raiding. But again, I find the importance of this type of exchange exaggerated at the expense of regular, low-profile trade in necessities, utensils and modest luxuries in local and regional networks. One of the main reasons for this negligence is the dominance of substantivism in archaeology (Skre 2008b). I think that we need to open our eyes to trade being something done by people. Has there ever lived a man or woman who did not exchange one thing for another?

The giving of gifts took place when social relations where forged or maintained. This would not apply in all situations when two parties had an interest in exchanging products. It would, for instance, rarely have been the case in the relationship between the craftsman who produced an object and its first user, e.g. the metal-workers who produced low-cost ornaments for the populace.

Specialized production of everyday utensils and necessities aimed at trade, e.g. of iron, pottery, soapstone and whetstones, can be traced throughout most of the first millennium AD. The exchange of products from these types of production was essential then for the day-to-day working of the mainly agrarian economy. Neither gift-giving, nor Viking raids, nor trade in the period's few markets and towns can account for the wide distribution of these products in the Viking Age. Exchange with the prime intention of acquiring objects, not to establish social relations, must have existed in a rural context throughout the first millennium and before.

I shall leave the discussion of gift-giving at that and dedicate the rest of this paper to the discussion of *money*, be it silver, coins or commodities (Skre 2008b, 330–32; 2008a, 344–47, 352). First, I shall discuss the economic system of the High Middle Ages, focussing on the role of, respectively, silver, coinage and commodities as media of payment and the relation between the different account units and types of transactions (sections 1 and 2). Then, armed with some points supplied by the first discussion, I shall try to penetrate mentalities and practices in the use of money during the Viking Age (sections 3 and 4).[2] Finally, some perspectives on Viking-age raiding and hoarding, emerging from these discussions, will be sketched (section 5).

1. What is money?

A basic concept when discussing money is *value*. On the basis of several Germanic languages, the Proto-Germanic verb **wérða* can be reconstructed, datable to well before AD. The word's basic meaning, which was carried into the various Germanic languages, seems to have been 'turn towards', developing to 'corresponding to', or 'given as compensation for' (Bjorvand and Lindeman 2007). Seemingly, the etymology indicates that an object's value was not considered an intrinsic quality but rather a relation. Its value emerges when it is compared to another object; that is as a potential or actual object of exchange.

That comparison and subsequent exchange may take several forms. In barter, the value of the two is compared directly; there is no common unit in which their respective value can be counted and compared. Therefore, in barter, the quantity and quality of the object that is given in exchange for the other needs to be negotiated anew in every transaction (Lunden 2007, 8).

Barter includes bargaining, which has a potential for generating animosity that may challenge the community's peace and stability. In medieval Scandinavia, where specialised production of items used by every household, e.g. iron, created a durable exchange sphere, exchange took a form that did not pose a threat to peace. In this exchange system, the value of regularly exchanged goods was expressed in rather stable exchange rates with other goods. Thereby, some goods attained functions normally ascribed to money, and this system is called *the commodity-money system* (Lunden 1978; 1999).

What is money? Life in the modern world does not supply us with the understanding of money which is necessary for grasping the character of the Viking-age media of payment. There are two major differences. Firstly, in order to compare the value of two objects, we do so by comparing their prices in coinage – there is no other generally accepted *unit of account*. In medieval Norway, there were numerous such units; several of the essential commodities created their own. Although there were some variations between regions, and also over time, the exchange relations between the various units of account were rather stable. If a man had a cow and wanted to use it to buy butter, then – if the cow and butter both lived up to normal quality standards – everyone knew that he was entitled to get some 30kg.

The second major difference between modern and medieval money is that today we are used to money in a fully abstract form. The media which carry the function of money – coins, bills, credit-cards and electronic computer signals – do not have any inherent value. They are so-called *fiat* money, abstract representations of value which is deposited elsewhere. In Viking-age and High Medieval Scandinavia, the media which were used for payment, even coinage, carried the value within themselves.

Aristotle was the first to define money as a set of functions: the functions of being a *medium of payment* and a *unit of account* (Melitz 1974, 4–5).[3] The functions of money are social conventions. The reasons why silver came to be ascribed money functions in seventh/eighth-century Central Europe are purely historical (below, section 4), and history is full of examples of other media gaining money functions, e.g. cloth in early medieval Frisia, and pepper in Europe during the High Middle Ages (Bloch 1967, 197).

The media which the functions of money are awarded to may in addition have a utilitarian value. Coinage, when efficiently protected by law against being melted down, has an ascribed value, but no utilitarian. As bullion or ornament, silver and gold have ascribed value; they have only a rather limited utilitarian value – for the silver smith only. The same goes for cowrie shells and glass beads. But many of the media which have served the functions of money around the world, such as salt, hide, pigs, cloth and cocoa beans, also had utilitarian value (Lunden 2007, 9; for general surveys of money media, see Quiggin 1949; Einzig 1966).

When discussing money, some scholars do not include both the utilitarian qualities of money media and their two monetary functions (e.g. Kelly 1975). As I see it, this leads into insoluble problems, like that discussed by Quiggin (1949, 1–10): the problems of distinguishing between what he calls mere barter (when both parties to the exchange intend to consume the object they acquire) and exchange using a medium with utilitarian value which is commonly accepted as a currency, e.g. coconuts. As Quiggin notes: the distinction between the two is blurred since there is no way of knowing whether the party who receives coconuts intends to consume them instead of using them as payment in later transactions. If he chooses to consume them, did they serve as money in the transaction, or was it barter?

What the definition issue boils down to is that the definition depends on the purpose of the analysis (Einzig 1966, 311). The purpose of the present analysis is to understand why and how silver and coinage were introduced as media of payment in Viking-age Scandinavia and continued to be used alongside commodities for close to a millennium. This leads attention away from the classification of the actual money media according to their functions, and towards the question concerning which of the possible functions of money media – unit of account, means of payment and utilitarian value – are awarded to which media in transactions. In one and the same transaction, coconuts can serve as medium of payment, unit of account and commodity – or maybe only one or two of those functions, with the two parties engaged in the exchange not necessarily agreeing as to which. As will be evident, this also goes for commodities, silver as well as coinage, in eighth- to seventeenth-century Scandinavia.

A system of commodity money may take a variety of forms. In some cultures, a single commodity served both as a medium of payment and as a unit of account. Consequently, every transaction will have involved that commodity as payment, e.g. in the commodity-money system, with cigarettes as currency, which developed in Prisoner of War camps during World War II (Radford 1946). This was not the case in the commodity-money system of High Medieval Norway. In that system, one of the exchanged commodities might serve as unit of account in which the value of the other commodity was expressed, thereby indicating what quantity of that commodity was necessary to settle the deal. But, depending on the types of commodities involved, they may both also have had their value expressed in a unit of account based on a third commodity that never entered the transaction.

Faced with such a concept of money, Modern Man will wonder about just how troublesome it would have been for a man with a cow in need of some iron to find a man who not only had iron of the right quality and quantity for sale, but who also wanted a cow. But supposing that the iron-owner wanted grain, the cow-owner would first have to find a man who would trade his cow for grain before he could again approach the iron-owner. The use of a single type of money would solve this problem, so the question is: why did Scandinavians not start using gold as the one accepted currency once they had learnt of the practice from the Romans in the early first millennium?

Scandinavian gold hoards of the third to sixth centuries testify that gold was certainly available then.

But Modern Man's worries are based on the wrong assumptions. Firstly, one must remember that precious metal cannot be consumed; it cannot contribute to the owner's survival, unlike salt, hide, cloth, cows and butter. This means that, in an economy in which the supply of necessities was threatened (e.g. by war or plunder), a man who had his movable wealth in cows, and managed to save them, would survive, but one who had it invested in metal would die (Lunden 2007, 9). His metal would be close to worthless: for who would exchange their cows, butter or grain for metal in times of famine?

The second point on which Modern Man is mistaken is that the number of transactions would be reduced if there was only one medium of payment, like coinage. If he should buy the iron with silver, the owner of the cow would have to perform two transactions: first selling his cow for silver, and secondly buying iron with the silver. Supposing, however, under the circumstances in which he was living, it was easy for him to find a man in need of a cow and with iron to sell, he would get away with one transaction. Under such circumstances – the 'double coincidence of wants' (Jevons 1876) – 'transactions costs', as the economists call the investments needed to complete a transaction, would be smaller by trading commodities in a commodity-money system rather than by using silver; contrary to what is claimed in many economic textbooks (e.g. Carrier 2005, 263–65; Boyes and Melvin 2008, 46–47, 295).

The reason for this flaw in the textbooks is, as will be discussed below (sections 3 and 4), that the usefulness of money media is not inherent in them, but is dependent on the society in which exchange takes place. The textbooks consider the use of money solely in the context of modern Western society. This is one of the basic characteristics of neoclassical economics, which must be adjusted for when applying economic theory to other times and places. To quote Marc Bloch (1967, 204): 'all research on payments, if it is to attain its end, must become "social". So must all research in economic history.'

It is only from the standpoint of a coin economy that a commodity-money system seems primitive and undeveloped. The reader will have gathered that what in the introduction was called 'to consider the use of silver and coins from a commodity-money perspective', results in regarding them as types of money which differ from commodity money, such as hide, cows and cloth, only in that they can be used for little but payment. Under certain social conditions, which will be discussed below (section 3), the combined qualities of commodity money, the utilitarian value and that of being a medium of payment and unit of account, makes it superior to silver and coinage.

Such a perspective on silver and coinage is of course justified only in certain types of analysis. Numismatists have a wide range of research questions which addresses qualities, which coinage has and commodities lack, as do the scholars who analyze hack-silver. But when regarding the use of various media of payment from the perspective of their users, hack-silver, coinage, butter and grain, stand on a par. In a choice between these currencies the seller's consideration of which he is willing to receive and the buyer's of which he is willing to offer will involve the same kind of parameters. For the seller, they will typically be: which of the available media have an undisputed quality? Do I need a type of payment for use in my daily life; or one for storage over winter; or one for trading off soon? Which medium will be most useful for me? Which medium will be the most valuable and most easily convertible for use in future transactions? Which type of medium is most easily transported to where I am going?

2. Buying land with silver, cows, butter and cloth

On 28 April 1321, Ogmund at Lote presented the claim to the court that a farm in Hundeidet in Nordfjord, western Norway, was his wife Ingrid's *oðal* (lawful inheritance). Six witnesses stood before the court and listed eight generations of fathers and sons who had possessed the farm, ending with Ingrid's father. Given such testimony, Ogmund had the right to acquire the land on his wife's behalf. The court of 12 men decided that for this farm, which had the value of 8 *mánaðarmatarból*, Ogmund should pay 40 *kýrlag*. He paid in pure silver and coinage, and the value of the silver was set by the court to one *mark* silver for three *kýrlag*, and the value of one *mark* of Norwegian coins was set to 2/3 *kýrlag*. Ogmund weighed up 10 *merkr*, 5 *aura* and 1 *œrtogh* of pure silver (c. 2.26kg) and 12 *merkr* of coins (c. 2.57kg) and then made the payment (DN III: no. 122).

The unit *kýrlag*, mentioned in the document, was the value of a good cow. It is probably the most ancient unit mentioned in this document (see below, section 3.1). In Ogmund's transaction, *kýrlag*, not silver or coinage, is the unit of account, the common unit in which the value of the various types of payment is defined. The value of the actual payment, silver and coins, was defined according to weight (1 *mark* = 8 *aurar* = 24 *ertogar* = c. 214g). The weight units *mark* and *eyrir* (pl. *aurar*) can be traced back to the early first millennium, whereas *ertog* is an invention of the Viking Age (Brøgger 1921; Kilger 2008b, 279–80). The value of Ogmund's coins was set to only 22% of the silver's value per weight unit, obviously because of the low silver content of the coins. The document from 1321 demonstrates that payment could be made in other kinds of media than that which defined the unit of account. Ogmund's payment was stipulated by the court in *kýrlag*, but he paid in silver and coinage, not in cows.

The following example shows that the scope of payment media was wide. On 4 January 1346, in Våle, Vestfold, four witnesses testified that Kolbein Simonsson had sold Torleiv Eiriksson a share in the farm Olumstad worth 32 *kýrlag*. The following payment was made (the document's value assessments in brackets): 1 red horse (4 *kýrlag*), 2 bulls (5 *kýrlag*), 7 cows, 1 bullock (1 *kýrlag*), various types of cloth (9 *kýrlag*), 8 *laupa* butter (4 *kýrlag*), 2 pounds grain and 2 *laupa* butter (2 *kýrlag*) (DN X: no. 52).

In these and numerous other examples, commodities are used as media of payment on a par with silver and coinage. Coinage, which in theory should fulfil both of the two main functions of money, does just that in some transactions, but in others it is only a unit of account and payment is done in other media, whereas in others coinage is just a medium of payment while *merkr* of silver or *kýrlag* are the units of account. The use of coinage therefore has the same characteristics as the use of commodity money. There are some chronological variations in the use of the various media and units, and coinage seems to have been used more extensively in towns than in the countryside (Gullbekk 2009, 207–31), but there was always a mixture.

Conversely, coinage seems to have been considered as a commodity like any other. One needed to 'buy' coinage to be able to pay expenses when the receiver demanded to get paid in coins. In 1626 the vicar in Rødøy, Helgeland, a region famous for its vast production of dried fish, reported after a visit Bergen, that 'I Rigsdaler kostede II W. Rundfisk' ('1 *Rigsdaler* [coin unit] costs 2 *våger* [weight unit] of dried fish') (*Norske Samling*, II, 502, with italics and brackets added in translation; Høgsæt 2001, 70). Here, money is 'bought' for fish. Not until the late seventeenth century did money become the common unit of account in Helgeland (ibid., 74).

Since Bruno Hildebrand (1864) coined the three concepts expressed in the title of his paper 'Naturalwirtschaft, Geldwirtschaft und Creditwirtschaft' ('Natural Economy, Coin Economy and Credit Economy'), the use of commodities as payment has been seen by many economic historians as opposed to the use of coinage, occurring only in societies where basic necessities were the dominant products and objects of exchange (e.g. Gullbekk 1998; 2009). Although neither of these two assumptions is totally mistaken, from the examples above they do not seem quite to hit the mark. As Marc Bloch poignantly expressed in the title of his paper 'Natural Economy or Money Economy? A False Dilemma' (1967), the use of, respectively, coinage and commodities as media of payment does not constitute different economies. For most of the medieval period, the use of one or the other was a matter of availability and the preferences of seller and buyer.

Most of medieval Europe had a mixture of the three factors, which Hildebrand (1864) identifies as constituting the three types of economies, a state of affairs which indicate that his concepts are really not well suited for understanding the economy of that period. Still, all over Europe there has been a development, although not at all contemporaneous or linear, from the singular use of commodities as money to a more or less singular use of coinage as medium of payment. In Scandinavia that development took place over most of a millennium and, in the following, I shall suggest some social parameters by which first the commodity-money system, and secondly the introduction and acceptance of silver and coinage should be understood.

3. Commodity money in the Viking Age and before

What characterizes a society in which commodities with a utilitarian value would be the most effective type of money? This question will not be answered in full in this section, but some points will be developed.[4] In parallel, evidence for a commodity-money system in Norway in the Viking Age will be discussed.

3.1. Units of account

Both in trade and in the keeping of debt accounts one needed units of account, so that the value of various goods could be compared. In a society with some trade in necessities, that function will typically be awarded to some media which are produced and consumed by most people. In fully rural societies, such as the Scandinavian ones in the eighth century and earlier, agricultural products would have been the obvious choice. In the twelfth-century Icelandic law-book *Grágás*, weighed silver and the value of a good cow (in Iceland called *kúgildi*) are the two units in which prices and fees are defined (Naumann 1987, 378–80). In the twelfth-century Gulathing law (Chs 41 & 223; Lunden 1978, 56), the value unit *kýrlag* is defined as that of a good cow that has proved able to carry a calf and is no more than eight winters old. But is there any actual evidence of such units of account in Norway in the Viking Age and before?

In my view, the reason why the introduction of silver is considered by many scholars to mark a watershed, as the first standardized unit of value (e.g. Steuer 1987, 123), is the meagreness of written evidence from the Viking Age, as well as the difficulties in identifying types of money other than coins and cut up silver (Brøgger 1936, 76). Silver money speaks for itself; unless reworked into an ornament, a coin is obviously a medium of payment, as most likely also were the cut-up silver-pieces lost here and there in a market-place or town, or dug down in a leather purse or lead container by the hearth, or near a peculiar rock. Conversely, the cow bones found in a midden, the iron ingots in a deposit, or the scant remains of a woollen dress in a grave carry no mark of once having formed parts of payment for grain, as they might actually have been. According to normal thirteenth-century exchange rates (Steinnes 1936, 134–39), one cow, or 120 standardized iron ingots (c. 12.3kg), or 35 *oln* of woollen cloth (c. 16.5m), could be used to pay for 1.5 *skippund* of grain (c. 280kg).

When found during excavations, the money function of cows, iron and cloth remains a potential, but to disregard that potential, and to take the artefactual evidence only at face value, must be characterized as overly empirical. This is especially so in the light of the overwhelming evidence of the dominant role of commodity money in the High Middle Ages. To regard that evidence as irrelevant for understanding the system of money media during the Viking Age would be under-empirical. Both philological and archaeological evidence supports an approach that strives to strike a balance between the two.

The Old Norse word for movable wealth is *fé*, literally meaning 'cattle' (Keyser et al. 1846–95, 180–83; Fritzner 1886, vol. 5, 396–97). Although cattle were an important, and in some cases the dominant, component in most farmers' movable wealth, the background for the word acquiring this meaning is hardly a simple expansion of its core meaning; it is rather that the value of movable possessions was counted in *kýrlag*. Using the value of a good cow as an account unit, the value of a person's movables would be expressed in *kýrlag*, as *fé*, although it may have comprised a variety of objects. In the High Middle Ages, as was seen in Ogmund's case, *kýrlag* was also a unit of account for landed property.

This account unit seems to have been well known in many parts of Europe. Words with the same double meaning as *fé* existed in several Germanic languages already in the early first millennium, e.g. Gothic (*faihu*), Old Saxon (*fehu*), and Latin (*pekūnia*, leading to the modern 'pecuniary'). In Scandinavia, the double meaning can be traced on linguistic grounds back to Proto-Norse, as spoken in the first half of the first millennium (Bjorvand and Lindeman 2007, 249–51). This unit could be applied in many contexts other than trade, e.g. to calculate the value of the deceased's possessions when they were distributed among the heirs.

In the early first millennium, the first evidence for other account units appears in the form of weight-adjusted rings of silver and gold, as well as weighing implements in the form of scales and weights (Brøgger 1936). It would be fair to assume that *kýrlag* dates back to the same period. Although some finds, in special contexts, of cut-up silver and gold may indicate a modest use of precious metals as media of payment in trade as early as the third century AD (Skre 2008a, 345), precious metals in the shape of rings were probably mostly used for paying fines, bride wealth and other obligations involving high values fixed by tradition and law. The Old Norse word for fine is *baugr*, literally meaning 'ring', that is a silver or gold ring, demonstrating that fines were stipulated, and possibly also paid, in rings. The standardized silver and gold rings of the first half of the first millennium testify that this custom goes back to that period, and *baugr* later became a unit of account for fines. In the twelfth century, one *baugr* was 1.5 marks silver (*c.* 321g) (Keyser et al. 1846–95, vol. 5, 92; Seip 1957).

There is little linguistic or archaeological evidence of an early medieval date for the other account units found in the written evidence of the thirteenth–fourteenth centuries, such as *mœrkr* or *laupa* butter and *skippund* grain. Since High Medieval sources give little or no evidence of over-regional standardization of these units, they cannot have played the role of general and inter-regional account units for movables. The only such account units seem to have been *baugr* for fines and *kýrlag* for movables (Naumann 1987, 380), both of them predating hack-silver and coinage by several centuries.

3.2. Finding a trading partner

How does a man in need of iron with a cow to sell find the man with iron to sell and in need of a cow? There are, in principle, two ways that this could come about. Firstly, he could go to a market where a sufficiently large number of people offered goods for sale (Melitz 1974, 65). Among all of them there would probably be at least one iron-owner who was in need of a cow. Alternatively, the cow-seller could rely on his knowledge of the needs and preferences of iron-producers living in his vicinity and then search out the man most likely to want to trade his iron for a cow.

If the iron-owner was offered a cow that he had no need for himself, he might still have thought that this was a good cow that could be traded off rather easily (Melitz 1974, 53ff). Therefore, he might accept the cow as a medium of payment rather than as a commodity. While he was waiting to use it as payment for something he needed, although the cow required grass, water and facilities, it had the advantage over silver that it gave milk, and perhaps even a calf.

In both these cases one transaction would normally be sufficient for both parties to get the things that they needed. If the cow was sold for silver, two transactions would always be necessary to get the iron. Consequently, in a society with either regular markets or where one had reliable information on who offered, and were in need of, which types of goods, a system of commodity money would have had lower transaction costs than one with silver or coinage as the only medium of payment. As will become clear below (section 4), this conclusion is only valid under certain conditions: that the scope of exchanged goods was narrow, and that the total number of transactions needed to maintain a household was low.

In southern and eastern Scandinavia, seasonal markets were held throughout most of the first millennium, whereas in the west, in present-day Norway, and in the north, markets seem to have been few or non-existent before the eleventh century (Skre 2008b; in press, b). This difference within Scandinavia is mirrored in the variation in the level of standardization of weight units. Viking-age finds of weights testify that *mark* and *eyre* were widely used, but with regional variations in their precise weight. Such variations were a nuisance in inter-regional trade, but not a severe obstacle; the seller and the buyer could weigh the silver both with their own weights and then decide whether they were satisfied with the deal. A higher volume in inter-regional trade would push towards standardization and this occurred in eastern and southern Scandinavia, *c.* 860/70, when precise standardized weights became widely used (Pedersen 2008). The geographical distribution of these weights (Steuer et al. 2002, Abb. 4) coincides with that of contemporary markets and towns (Skre in press, b, fig. 1), indicating that inter-regional trade had a higher volume there than in the rest of Scandinavia.

From this, there seem to have been different solutions within Viking-age Scandinavia to the problem of finding a trading partner. In regions with no towns or markets, people would have relied on their knowledge about the needs and products of other producers in their search for a trading partner. The lack of markets and towns in Norway before the eleventh century combined with the lack of inter-regional weight standardization probably indicate that trade was mainly intra-regional and that inter-regional trade did not reach the same volume as in southern and eastern Scandinavia.

Even with detailed information on the products and preferences of other producers, finding a trading partner when the need arose was not always easy – what Melitz (1974, 57–60) calls 'search costs' would have been higher in most societies that did not have markets. A well-known way of handling this problem is to postpone payment and thereby establish debt obligations (Hildebrand 1864; Melitz 1974, 65–66; Anderlini and Sabourian 1992). Then the buyer, who becomes a debtor, will have some time to obtain the kind of payment demanded by the seller, now the creditor. The detailed regulation of loans and debt-settlement in the Icelandic *Grágás* and the Norwegian provincial laws, especially the Gulathing law (Chs 35–50, 55, 59, 71, 115–16), demonstrates the frequency of such obligations, as well as their potential for resulting in conflicts (Miller 1990, 78).

William Ian Miller (1990) describes trade in High Medieval Iceland on the basis of evidence in sagas and law-texts. Most farms in Iceland were self-sustained with regard to subsistence goods, but feasting – or other occasions when it was necessary to cater for a larger group of people than usual – might have demanded the acquisition of supplies from other farms. Smaller farms with a fragile economy might borrow livestock or rent land from a neighbouring larger farm. Some farms had access to special types of products; they might have a good river for fishing, or access to firewood within their farm's territory, or perhaps good pastures and the necessary competence to breed horses (Miller 1990, 78–79).

The basic conditions would have been much the same in Viking-age Norway. Most farms produced the food necessary to feed the farmer's household and staff, such as butter, meat and cereals, and they would have produced their own cloth and forged most tools, nails, etc, in the farm's smithy. But other necessities, such as soapstone vessels, shoes, iron, whetstones and finer cloth, would not have been produced in all farms, and neither would the ornaments, brooches, beads, weapons, antler combs, riding gear and boats that grave-finds demonstrate were widely distributed during the Viking Age.

In times of famine, crop failure or economic change, price conventions would have come under pressure and some prices would have risen, others fallen. The neoclassical economists, as well as the substantivists, would say that such fluctuations are indicative of an emerging market economy. But both of them neglect the fact that in every society, prehistoric as well as medieval and modern, the pure market (where every transaction is dictated *only* by an economic rationality) never existed and does not even do so today, any more than gift exchange free of economic consideration.[5] The mechanisms of the market are always active in every act of exchange, but they are always restricted by social conventions. Such conventions may be so strict that prices are rather fixed, even if there is no authority to enforce the accepted price (Melitz 1974, 43). In Viking-age and medieval Scandinavia, an open display of greed would have been dishonourable (Þorláksson 1992). A man's life and possessions were defended by himself, supported by friends, relatives and protectors. If he were to lose these supporters, e.g. through the open demonstration of greed, he would lose honour and be left on his own (Meulengracht Sørensen 1995).

Producers would have been part of open and informed networks on a local and regional level. The political alliances and enmities of local magnates and chieftains would have restricted the openness of the network, of which their more or less loyal peasants and supporters formed part, whereas the urge to survive and to acquire essential, as well as attractive, goods would tend towards opening it up.

Summing up the above, it seems evident that commodity money would be the type of money best adapted to trade in a society with the following characteristics:

- Most households are normally self sufficient with necessary goods, and they produce a surplus of some sort which can be used for exchange
- Given that the supply of necessities is uncertain and depends on good harvest and peaceful times, storing wealth in necessities would increase the chances of survival
- To get hold of special types of subsistence goods, like fish or game, or to get additional supplies for special occasions, like marriages or feasts, or in case of failed crops, illness or accidents, a household might need to acquire subsistence goods from other producers
- Some utensils or raw materials, like soapstone pots or iron, need to be acquired from specialised producers
- Household members can go to a market to exchange their products, or they can get hold of information about other producers, their products and preferred forms of payment, as well as when, where and how to approach them for trading purposes
- There are few, or no, opportunities to acquire imports by means of trade with long-distance traders

4. The introduction and early use of silver as money

In Europe during the first millennium, the power to define which metal-media should be money resided in the vast economies in the south. During the Roman period, gold was the main money metal-medium in Europe and copper, and more rarely silver, was used for low denominations. Silver took over the dominant position as metal-money in Western Europe at the end of the seventh century, reaching Scandinavia in the eighth, as sketched above (in the introduction). At that time, silver was also the dominant money metal-medium in the Caliphate, and the coins from there reached Scandinavia in the ninth century (Spufford 1988, 7–73).

Why were silver and gold chosen as money? In addition to historical factors, some of the two metals' properties supply the explanation. Both metals were available in Europe and in the Caliphate, and the relative scarcity of both gave them the advantage over (e.g.) lead and copper of having a high value per weight unit. Transport of value in gold and silver was therefore easy; besides, they could easily be cut up and melted down so that they could readily be made into objects of any desired value. The quality of silver was rather easy to assess for the experienced trader. Test marks, so-called nicks, which can be found on Viking-age silver objects, testify that such assessment was performed regularly (Kilger 2008a, 226–27). Gold had a higher value by weight, in the Norwegian High Middle Ages it was normally eight times that of silver, and gold was therefore better for containing high value in a small object, while silver was better for producing lower value objects, like coinage with low denominations.

These qualities – and its use as the accepted type of money in Central and Western Europe – made silver and coinage attractive types of money in the particular context which emerged in Scandinavia in the early Viking Age, namely in *long-distance trade* and the *urban way of life*.

In Scandinavia, traders from the Frankish realm, most likely Frisians, were first present in large numbers in Ribe in the early eighth century – and this is where the first minting occurred. In Birka, Kaupang and Hedeby, silver as payment (hack-silver and coinage respectively) was introduced some 2–5 decades after each of these towns was established. The presence of Frankish/Frisian traders is well attested in these towns (Skre in press, a) and, given that silver was the accepted currency in most other harbours they frequented, they would have preferred to receive silver as payment.

The urban way of life has some characteristics which favoured the development of silver currency. Contrary to the rural population, urban inhabitants would have produced very little of their own food, but have depended on buying it from people in the town's hinterland. To be able to buy food, they had to trade off their produce, be it shoes, ornaments, cloth or combs. The selling of products and the buying of food and other necessities meant that the number of transactions townsfolk performed during a year would have been infinitely higher than people who lived in rural areas, producing most of their own food. A high number of transactions would have been easier to perform by using a medium of payment which everyone was willing to accept (Melitz 1974, 49).

The variety of goods for purchase would have been much higher in a town than in a rural context. Craftsmen living in town produced a variety of goods, long-distance tradesmen brought exotic goods and other people came from far afield bringing their own products for sale. Although it would be possible to predict the preferred payment of some urban salesmen, the number of potential trading partners would have been much higher than in rural areas. The difficulties in predicting which types of payment sellers preferred would have tended to favour the use of a widely accepted medium of payment.

Whereas most rural trade took place in dense networks, much urban trade would have taken place in loose networks. Trading partners would not necessarily have met again, especially if they were not permanent town residents. Therefore, the establishment of debt obligations would be less suited in the urban context than in the rural. This will have stimulated the development of a generally accepted medium of payment.

What I have called the urban way of life has four aspects: (i) the higher number of transactions; (ii) the wider spectrum of goods for sale, from (iii) a higher number of sellers; and (iv) the looseness of the trade networks. These four can be assembled under one headline: they resulted in an increase in the household's total 'search costs', i.e. the labour and investments necessary to find trading partners with complementary preferences. The introduction of a medium of payment with no utilitarian value resolves this problem; it reduces search costs by separating the problem of finding a buyer for one's produce from that of finding a seller of what one is in need of (Melitz 1974, 58). When silver or coinage is taken or given as payment, it is only necessary to find either a seller or a buyer at one time, not both together in one person.

For a household living under the conditions described above, the volume and level of detail in the information necessary to trade would have been substantially reduced by introducing a medium of payment with no utilitarian value. In Scandinavian Viking-age towns this medium would be the one favoured by long-distance tradesmen: silver. Both cut silver and coinage would answer this need, given that both possess the essential quality that they could easily be split up, or assembled, to equal nearly any value. This quality would be essential because of the varying amounts, often modest, that were exchanged in daily transactions in towns, as opposed to the normally higher-value transactions in rural areas (Spufford 1988, 10).

The introduction of silver was gradual and spread over decades. In Kaupang, established c. 800, trade and production had been going on for more than a generation before the first documented use of silver as payment, and for two generations before the silver finds reach a significant volume c. 850 (Blackburn 2008; Pedersen 2008). Artefactual finds and workshop debris testify that long-distance trade, as well as craft production, was as significant in the first half of that century as in the second (Pedersen in prep.; Skre in press, c). This indicates that trade in that context could very well have taken place without the use of silver as payment, but in the long run it tended to push towards silver being introduced and becoming widely accepted.

There is not sufficient evidence to decide what proportion of the transactions undertaken in the Scandinavian Viking-age towns involved silver as payment. It is evident from finds in Kaupang that the use of silver in the form of cut-up coins increased in this town c. 850 and then remained roughly on the same level until it started to drop c. 900, continuing to decrease until the town was abandoned c. 930 (Blackburn 2008, fig. 3.15). The cut up bullion cannot be dated with the necessary precision, but that material seems to fall into the same date-range as the coins (Hårdh 2008). Obviously, before c. 850, the vast majority of transactions did not involve silver as payment, and even fewer before c. 825. It would be fair to assume that this was also the case in a significant proportion of transactions after c. 850, perhaps a majority, but this is no more than an assumption.

5. Concluding remarks: perspectives on raiding and hoarding

Long-distance exchange is well attested from before the Viking Age in the numerous imports in Scandinavia and the shared aristocratic material culture around the North Sea. This exchange did not take place on Scandinavian market-sites, and it did not stimulate the use of silver and coinage as media of payment. During that period, long-distance trade was the privilege of the aristocracy; they achieved attractive exotic goods through their personal networks, in what Colin Renfrew and John Cherry (1986) call 'peer polity interaction', where both parties had intimate knowledge of each other's preferences.

Around 800, Scandinavians started to raid towns, churches and villages on the Irish Sea coasts and subsequently around the North Sea, as well as on Russian rivers. Ship crews from the north were hardly a totally new phenomenon in these regions, but the raiding indicates that these acted outside of existing networks. The reasons for the sudden shift to raiding are uncertain. Possibly, a new and lower social stratum of the Scandinavian population, less well connected in trade networks, had taken up long-distance travelling. Or perhaps the established aristocracy included raiding in their repertoire on long-distance travels. Raiding one's friends and friends' friends can have a high price that must be weighed against the possible gain of maintaining good relations. As indicated by *Ohthere*'s friendly visit to King Alfred's court (*c.* 890), some Scandinavians chose the peaceful option.

In the course of the first decades of the ninth century, raiding attained a significant volume that deeply affected all lands in Scandinavia's neighbourhood. Soon Scandinavians were involved in internal politics in the areas they raided, and they will have acquired the habit of using silver as payment. Perhaps surprisingly, there is little evidence that this habit was brought back to rural regions in Scandinavia during the vast Viking campaigns in the ninth century. Neither do much of the enormous quantities of silver that were extorted in plunder, ransom and tax seem to have been brought back – the number of Frankish and English coins found in Scandinavia is surprisingly low (Sawyer 1971, 100–01; Blackburn 2008, 57–58; see also Coupland (5), in this volume), as is the total number of ninth-century silver hoards and the proportion of hack-silver in them (Hårdh 1996). It seems that silver just did not have any role to play as means of payment in ninth-century rural Scandinavia.

There is one significant exception. The first occurrence of substantial quantities of silver outside of towns and markets started *c.* 825, when weighed silver in the shape of Islamic coins was deposited in hoards in a totally rural context on the shores of the southern Baltic Sea. This hoarding started and remained most prominent on the island of Gotland, which formed a hub in Baltic trade (cf. Östergren (17), in this volume). The silver arrived via the Russian rivers where trade with the Caliphate had opened up in this period. In the following decades, such hoarding spread to most coasts of the southern Baltic Sea (Kilger 2008a, 214–29).

The ninth-century occurrence of silver in rural Gotland should not be taken to indicate that silver was regularly used as means of payment in rural regions in the ninth-century Baltic. Most Gotlandic hoards contain large quantities of coins rather than bullion and should be understood as the working capital of Scandinavian long-distance tradesmen who collected this currency in their dealings along the Russian rivers. They hoarded their coins beneath the floors of their houses in Gotland until it was time to venture on a new trading expedition. It will have been these traders who introduced the use of silver to the towns and markets around the southern and eastern shores of the Baltic Sea. This use gained momentum in the last quarter of the ninth century, when the introduction of a more precise type of standardized weights and increased hoarding demonstrate that silver had become an accepted medium of payment in Baltic markets and towns.

There is little evidence to indicate when, and to what extent, silver was taken into use in rural trade outside of markets. Hoarding of silver in rural areas increased in the tenth century, as did the proportion of hack-silver in the hoards (Hårdh 1996). But this cannot be taken as secure evidence of silver being used as payment in rural trade; the silver may have been assembled through raiding or through trade in markets and towns and then hoarded for later use there. Rings may have been acquired as fines, or bride-wealth, and then kept for similar use. The steep, late twelfth-century rise in coin-finds in rural churches and the thirteenth- and fourteenth-century documentary evidence for rural transactions form the earliest firm evidence for the significance and extent of the actual use of silver and coins in rural Norway.

Based on the perspective on media of payment outlined here, how should the economy of Viking-age Scandinavia be characterised? Obviously, widespread concepts like 'gift economy', 'silver economy', 'money economy' and 'coin economy' are hardly suitable. All in all, I think media of payment are of too limited significance within the total economy to justify such concepts; their prime significance is as indicators of more basic changes and characteristics of economy and society. Looking at economy as a whole, the exchange sphere is just one of three, the other two being production and consumption. Variations within these three spheres in time and place are infinite, and the interplay between them and with society as a whole is complex. Rather than promoting terms which violate variations and simplify complexity, I think that we should work on establishing sets of concepts that do the opposite – that reveal variations and characterize complexity in past economies, as well as the manner in which they are interwoven with the rest of society.

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Abbreviations

DN = *Diplomatarium Norvegicum. Oldbreve til Kundskab om Norges indre og ydre Forhold, Sprog, Slægter, Sæder, Lovgivning og Rettergang i Middelalderen*, vols I–XXII (1847–1990), P T Mallings Forlagshandel, Christiania

Endnotes

1. Admittedly, some numismatists have been highly aware of the widespread use in early medieval Europe of commodity money, including Philip Grierson (1959), whose papers on the issue initiated a rather heated debate with his colleague Michael Metcalf (1967; Grierson 1967). Parallels can be found in the more recent debate between the numismatist Svein Gullbekk (1998; 2002; 2005) and the historian Kåre Lunden (1999; 2007). It should also be said that scholars within my own discipline, archaeology, have been the prime spokesmen for the significance of silver as means of payment.
2. Payment was not only made in trade but also when buying land, when paying dowry, bribes, fines, tax, customs duty, fees, reward, land rent, and salaries. In addition to changing hands in peaceful transactions, the media of payments could be robbed violently, gained by fraud, or stolen in secrecy. The main focus in this paper will be on peaceful exchange in movables, although other types of transactions involving money will also be touched upon.
3. Some textbooks describe a third function of money; to be a means for storing value. I see storability not as a condition for a medium to function as money, but as a quality which various money media may have to varying extents. Various money media also differ in other respects, like their divisibility, transportability, stability of value, etc. (Einzig 1966, 321). All valuables will also have a symbolic value, e.g. to symbolize their owner's wealth and status. As I see it, this symbolic value will for the most part be rooted in the objects' utilitarian value or in their value as media of payment. Adding to this, coinage carries a symbolic message: the sign of the king who issued it, which makes the coin a political statement. Both these types of symbolic value are of

little relevance in the lines of argument pursued in this paper, and will therefore go unmentioned.

4. The remainder of this paper presents some lines of reasoning that I intend to explore and substantiate further in future research.
5. Perhaps plunder, when considered as a relation between the victim and his robber and killer, could be said to be the type of exchange which best fulfils the idea of a purely economic transaction free of social restraints. The robber has eyes only for the potential economic gain, and his victim is not recognized a social person but objectified and destroyed. But even here, the buccaneer's gain is not only economic. He also earns the honour he was awarded by his peers and superiors through the courage and fighting skills he displayed in the raid. In some cases this might bring him more gain than the valuables he took possession of.

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