



# *Silver Economy* **IN THE** *Viking Age*

*James Graham-Campbell and  
Gareth Williams, editors*

# **SILVER ECONOMY IN THE VIKING AGE**

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# SILVER ECONOMY IN THE VIKING AGE

**James Graham-Campbell**

**Gareth Williams**

*Editors*

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## Preface

During April to August 2000, a temporary exhibition was mounted at the British Museum by Dr Gareth Williams (Department of Coins and Medals), entitled 'Paid in Burnt Silver: Wealth and Power in the Viking Age', with the support of the Royal Norwegian Embassy, through their 'Visions of Norway' programme. The two of us considered that this important event provided an appropriate occasion for the British Museum and the Institute of Archaeology, UCL, to organise a joint symposium on the subject of the economic uses of Viking silver, to be co-sponsored by the Department of Coins and Medals (BM) and the Complex Societies Research Group (IoA). Some 40 international specialists, comprising archaeologists, historians and numismatists, were invited to participate, with 12 papers planned for delivery on the theme of 'Silver Economy in the Viking Age'. In the event, Svein Gullbekk, who was to have spoken on 'Monetary Development and State Formation in 11th-century Scandinavia' was unfortunately unable to be present, and a paper on 'Coinage, Kingship and State Formation in the Late Viking Age', by Gareth Williams, was substituted in its place. As the organisers, we would like to record our appreciation of those colleagues who shared, together with James Graham-Campbell, the responsibility for chairing the six sessions: Barry Ager, Marion Archibald and Leslie Webster, all of the British Museum.

The Symposium was held at the Institute of Archaeology, on 26–27 May 2000, and we are grateful to then Director, Professor Peter Ucko, for having enabled this most stimulating event to have been held there, with the support of the Institute's Research Committee. We would also like to express our gratitude to the British Academy for their generous support for the symposium through a Conference Grant. At the same time, it is a pleasure to thank both the then Director of the British Museum, Dr Robert Anderson, and the then Keeper of Coins and Medals, Dr Andrew Burnett, for having invited participants to a private view of the exhibition, on our first evening, and last, but very far from least, Dr Per Sörbom and the Royal Swedish Embassy for having sponsored the reception in the Gallery that helped make this a particularly memorable occasion.

Ten of the 12 papers delivered during the symposium are published here in edited form, although we have not sought to impose absolute uniformity of style on our speakers, who in any case represent seven different nationalities, so as to retain something of a sense of the occasion, which included much lively but good-natured discussion. As both organisers and editors, we allowed ourselves, then and now, the last word(s) and so there are, indeed, 12 papers in this volume.

After discussion with the editors, it was agreed that the important paper delivered by James Barrett, on 'Wealth, Power and Trade in Scandinavian Scotland', would be held over for expansion and publication by him elsewhere. Mark Blackburn's paper on 'The Monetary Economy in the Danelaw under Scandinavian Control, 880–927' overlapped heavily with two other papers already promised for publication elsewhere, so with the agreement of the editors he has chosen instead to expand here on one aspect of his symposium paper, which he has developed into a new and broader paper on 'Gold in England during the "Age of Silver" (Eighth–Eleventh Centuries)'. Similarly, the paper by Gareth Williams on 'Coinage, Kingship and State Formation in the Late Viking Age' does

not appear in the form that it was presented at the symposium, but the theme of that paper is one of those explored in his editorial overview paper in this volume, which also includes a more detailed exploration of the themes presented in the 'Paid in Burnt Silver' exhibition. The paper by Marion Archibald, on 'The Evidence of Pecking on Coins from the Cuerdale Hoard', is published here only in a summary version, being work in progress for her contribution to the catalogue of *The Cuerdale Hoard and related Viking-Age Gold and Silver from Britain and Ireland, in the British Museum*, in preparation by James Graham-Campbell.

As the co-editors of these proceedings, we are most grateful to the Publications Committee of the Institute of Archaeology for having readily agreed to take this volume under their wing, recommending it in due course for publication by UCL Press, and to both the Viking Society for Northern Research and the Dorothea Coke Memorial Fund, University of Cambridge, for grants to help defray its printing costs. Finally, we would both like to express our gratitude to all the contributors for their patience during the not inconsiderable delay of the appearance of their papers in print (especially after impatient demands on our part for submission in one or two cases!); in other words, we appreciate their understanding that we have both found ourselves, in our different ways, undergoing unexpected and demanding challenges during the past two or three years.

30 April 2005

James Graham-Campbell  
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*University College London*

Gareth Williams  
*Curator of Early Medieval Coinage*  
*British Museum*

This book in its current form (as described by us above) was intended for publication in late 2005. Unexpected difficulties during the production phase and changes in the ownership of UCL Press have led to a delay of a year in its publication. To avoid the possibility of any additional delay, the editorial decision was taken not to allow contributors the opportunity of further revising their texts, so that any failure to address issues raised in very recent publications is thus our own responsibility and not that of individual contributors. We would like to express again our gratitude to them for their patience and forbearance, and to Mitch Allen and colleagues at Left Coast Press Inc. for having seen the volume through its final stages into print.

8 November 2006

JG-C and GW

## List of Abbreviations

<i>Antiq J</i>	<i>Antiquaries Journal</i>
ASC	Swanton, M J (ed and trans) (1990), <i>An Anglo-Saxon Chronicle</i> , Exeter
ASSAH	<i>Anglo-Saxon Studies in Archaeology and History</i>
AU	Mac Airt, S and Mac Niocaill, G (eds and trans) (1983), <i>The Annals of Ulster (to AD 1131)</i> , Part 1. Text and Translation, Dublin
BAR	British Archaeological Reports
BCDA	<i>Bulletin de la Commission départementale des Antiquités de la Seine-Inférieure/Seine-Maritime</i>
BCEN	<i>Bulletin du Cercle d'études numismatiques</i>
BM	British Museum, London
BMC	Grueber, H A and Keary, C F (1887–93), <i>A Catalogue of English Coins in the British Museum. Anglo-Saxon Series</i> , 2 vols, London
BnF	Bibliothèque nationale de France, Paris
BNJ	<i>British Numismatic Journal</i>
BSFN	<i>Bulletin de la Société française de numismatique</i>
CBA	Council for British Archaeology
CH	'Coin Hoards' (published in <i>NC</i> )
CNS	Corpus Nummorum Saeculorum IX–XI
CTCE	Blunt, C E, Stewart, B H I H and Lyon, C S S (1989), <i>Coinage in Tenth-Century England</i> , Oxford
D	Duplessy, J (1985), <i>Les trésors monétaires médiévaux et modernes découverts en France</i> , vol I (751–1223), Paris
EHD	Whitelock, D (ed and trans) (1955; 1968), <i>English Historical Documents c.500–1042</i> , London
EHR	<i>Economic History Review</i>
FM	Fitzwilliam Museum, Cambridge
GDR	'Gratia Dei Rex' coinage of Charles the Bald
IMNHASP	<i>Isle of Man Natural History and Antiquarian Society Proceedings</i>
JRSAI	<i>Journal of the Royal Society of Antiquaries of Ireland</i>
MDA	Musée départemental des Antiquités de la Seine-Maritime, Rouen
MG	Morrison, K F and Grunthal, H (1967), <i>Carolingian Coinage</i> , New York
<i>Med Arch</i>	<i>Medieval Archaeology</i>
<i>N Munster Antiq J</i>	<i>North Munster Antiquarian Journal</i>



<i>NC</i>	<i>Numismatic Chronicle</i>
<i>NCirc</i>	<i>Spink's Numismatic Circular</i>
<i>NH</i>	<i>Northern History</i>
<i>NMI</i>	National Museum of Ireland, Dublin
<i>NNUM</i>	<i>Nordisk Numismatisk Unions Medlemsblad</i>
<i>NNÅ</i>	<i>Nordisk Numismatisk Årsskrift</i>
<i>PA</i>	Poey d'Avant, F (1858–62), <i>Monnaies féodales de France</i> , 3 vols, Paris
<i>PNM</i>	Publications of the National Museum [of Denmark]
<i>PRIA</i>	<i>Proceedings of the Royal Irish Academy</i>
<i>PSAS</i>	<i>Proceedings of the Society of Antiquaries of Scotland</i>
<i>RBN</i>	<i>Revue belge de numismatique</i>
<i>RN</i>	<i>Revue numismatique</i>
<i>RNS</i>	Royal Numismatic Society
<i>SCBI</i>	<i>Sylloge of Coins of the British Isles</i>
<i>TRHS</i>	<i>Transactions of the Royal Historical Society</i>
<i>V&amp;A</i>	Victoria and Albert Museum, London

## Regions Around the North Sea With a Monetised Economy in the Pre-Viking and Viking Ages

*D M Metcalf*

The circular letter calling for papers for our symposium spoke of the transition from the gift/status economies of the pre-Viking Age to the monetised 'nation states' which were emerging by the end of the Viking Age. This view of the English Viking Age being, in my opinion, seriously out of touch with current research, I felt some doubts whether I could make any useful contribution to the occasion, but I wrote to ask Dr Gareth Williams whether a paper that might be thought controversial would be acceptable. He replied with exemplary serenity, '... by all means be as controversial as you like ... the whole point of a symposium like this is for people to share their ideas with others, whether or not everyone agrees in the end. Certainly it often makes for a more interesting debate when people argue (constructively!) with each other's opinions.' Encouraged by this wise response, I should like to try to set out as clearly and accurately as possible the framework of the argument, as I see it, which says that in the pre-Viking-Age parts of England, and also other regions across the North Sea, had already developed an intensive money economy comparable with that which they enjoyed in the eleventh century. Between the two there was a monetary downturn in southern England, and similarly on the Continent. Pirenne could see the monetary upturn which followed, and mistook it for the beginnings of monetisation in north-western Europe. He was unable to see the preceding downturn, and therefore failed to do justice to the character of the economy in the early middle ages. Tenth-century numismatics, which tends to be difficult, has been intensively and very ably studied by a group of scholars of whom Christopher Blunt was the doyen. Tenth-century monetary history, which is another kettle of fish altogether, requires to be set into a wide context if the perspectives are to be accurately drawn. Between the eighth century and the eleventh, much of the economic infrastructure in southern England fell on hard times; *wics* and proto-towns were replaced by a new urban network. There is a considerable but scattered literature on monetary history, and the general historian may well be grateful for an overview. What he or she is most likely to need is a sense of how the arguments mesh together.

It is well enough known that in eighth-century England the degree of monetisation varied regionally, being much greater in the south-east and the east, and thinning out westwards to such an extent that the south-western peninsula, the whole of Wales and the north-west, let alone the Pennine region and Cumbria, were relatively coinless. The east-west

gradient was evidently generated by trade across the English Channel and around the coasts of the North Sea (Metcalf 1989, 267–274). It is to some extent a perennial pattern in English monetary history throughout the early middle ages and indeed into the high middle ages. It does not correlate closely with regional prosperity, as we may judge from the Domesday Survey (Darby 1979, 200). Rich farming landscapes, for example in Herefordshire or Shropshire or in Somerset, have yielded extremely few stray finds of coins compared with Kent or East Anglia, a discrepancy by a factor of 10 or 20, whether it is viewed per capita or per acre. Similarly, the gradient does not correlate closely with political power. Mercia became a major player in the progressive consolidation of smaller tribal groupings, as the Tribal Hidage reveals (Hart 1977, 43–61), largely without the benefit of a money economy, and it was able eventually to gain the upper hand over the kingdom of the East Angles (Dumville 1989, 123–140) in spite of the greater monetary wealth of that kingdom. It is a similar story south of the Thames: the early primacy of east Kent (which surely reflects its locational advantages) is challenged by Wessex, in spite of the much later and weaker monetisation of the West Saxon kingdom.

What emerges as a conclusion clearly enough from all this is that monetisation in the pre-Viking Age was significantly linked with long-distance or inter-regional trade. *Wics* were the nodal points of the trade-routes: the *wics* of the Wantsum Channel; Ipswich; *Lundenwic*, *Eoforwic*, *Hamwic*. And the English *wics* are part of a larger picture, of trade around the North Sea coastlands, with Dorestad as the dominant centre, and again with some regions strongly monetised and others, such as north-eastern France and Belgium, much less so (Op den Velde, De Boone and Pol 1984, 117–145). The relative intensity of monetary exchanges in the hinterland of each *wic* seems to have varied, for reasons that are not clear. One might have supposed that the prosperity of the *wic* arose from the trade passing through it. But it seems that monetary exchanges may to some extent, and to a variable extent, have been concentrated in the *wics*, rather than evenly spread through the hinterland area which supported the urban economy: for example, farmers brought their cattle to market and, although they may have taken their money home again, it was in the marketplace that there was the greatest risk of accidentally losing a coin. Thus, Ribe, in Jutland, was a *wic* full of money (we can all, I hope, agree on that), yet finds of sceattas anywhere east of Ribe are exceedingly few, and not for want of searching.

The concentration of money in *wics* could also have been partly because that was where wealth was generated – not just the value-added wealth of traders who lived in the towns, but that produced by craft industries – comb-making at Ribe (Bendixen 1981, 200), glass-making at Hamwic (Andrews 1997, 216–218) and so on. Specialised production tends to require cash payments rather than barter.

When all is said and done, however, the *wics* are coastal: they are essentially ports prospering through maritime trade, and unless they were eking out a livelihood by taking in each others' washing, that implies that a *wic* was functionally linked to its hinterland.

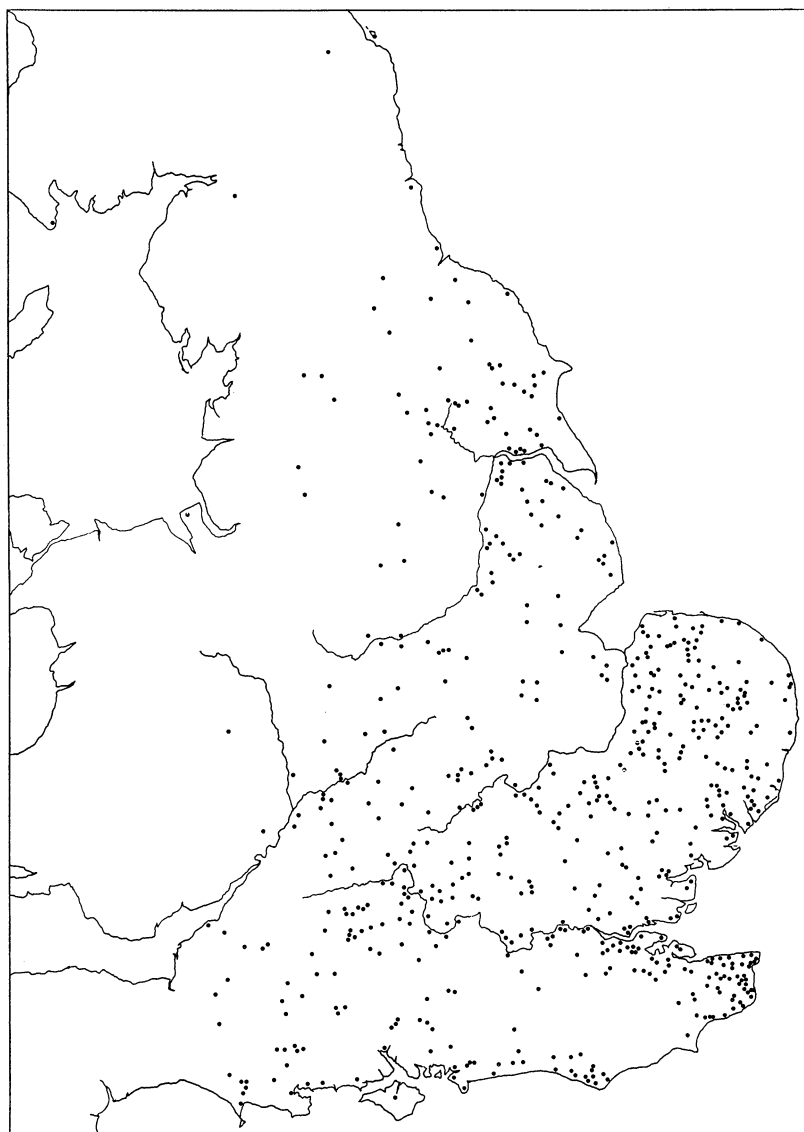
There is a problem of method, in that our impressions of the degree of monetisation tend to be based on the relative numbers of stray losses from this region and that. Although the chances of coins being accidentally lost are most likely to have been in direct proportion to the number of occasions on which they changed hands (rather than, for example, the size of the accumulated currency in a region), there are so many other unknown variables that the conclusion may be deemed unsafe, unless the margins of difference are very substantial. Different styles of husbandry, different settlement patterns, coins of different purchasing power – each may have had a significant effect on the

statistics. Again, ratios of stray finds may not equate with ratios of stray losses for the purposes of the exercise, because of differences in the intensity of metal-detector searches or of archaeological excavations, or even of techniques of excavation. The uncertainties can to some extent be discounted, but it is well to remember that comparisons between regions based simply on global numbers of stray finds should be treated with caution. The east-west gradient of which we spoke is so pronounced and so widely evidenced that its significance is unlikely to be compromised by methodological uncertainties. The paucity of detector finds of eighth-century coins in westerly regions, for example, can be confirmed if one takes into account the relatively large numbers of Roman and other coins found by detectorists in those same regions. It is worth underlining that this paucity in the west is relative. It does not mean that coinage was virtually unknown there. At Bidford-on-Avon in Warwickshire, for example, a detectorist who has searched the area year in year out for 14 years, finding one or two sceattas a year, had at the last count pushed the total to 29 sceattas from this one village.

Having established the broad, regional perspectives, one can turn to the local topography, to marshal another argument, based on the contexts of the find-spots. There are now over 650 localities on record from which in total more than 2,360 single-finds of thrymsas and sceattas have been recorded in England (see the map, Figure 1.1) – far more than for eleventh-century coins (Metcalfe 1998, 249–271). As regards the alleged gift/status economy of the pre-Viking Age, need I say more, really? Of the 650 localities, some include several separate sites within the boundaries of the same parish. The point to be seized is that the great majority of these 650+ localities (necessarily) are just villages, with nothing special about them. There is no visible correlation with royal manors, or with minster churches. There is no concentration of finds from royal centres such as Winchester or Tamworth (both well excavated). Coins have not been found in proximity to Offa's Dyke. Sceattas were being lost predominantly in the course of ordinary village life, and, one must suppose, by ordinary people – everyday farming folk.

The acid test, general historians might be inclined to suppose, of whether coins were in widespread use for everyday purposes would be if they were ordinarily handled by women. A capitulary of Charles the Bald issued at Quierzy in 861, while specifying penalties for refusing good coin, goes on to exempt women from this provision, on the grounds that it is well known that they are accustomed to bargain before agreeing a price and making a purchase (Grierson 1990, 64). Legal documents rarely record such mundane details, which have the charm of immediacy. But one may well ask which is the better evidence, the anecdotal from which it may or may not be safe to generalise, or the more comprehensive review of a range of archaeological evidence.

If the latter is open, as a whole, to some residual doubt because of the unknown variables referred to above, there are, fortunately, some aspects of the evidence of stray finds which are much more secure. When coins from different mint-places, but of the same date and the same face value, mingled freely in circulation, they will arguably have been lost at random in respect of their mint-place, and the composition of the finds from a site should provide excellent evidence of the proportions, in the currency of that place, of the respective kinds and, by extension, of the relative scale of inter-regional transfers. In other words we are on much safer ground if we rely on within-sample variation. Thus, for example, the sharp contrast between the eighth-century finds from York (including its southern *suburbium* of Fishergate) and from Whitby (Rigold and Metcalfe 1984, 245–268) respectively raises intriguing problems of interpretation. Another example: the relative



**Figure 1.1** Distribution map of thrymsas and sceattas from England.

scarcity of the locally minted sceattas of Series H anywhere outside Hamwic itself has prompted the suggestion that the *wic* enjoyed a positive balance of payments through its trading (and craft) activities, and that this was reflected in unusually small monetary outflows (Metcalf 1988, 17–20).

The other leg of the argument from the mingling of coins of different mint-places depends on estimates of the quantities of coins minted, as judged from the numbers of dies employed. This argument is stronger when applied to active mints, which were using up reverse dies at such a rate that one need not worry too much about the possibility of serious under-use of dies. Taken by itself, the argument from quantities of coins minted might be depreciated by saying that most of the coins could have served only or mainly as a store of value, and that they should not be assumed to have supported an exchange economy. That is something which one cannot altogether discount, except by saying that if coins were in such widespread use, most of the people who were using them were necessarily ordinary people who would not have had large-scale surplus wealth. But when the two arguments are combined, and set into the context of regional currencies, one obtains very specific and powerful evidence of the scale of inter-regional monetary transfers. These are the twin pillars on which the case rests: not the seven pillars of wisdom, nor the five pillars of religion, but the twin pillars of monetisation – quantity in combination with velocity. On the conventional estimate that 100 dies could be used to strike something like a million coins, it is clear beyond reasonable doubt that millions of coins were involved in inter-regional transfers within England, and that the scale of the currency accumulated within Hamwic, for example, was of the order of some two or three million coins.

We now know, through the patient researches of Derek Chick, that the coinage of King Offa was struck from an estimated 1,000 to 1,100 dies, with little room for statistical error, pointing us towards an output figure of the order of 10 million coins. For the preceding sceatta coinages, evidence of the same high quality is not yet available, except for Northumbria, but it has been conjectured that they were produced, admittedly over a period of nearly 100 years, from a grand total of roughly 8,000 dies, therefore perhaps 80 million coins in all. Of course these totals are dependent on the assumption of 10,000 as the average output of a die, as is the corresponding estimate for Offa, and they may accordingly be somewhat wide of the mark, but not so wide as to threaten the general conclusion that the pre-Viking-Age economy was strongly monetised in some regions, and relatively much less so in others, with maritime trade in the English Channel and on the North Sea coasts as the driving mechanism.

Of all the sceattas found in England, a good 14 per cent are of the ubiquitous ‘porcupine’ type, minted in the Rhine mouths area, largely at Dorestad (Metcalf 1993–94, 174). Dorestad, with its miles of quays (Van Es and Verwers 1980), was the Rotterdam of the day, a major commercial port serving as intermediary between the trade of the Rhine valley, and in the other direction the trade passing through the *wics* of the North Sea coastlands, all around from Northumbria to Jutland. A seventh of all the money in England had originated in the Rhine mouths area. We can safely say that millions of porcupines accumulated in England. And then there are the plentiful Frisian runics, Series D, which also reached England in quantity, and the Wodan/monster sceattas of Series X, minted in Ribe. In light of our discussions at the symposium (see Malmer, Chapter 2, in this volume), it is necessary to add that the arguments for the attribution to Ribe (Metcalf 1984, 159–164) have been disputed, but have recently been restated without retraction

(Metcalfe 1996, 403–409). Together the foreign sceattas found in England represent a massive balance-of-payments surplus, generated (how else?) by exports. They did not reach England through gift-exchange, or as status-symbols (Hodges 1982; Hodges and Cherry 1983, 131–183). The scale of the exchanges is such that most of those exports were almost certainly farm products of one sort or another. It would seem that regions such as East Anglia were producing for an export market to an appreciable extent. And on the Continent too, there seem to have been sharp contrasts between the heavily monetised and the lightly monetised regions – the Rhine mouths area, for example, in contrast with the coastlands further west in Belgium and Picardy (Delmaire, Gricourt and Leclercq 1990, 179–185). Detectorists' single-finds accumulate steadily in the Netherlands: the KPK maintains a register of them, and coin dealers regularly sell provenanced sceattas.

I have concentrated on the logical framework of the argument, with the minimum of details by way of example, and those drawn mainly from the first half of the eighth century, because that is where the case stands or falls. It offers a view of the pre-Viking Age which is sharply at variance with the general ideas of historians of an earlier generation. If this argument had been available to Pirenne, he could not have formulated his famous thesis in the way he did. No blame attaches to him: in the country of the blind, the one-eyed man is king. But there is no occasion to be one-eyed about the evidence available in 2000. Pirenne could not know what we know now, nor could he have shared the ideas that govern our thinking, for several reasons. First, the number of eighth-century coins above-ground has increased many times over, primarily by the activities of metal-detectorists, allowing us to construct die-catalogues large enough to serve as a basis for statistically reliable die-estimation. When there were only half-a-dozen specimens of a variety in existence, the absence of die-duplicates among them was neither here nor there, and there was no immediate reason to suspect the large scale of the issues. Second, there has been a 30-year-long debate among numismatists about the appropriate methods and practical problems of statistical analysis (Carcassonne and Hackens 1981), with a growing awareness of the historical implications of the numismatic facts, or better one could say, the facts about monetary circulation and monetary history that are being created through the recording of provenanced single-finds. Pirenne could allow himself to imagine that eighth-century coins had originally been so few that they made hardly any impact on an economy in north-western Europe characterised by non-monetary exchanges, local self-sufficiency, a restricted long-distance trade in luxury goods which reinforced the status of the ruling elite and so on. We know differently. Even though numismatists will no doubt continue to wrangle about how large is large (Buttrey 1993, 335–351; Buttrey 1994, 341–352; De Callatay 1995, 289–311), the sheer scale of the currency, in combination with the relative scale of transfers between regions – some regions, but not all – imply that there was a monetised economy based on trade. The fact that our surviving documentary sources are virtually silent about it in no way casts doubt; it merely illustrates why an interdisciplinary approach is fruitful in early medieval studies. The contexts of the find-spots show that, in heavily monetised and in lightly monetised regions alike, this economy reached out to countless ordinary villages. In Denmark we may be talking about sceattas from high-status sites, but not in England. Where Pirenne detected the first beginnings of a widespread money economy in the years following the dislocation of the Viking raids, an upturn as he saw it somehow triggered by that dislocation, we can say categorically that that was not the beginning, but rather the recovery after a downturn caused by the Viking raids, from an earlier level of mint-output and monetary circulation that was not to be reached again much before the eleventh century. Pirenne simply did not reckon with that

earlier phase of monetisation. How deep and how dark the tenth-century recession was in southern England (and in other regions too) is a difficult subject for investigation, because our data-base of single-finds of coins is so much smaller and so problematic compared with either the eighth century or the eleventh century. That is in spite of die-estimation which indicates a high level of mint-output (Metcalf 1986, 133–157). But the story is certainly one of great wealth in certain regions – portable wealth which was in itself an inducement to Viking raiders – followed by dislocation and monetary recession, followed by recovery. The numismatic evidence which has been used to create the perspective necessarily sums up a diversity of local detail, and reveals the dominant theme. There may have been other local themes, which are submerged in the general statistics. If evidence of them shows up here or there, one should not be surprised, nor should one allow it to distort the over-all view.

The tenth century – the Danelaw century – witnessed some curious reversals of polarity, of which none is more striking than the dramatic rise to prominence of the mint of Chester and eventually, at about the date of Eadgar's reform of the coinage, its equally dramatic decline. Obviously this is intimately connected with trade in the Irish Sea coastlands and with the fortunes of the Norse kingdom of Dublin. There are numerous hoards of English coins found in Ireland and Man (Metcalf 1992, 89–106) and in the highland region of Scotland (Metcalf 1995, 16–25), which reflect a new situation. Until then, there had been little enough coinage in those regions. Interestingly, these hoards are by no means as heavily dominated by the mint of Chester as one might have expected. Money from eastern England was also quite prominent in the outflows.

The bonds of society were very different in the highland zone, and so were the constraints on gaining a livelihood, and the ordinary levels of material well-being. There is more of a case for speaking of a status silver economy enjoyed by warrior leaders. We should be careful not to get our framework of argument back to front: we cannot by studying coin finds, detect the transactions, unilateral or otherwise, that coins were *not* used for. Gift-exchange, and so forth, no doubt existed alongside any monetary economy, and was relatively more prominent than in England, but numismatics cannot help us to explore it. In the highland zone, the hoards were not accompanied, as they were in England, by a thick carpet of stray losses, and one may justifiably infer that the Highlands and Islands were not a monetised region, in spite of the hoards. It is not until the time of King David I that we see the English monetary patterns spreading northwards to encompass the central lowlands of Scotland.

Jean-Paul Devroey has sketched the characteristics of the ninth-century political economy, as revealed by *polyptiques* (Devroey 1985, 475–488). He points to traditional and very conservative agricultural strategies as the background to ideals of peaceful stability, regular production, foresight in the storage of surpluses, and political paternalism. The estate economy had few outlets: revenues derived from agricultural surpluses were often not applied to any economic purpose, but were used up in almsgiving, in the building of churches or in the purchase of precious objects such as books or vestments. Alongside this rather static survival-economy there are signs, which (Devroey says) we do not understand at all clearly, of a money economy which, in tension with demographic trends, held out the possibility of progressive social change and a spiral of economic development. The signs, one may comment, are writ increasingly large. To speak about the two economies being 'alongside' each other merely affirms the obvious, namely that they could coexist, and leaves open the question of their relationship. Thus, York may



have had the character of a trading emporium which was socially very different from the broad acres over which the Northumbrian kings ruled, an island where money was in daily use, in a sea of subsistence and barter. Such a view is challenged by the stray finds of coins from the countryside which offer the crucial obstacle to traditional historical perceptions. Their evidence gains in strength by being submitted to systematic comparative analysis.

In the tenth century, however, the numbers of stray finds from southern England decline quite sharply, to such an extent that the patterns of inter-regional monetary circulation in the southern shires are difficult to determine, simply because we have not accumulated enough data. If we compare the half-century from the accession of Athelstan to Eadgar's coinage reform (925–c 973) with the immediately following sixty years to the death of Cnut (c 973–1035), the numbers of single-finds recorded in the British Numismatic Society's annual Coin Register over the past five years is 22 before 973 against 88 after 973, a fourfold difference (cf. 293 thrymsas and sceattas!). The numbers are large enough to be statistically significant; we have to try to believe them. Of the 22, no fewer than 14 are finds from East Anglia, and a few of those, from the Thetford by-pass, may in fact be from an undisclosed small hoard. There is a paradox here, in that although there are so few single-finds from 925–c 973, Athelstan had a comprehensive network of some 30 mints scattered over Wessex and Mercia (but only two in East Anglia). The single-finds are the crux of the evidence for a monetary downturn or retreat in southern England in the tenth century. Perhaps the straightforward interpretation is the sensible one, namely that maritime trade from the Channel ports and the North Sea ports was severely dislocated by the unacceptable levels of risk, or that England's trading partners were in economic disarray, and that the fall-off in trade fed back into the hinterland in the English countryside. At approximately the same date as that of Eadgar's reform, c 973, the polarities swung back again, the Irish Sea trade ceased to bring money into Chester, monetary outflows to Scandinavia began to grow strongly, the southern English mints likewise resumed their activity, stray losses quickly become plentiful throughout southern England, and their analysis shows that money was moving freely across shire boundaries, and finally it seems that inflows of silver from across the Channel resumed (although foreign coins were not permitted to circulate in England, and had to be recycled) (Metcalf 1998, 85–89). In a word, the perennial patterns of English monetary history, based on trade with the continent, were restored, in a triangular situation that now also involved Scandinavia.

Eadgar's reform was more than just a renewal of the coinage. Its political dimension, in the early days, is illustrated by the importance of Winchester in implementing the reform (Metcalf 1998, 105), and the tardiness of London in participating (Petersson 1990, 295). If one were to compare the distribution map of stray finds of coins in England south of the River Trent, from the accession of Eadgar in the south in 959 to his coinage reform, with a similar map for the sexennium c 973–79, the contrast would focus attention on changes in monetary circulation which we do much better to understand in political than in social or economic terms. Again, a study of the ranking order of the reform mints and their respective shares of the national currency, allied with a survey of the mint-places of the stray finds from the territory of the Five Boroughs, quickly disposes of the old idea that the Danish settlement was a major stimulus to monetisation.

If we turn back now, briefly, to the period from c 860 onwards – the period of the great heathen army, the creation of the Danelaw, the fight-back by Wessex and the recovery of East Anglia, Lincolnshire and eventually York – the monetary historian's task of creating