Money and Coinage in the Middle Ages

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Money and Coinage in the Middle Ages

Edited by

Rory Naismith

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CHAPTER 1

Introduction

Rory Naismith

This volume is about ways of studying medieval money, and especially the most direct manifestation of money: coinage. It is intended to introduce readers to a range of approaches to a subject that has traditionally been seen as somewhat specialized; a domain of highly technical study which often seems to sit at some remove from the mainstream of historical and archaeological research. One important aim of the chapters offered here is to show ways in which money can be incorporated into analysis of the Middle Ages more broadly, both for particular periods and in specific thematic contexts such as art, literature, and economic analysis. Case-studies, surveys and comments on critical literature all contribute to this end, and the book closes with a general bibliography that includes works selected by the authors as especially helpful and important.

With such a wealth of discussion of all aspects of medieval money elsewhere in the volume, the scope of this introduction is modest. It sets the scene on a basic level, examining some of the key terms, ideas, sources, and scholarly trends in the field from a more general point of view.

Forms of Money

Money in the Middle Ages meant many things. As in modern times, the same terms could be applied to coins, quantities of precious metal, and abstract values used to reckon credit and accounts, as well as goods in themselves or as substitutes for coined money. Some sense of this diversity is conveyed very well in Gaspar Feliu's contribution to this volume. The practical weaknesses of medieval money could also contribute to its conceptual strength: it is clear that across the Middle Ages, there was a strong tradition of thinking in terms of money, often in very subtle ways, even when actual cash was in short supply or unsuitable for the majority of transactions.

In an important sense, then, coined money is a small part of the story, although until the appearance of extensive financial records in the later Middle Ages it is the one which by default receives most attention. Pieces of metal stamped with a design that validated them as the trustworthy product of a

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given authority had been made for over a millennium before the end of Roman rule in western Europe during the fifth century. Even in northern and central Europe, coins had been minted and used before the coming of the Roman Empire. As such, the general principle of metallic coinage was deeply engrained in medieval Europe. It was not just a matter of rulers issuing coins to make and receive payments in a regulated fashion; coinage had become a hallmark of ordered society.

A time-traveller taking a tour of medieval Europe would have had a bewildering variety of moneys to negotiate. The details that he or she might have found in various periods and places are set out elsewhere in this volume in the chapters by Alessia Rovelli, Andrew Woods, Richard Kelleher, and Philipp Robinson Rössner. If travelling back from modern times, he or she would have noticed a lack of monetary means of exchange besides coin. People certainly thought in terms of coin for all sorts of purposes, but there was no equivalent to the credit card, PayPal, or the like. Instead, many transactions depended entirely on trust: buying things on a very simple credit basis, for instance, when coin was not available.[1] This worked well enough in the small face-to-face communities in which most medieval people lived – any unpaid debt could easily be pursued – but it meant that travellers (not least putative time-travellers) often had a hard time and needed cash even more than others.[2] Neither was there a widespread near-equivalent to the cheque. Ingots or objects of gold and silver fulfilled some of the same roles: with precious metals being so closely tied to concepts of value they were a natural form of storing wealth, and under some circumstances could serve as a high-value means of exchange. At times uncoined precious metal was used in preference to coin in exchange settings, as in Viking-Age Scandinavia, but it persisted alongside coined money on some level throughout the Middle Ages as a higher-value alternative.[3] In the later Middle Ages, more formal written financial instruments started to develop, above all the bill of exchange. By the 14th century, merchants at the apex of international commerce could do most of their business without using coin at all. But there were important limitations to paper finance at this stage. It could not easily be transferred between parties other than those named in the document, and was concentrated in Italy, especially in the cities; elsewhere it spread slowly beyond outposts of the Italian banking companies.[4]

1 Bougard, "Le crédit dans l'Occident du haut Moyen Âge".
2 Naismith, "The social significance of monetization in the early Middle Ages", pp. 24–25.
3 Skre (ed.), *Means of Exchange*; Phillips, "The monetary use of uncoined silver in western Europe in the twelfth and thirteenth centuries".
4 Spufford, *How Rarely Did Medieval Merchants Use Coin?*. Cf. Bell, Brooks, and Moore, "The non-use of money in the Middle Ages".

Under these circumstances the emphasis would have fallen on coins. These would have looked very familiar at first glance, and on a basic level worked in much the same way as those of the 21st century: they represented an easy, relatively reliable means of storing and transferring value. Yet on closer inspection there were important differences from modern currency. First, all medieval coins were handmade at every stage of the process, from the casting and carving of the die to the shaping of individual pieces of metal for striking. Hence, although a time-traveller would normally have found coins to be interchangeable in practice, there were small differences in appearance between them. Dies made by hand, even with the help of tools for repeated parts of the design or inscription, would differ one from another, as would the exact placement of the die on the coin (or "flan", the technical term for a piece of metal intended to provide the basis of a coin); so too would the coin's exact weight and fineness. Margins for error in all these areas were highly variable. Some coinages were very strictly controlled and look almost like the product of some kind of automated process; others are quite slipshod.

FIGURE 1.1 Woodcut illustration of a minting scene, from Emperor Maximilian I, *Der Weisskunig*. Originally executed by Leonhard Beck (c.1480–1542) in 1514–1516, but here reproduced from a printing made in Vienna in 1775 (p. 80).
SOURCE: UNIVERSITÄTSBIBLIOTHEK HEIDELBERG/CREATIVE COMMONS.

The mechanisms behind coin production are vividly encapsulated by figure 1.1: a famous woodcut illustration by Leonhard Beck (*c.*1480–1542) made in 1514–1516 to illustrate Emperor Maximilian I's (1486–1519) manual on rulership, *Der Weisskunig*. This particular image shows the eponymous "white king" – who stands at the back, surveying the operation with a set of scales he would use for quality control – and the series of techniques needed to turn bullion into coins. One man in the centre beats a sheet of metal to the correct thickness; another to the left cuts a sheet into round pieces; to the right a third man strikes the prepared pieces of metal, with the help of a young boy who had the unenviable task of quickly removing and replacing each coin. All of these production techniques were centuries old by the 16th century, and can be paralleled across the Middle Ages. There were of course differences in detail. Some minting operations would have been much larger, and many much smaller: Michael Dolley believed that the small "mint" of the Isle of Man in the 11th century could have consisted of "two men and a boy".[5] There were also technical variations. In late Anglo-Saxon and Norman England, something akin to a heavy-duty pastry cutter was used to cut flans out of sheets of silver. Some 7th- and 8th-century coins were made by striking uneven globules of silver, while 12th- and 13th-century "bracteates" were wide, very thin coins struck only on one face, probably against a soft surface such as leather. Nonetheless, the "white king's" picture provides a good (if rather formalized) impression of how medieval coins were manufactured.

In addition to finding medieval coins somewhat irregular physically, a time-traveller would have probably been struck by the widespread use of precious metal. This rarely equated exactly with the face value of coined money; if it had, there would have been a strong incentive to remove coins from circulation and melt them down for their bullion. Gold was prevalent in the immediately post-Roman centuries, as it had been in the late Roman era, because of the wish to maintain a familiar and prestigious currency integral to state finances. Our time-traveller would then have found a long era dominated by silver pennies, which first appeared in northern Europe late in the 7th century and spread out from there to central and eastern Europe, Ireland, Italy, Scandinavia, Spain, and beyond. But he or she would also have noticed that as time went on pennies were generally of poorer silver – indeed, often virtually no silver. They were increasingly impractical for large purchases, and although gold coins and precious-metal bullion had always been available to some extent, demand grew for a more systematic monetary answer to this problem. If

5 Dolley, "A Hiberno-Manx coinage of the eleventh century", p. 83.

our time-traveller had progressed into the 13th century, he or she would have encountered solutions in the form of larger silver pieces (the *grosso*, with its English equivalent the groat), along with gold coins such as the florin and ducat. Both these innovations began in northern Italy in the 13th century and percolated out to other regions at variable speeds; this explains why the later medieval monetary landscape was so complex, as increasingly differentiated monetary economies ran up against each other.

Of course, there had always been considerable diversity in medieval coined money, especially if one takes a broader view that incorporates the full extent of Europe and the Muslim world. There is no reason our imaginary time-traveller would have restricted him or herself to western Europe, and the foregoing comments really only apply to this area. A visitor would have found that native coinage appeared significantly later in much of central and eastern Europe and Scandinavia during the Middle Ages. This is emphatically not a matter of earlier polities lacking in economic complexity or wealth – far from it: Russia in the 9th and 10th centuries was a veritable Euphrates of Islamic silver, which flowed into and through the area in vast quantities. Rather, adoption of coined money was a cultural statement.

Meanwhile, in the Mediterranean, western Europeans travelling east would have encountered monetary systems that reflected not just very different cultural milieus but, for much of this period, significantly richer and more sophisticated economies. These included the Byzantine Empire, or rather what its inhabitants quite rightly still called the Roman Empire, which preserved a multi-tiered monetary system with a large gold element (central to its fiscal structures) until the 14th century.[6] On the eastern and southern shores of the Mediterranean, there was a still larger and more diverse sphere: that of the Islamic Caliphate and its successors. These operated a currency which dwarfed that of early and central medieval western Europe in scale and complexity. As in Byzantium, payments to and from the state played a large part in driving the production of gold and silver, and copper alloy was also at some times used extensively for smaller-value transactions. All three metals interacted in day-to-day business. In the absence of a real-life time-traveller, one can turn instead to one of the many remarkable letters preserved in the "geniza" of the Ben Ezra synagogue in Cairo. In this chatty and meandering missive, an 11th-century Jewish merchant of Cairo gave specific instructions on how particular purses of money in the possession of his correspondent should be handled: one purse

6 Hendy, *Studies in the Byzantine Monetary Economy c.300–1450*; Morrisson and Schaaf, *Byzance et sa monnaie (IVe–Xve siècle)*.

of gold dinars (but not the one belonging to his mentor) should be used to make a payment, and it would be best if they could be changed into silver dirhams first – preferably low-quality ones. If the correspondent chose instead to spend them, handing over the proceeds later, he should buy flax.[7] Some echo can be heard of the back-and-forth of letters, purses, goods, and anxiety that prevailed in the large and sophisticated 11th-century Egyptian economy, within which coined money played a critical lubricating role.

Coins from western Europe, Byzantium, and various Muslim states mingled in the Mediterranean. The prevailing currents that carried them in multiple directions are closely intertwined with underlying movements of people and commodities. Chapters in this volume touch on these questions of large-scale coin circulation, as does the wider literature on early medieval currency.[8] All merchants shared a preference for precious metal in coins which would be used for long-distance trade: these carried enough gold and silver to make their transfer between different monetary systems practical, since in making that transition they usually became in effect small, round pieces of bullion. The validity of a coin, and the incentive to recognize it as a distinct piece of currency rather than a more or less pure piece of metal, depended on a combination of backing from the ruling authorities and acceptance among the intended users.

Money and Authority

Finally, a time-traveller accustomed to 21st-century coins and notes would have been struck by continuity in one aspect of money: reference to the ruling power. Names and images of kings, emperors, city authorities, and the like were virtually universal. These visual statements had been a commonplace of coined money since its inception in ancient times, and served ultimately as a form of guarantee, a pledge that the ruler would honour – and possibly compel others to honour – the piece of metal at a given value. The precious-metal content provided a counter-pledge against that guarantee.

Medieval Europe was heir to a very long and well-established tradition that tied the issue of coin to ruling authority. The most immediate and lasting precedent was that of the Roman Empire. Roman coinage would exercise a powerful influence on the visual and organisational aspects of medieval currency,

7 The letter is illustrated and translated in Goldberg, *Trade and Institutions in the Medieval Mediterranean*, pp. 58–61.

8 Grierson, "The monetary reforms of ʿAbd al-Malik"; Spufford, *Money and Its Use in Medieval Europe*.

seen in all sorts of areas: the strong attachment to verbal statements of position (normally, in western Europe, expressed in Latin); the way in which rulers were portrayed; and of course the general principle that kings and emperors should take charge of the currency. A second key ingredient that combined with the antique Roman tradition was Christianity. Deep-rooted Christian ideals affected ways in which money could be used, and these touched on coinage manufacture as well. Crosses, saints, and religious invocations became an integral part of the visual repertoire of coined money, alongside references to king, emperor, city, or similar. An excellent case-study of the numismatic conjunction of religion and power is presented in Anna Gannon's chapter in this volume. This focuses on early Anglo-Saxon England, a context in which the verbal element of coinage was minimal and the link with ruling authority probably more segmented. These qualities make Gannon's case-study an especially interesting and nuanced one to set alongside developments elsewhere in medieval Europe. Broadly speaking, the nexus of power and faith was prominently displayed through coinage. Rulers who sought to establish legitimacy often issued coins on the same model as their predecessors', in the expectation that they would project an impression of "business as usual" and thereby bolster their bid for acceptance.[9]

As might be expected, kings and others jealously protected rights surrounding coinage. It was for this reason that coins often carried a reference to the person or place responsible for manufacture. This part of the inscription was not primarily a statement of authority or power, even though involvement with minting could be prestigious. Rather, it was a sort of security measure: anyone who doubted the quality of the coin could trace it back to its point of origin, and if necessary hold its makers accountable. The manufacture of coin was generally restricted to places or people sanctioned by the ruler – even if, in some cases, the thread linking individual mint-places to the overall ruling authority became quite attenuated. France and Germany in the 10th, 11th, and 12th centuries saw the number of mint locations multiply and devolve into the hands of counts, dukes, bishops, and abbots, though many of these figures did so on the strength of a royal grant or (at least notionally) in their capacity as holders of formerly royal prerogatives.[10] On a more pragmatic level, ferocious punishments lay in wait for those who challenged "public" authority through acts of forgery: heavy fines, mutilation, and death could all be meted out. Tellingly, less severe penalties were also instituted for those who rejected

9 Naismith, *Money and Power*, pp. 117–27.
10 Kluge, *Deutsche Münzgeschichte von der späten Karolingerzeit bis zum Ende der Salier*.

legitimate coinage. Money and authority thus occupied a two-way street, involving the use as well as the making of coin. Rulers extended this principle to limit what kinds of coin could be used – typically those of their own territory, and sometimes only those of the current issue. This was the premise of what is known as *renovatio monetae* (renewal of the coinage), a system in which only coins of the current type were deemed acceptable and they had to be reminted from time to time – potentially very frequently.[11]

The imposition of a *renovatio*-style system highlights one of the recurring flashpoints of medieval coinage: how should the coinage be run, and for whose benefit? Rulers were expected to look after the interests of their people, and the provision of a reliable currency was part of that responsibility. Recoinage probably gained popularity as one weapon against the threats of forgery and inconsistency.[12] But it could easily become a tool of exploitation if combined with hikes in the rate of profit taken by the minting authorities (known as seigniorage) and especially the imposition of debasement.[13] This was a dangerous path to follow, for it could bring economic turbulence through inflation, and even damage trust in the coinage. Yet for kings in a desperate situation, the coinage might be too tempting a target to spare. Some French kings in the era of the Hundred Years War (1337–1453) fell back on exploitation of coinage as one of their primary sources of income.[14] As might be expected, such policies prompted a lively dialogue about just whose good the money should serve, and what limits there should be to royal manipulation of the currency. The most famous text to emerge from this debate, "The Mint" (*De moneta*) by Nicole Oresme (d. 1382), articulated a moderate and responsible approach:

> Although it is the duty of the prince to put his stamp on the money for the common good, he is not the lord or owner of the money current in his principality. For money is a balancing instrument for the exchange of natural wealth … It is therefore the property of those who possess such wealth.[15]

11 Svensson, *Renovatio Monetae*.

12 Naismith, "The coinage of Æthelred II" examines one of the key periods in the evolution of this system.

13 The causes and consequences of debasement are a complex topic: for one major contribution, see Munro, "Coinage debasements in Burgundian Flanders, 1384–1482".

14 Sussman, "Debasements, royal revenues, and inflation in France during the Hundred Years' War".

15 Johnson, *The De Moneta of Nicholas Oresme and English Mint Documents*, p. 10.

Numismatics, Monetary History, and Beyond

The leap from the study of coins to how they circulated is the point at which they become artefacts of monetary history rather than numismatics. The latter is understood as the study of coins in themselves. It is the expertise needed to classify and organize surviving coins, and involves the ability to weigh the significance of many different characteristics. Just looking at a medieval coin will betray some of its background, especially if it has an inscription. If it does not, working out when and by whom a coin was produced can be a challenge. It takes an expert numismatist to determine on the basis of minute variations in style and distribution of relevant finds that (for instance) a penny in the name of Æthelred II of England was actually made in Dublin or Scandinavia. Likewise, it takes an expert to know where to look for the small marks on gold florins of Florence or permutations in the lettering of later medieval English coins which reveal the inner workings of the minting process, and potentially when and by whom the coin was made. A practised numismatist will also be able to assess what the weight of a coin might indicate, or any number of other physical details such as weak striking (which can be difficult to distinguish from wear that occurs after production) or an unusual tone or texture. Even taste or the tone made when dropping a coin onto a hard surface can give away important details of its physical characteristics. As one might suspect, knowledge of this kind has a large practical element, and needs to be built up from direct experience of many coins. Good numismatists will be adept at integrating all these details into their historical context by fastening on the meaningful differences in practice between coinages.

Monetary history can be defined as study of how coins actually functioned in a social and economic sense. It requires looking beyond the coins as they are now preserved: in relatively few numbers, treasured by museums and collectors as remnants of a bygone era. To conduct monetary history, one needs to picture surviving coins as a tiny fraction of the currency that once circulated in the Middle Ages, a currency that played a very real and tangible part in the lives, businesses, and hardships of medieval men and women. The history of money thus involves coins, but has more in common with economic and social history than with numismatics. Estimating the original scale of coinage is one area of crossover between the two disciplines. Actual coins and calculations of output reached from the number of dies represented among them need to be placed alongside any surviving records of output. Monetary history can go in various directions with this data. One involves inserting estimates of productivity and the scale of the currency into a sequence alongside estimates of population and other critical economic indicators, to track macro-level developments in the economy. Another involves zooming in to a more individual level and examining how different people in medieval society actually used money, or what effect the nature of money had on their lives. How did peasants and paupers get by when only high-value denominations were available? How did everyone cope with periods when supplies of precious metal failed, as in the late 14th century? Several of these approaches are discussed in further detail elsewhere in this volume, not least in the chapters by Nick Mayhew on the larger-scale economic ramifications of coined money and by Rory Naismith on its usage within medieval society.

Many approaches to coins and money move beyond numismatics and monetary history as defined in these terms. Scholars are often comfortable combining the two, to good effect, and some of the best research within these areas takes account of other ways of coming at the subject. This methodological eclecticism is at the heart of the present volume. It sets out to give an overview of ways in which coins and money, as categories of object and thought, can be understood. As one might expect, there are many niches beyond the two traditional ones described above. An archaeologist, for example, will use coins in part as evidence for the dating and possible character of a site, but also focus on their importance as contextualized artefacts. Art historians place coins alongside other objects and images as representatives of visual culture rather than economic or physical entities *per se*. Cultural studies of coins as signifiers of identity likewise involve taking account of their appearance, but also indications of how they were actively used to build perception and understanding. Similar in some respects is the anthropologist's view of money, informed by a broad understanding of how it fits, comfortably or uncomfortably, into spheres of human interaction worldwide. Although grounded in observation of contemporary societies, anthropologists' and ethnographers' insights have played a critical part in forming ideas of how money might have been treated in ancient and medieval Europe. There are other ways of viewing coins, but these approaches are all addressed directly in this volume, in the chapters by (respectively) Nanouschka Myrberg Burström, Anna Gannon, Lucia Travaini, and Bill Maurer.

There are also important features of a coin that can be ascertained only by application of scientific analysis. Metallic content is one prominent feature which simply cannot be known in detail from outward appearances.[16] There may be a veneer of finer metal on the outside, or significant variations in

16 Methods for assessing fineness are surveyed in Merkel, *Silver and the Silver Economy at Hedeby*, pp. 19–34 and 67–89.

make-up across the coin. Determining what mix of metals is to be found in a coin requires skills that most numismatists do not possess, as well as access to up-to-date scientific equipment. A researcher trained in the use of techniques such as electron scanning microscopy or laser ablation analysis (among others) has much to bring to the table: in addition to finding out how "pure" a coin is in terms of main elements such as gold or silver, he or she can pin down what other elements are present in smaller quantities. The balance of these and specific features of some elements, such as lead isotopes, can give important clues to the origin of the metal. This information can only be pushed so far: it is difficult to make the leap from the metallic profile of a group of coins to a specific source, though it is normally feasible to say with confidence which coins do or do not share a common origin.[17]

Source Material

What are the actual underpinnings of all these approaches, from numismatics and monetary history to metallurgy and art history? Surviving coins are of course crucial, and can be understood on two main levels. They reflect, on the one hand, the production mechanisms that brought them into being, as outlined above; on the other, they reflect the acts of exchange that led to their deposition. Broadly speaking, the numismatist is more concerned with the former, the monetary historian and the archaeologist with the latter. Coin-finds and their assessment are a whole subject in themselves. They can be broken down in several ways, but three main ones are generally accepted: hoards, single-finds, and clusters of single-finds.[18]

Hoards are groups of coins (and often other objects) deposited together. For the numismatist, their value is that they provide a snapshot of which coins could be combined at one point in time. He or she can look at what coins are represented in a given find, relative to the entire corpus for that period: the latest one represented in it may well give a clue to when the hoard was deposited. The presence or absence of earlier or foreign issues might hint at how circulation was controlled, or at what kind of hoard this was. That said, the circumstances which led to any hoard's being abandoned and not recovered until modern times are inevitably murky and often contentious. A hoard might, for instance, be the result of gradual accumulation rather than a "scoop" of what

17 Merkel, *Silver and the Silver Economy*.
18 Grierson, *Numismatics*, pp. 124–39; Blackburn, "Coin finds".

could be brought to hand in a single go, and its deposition could have been accidental or deliberate. "Deposition" is a word used advisedly, in an effort to be as neutral as possible. It is widely assumed that medieval hoards were concealed as a sort of safety deposit, with the expectation that the owner planned to return and recover it. Times of disruption (such as the Black Death, or the Viking campaigns in England in the later 9th century) do indeed tend to be particularly rich in hoards, for there was both more incentive to hide wealth and a higher chance of owners being killed or displaced. But while a general link between hoarding and times of uncertainty holds true, in the absence of exceptional circumstances it is dangerous to make a link between individual hoards and specific incidents. Moreover, other possibilities need to be kept in mind. Hoards could have been deliberately abandoned with no intention of returning – for apotropaic reasons, or to deny wealth to enemies, for instance.[19] Deposition in an unusual location might suggest such a motive. Hoards could also be lost by chance. Even a bundle of medieval coins was a small object, liable to be dropped or misplaced.

Single-finds are more or less what the name suggests: individual coins found in an isolated context. It is thought that these represent losses in the course of day-to-day interaction (though of course the possibility exists of deliberate deposition, or indeed of an unrecognized hoard). They might be brought to light by pure chance (for instance, during building), by deliberate searching with a metal-detector, or by archaeologists in a controlled excavation. This last is obviously the ideal, for it furnishes some detail about the context of preservation. But responsible detector-users and casual finders record the locations of their finds with a regional or national repository of such information if one exists. An individual single-find is not especially informative, but a large number of them can begin to shed light on patterns of circulation. The information revealed by single-finds in this way is often quite different from what the hoard record suggests. The two categories of find were governed by very different forces: single-finds by what coins changed hands most frequently in a given area; hoards by (probably) the occurrence of destabilizing factors and by traditions of deliberate deposition. As such, single-finds offer a better window onto the role of money in the economy at large[20] – though study of hoards, and the prevailing size among them, perhaps gives some flavour of access to coin.[21]

19 Remarks on the interpretation of hoards of Roman coins are also valid for the Middle Ages: Guest, "The burial, loss and recovery of Roman coin hoards in Britain and beyond", pp. 101–6.

20 Blackburn, "Coin finds".

21 Allen, "Coin hoards in England and Wales, c.973–1544", p. 151.

FIGURE 1.2 Cut halfpenny of Harthacnut (1040–1042), Winchester mint, uncertain moneyer, found at Kimpton, Hampshire PAS SUR-B5FF52.
SOURCE: PORTABLE ANTIQUITIES SCHEME/CREATIVE COMMONS.

Clusters of single-finds are best treated as a slightly distinct category, even if they have much in common with those as discussed above. Above all, each coin probably represents an individual act of loss or deposition. Clusters of single-finds can occur in open ground or on the sites of meeting places or fairs (or, indeed, unexcavated settlements) uncovered by diligent metal-detector users. Places that have produced a lot of coins and other metallic items are sometimes referred to as "productive sites", in the absence of any detailed knowledge of their identity.[22] Some archaeologically excavated sites also fit into this category, as do locations akin to the modern wishing well which attracted numerous depositions of coins for special reasons: the *confessio Sancti Petri* of Old St Peter's in Rome, for instance, where thousands of late antique and medieval coins left by pilgrims built up over time.[23] Assessing a mass of single-finds from a single site is a delicate operation, for it magnifies some of the problems presented by single-finds as a whole. Were the coins lost soon after their date of manufacture? How representative is the profile of the cluster? With both hoards and single-finds, these and other challenges can be addressed only through careful comparison of all available information.[24] That is to say, the entire corpus of find material often needs to be viewed as a whole.

As well as being artefacts of monetary production and circulation, coins are archaeological objects, items which were handled day in and day out by medieval men and women, and which often bear the imprints of such use.

22 Pestell and Ulmschneider, *Markets in Early Medieval Europe*; Coupland, "Carolingian single finds and the economy of the early ninth century"; the term is critiqued in Richards, "What's so special about 'productive sites'?".

23 Serafini, "Appendice numismatica". See also chapter 13 by Lucia Travaini.

24 A case study is Blackburn, "Coin finds".

FIGURE 1.3 The "Wilton Cross", consisting of a light-weight *solidus* of Heraclius (610–641), mounted in a gold cross inlaid with garnets, found at Wilton, Norfolk (now in the British Museum).
SOURCE: BRITISH MUSEUM.

Their physicality is an integral part of their value.[25] Has a coin been cut, bitten, or in some other way checked to assess its quality? If so, what does that suggest about the population's faith in the currency? In some circumstances, coins might also be cut into pieces for use as bullion or lower denominations. Cutting pennies in this way was the normal way of obtaining small change in England from the 10th to 13th centuries (Figure 1.2). Coins might in addition be modified for uses which were not directly monetary – pierced, mounted, or otherwise adapted, often for ornamental purposes. This could be a multi-stage process: one Byzantine gold coin which eventually formed the centrepiece of a gold and garnet cross in 7th-century England had not only travelled a long way from its source in the eastern Mediterranean, but had clearly been mounted in some other way before being removed and used to make the surviving cross (Figure 1.3).[26] Sometimes even an unusual find context is enough to point to

25 In addition to the chapter in this volume by Nanouschka Myrberg Burström, see Kemmers and Myrberg, "Rethinking numismatics".
26 Archibald, "The Wilton Cross coin pendant". See also chapter 12 by Anna Gannon.

special treatment of a coin. All such cases are crucial to understanding how money was seen and understood on a human level by its medieval users.

Finally, all students of numismatics and monetary history need to look beyond coins themselves to other contemporary objects that have a bearing on coins and exchange, such as hacksilver in the Viking world or cloth in later medieval Iceland,[27] and above all to texts dealing with coins and money. These range from mint records which very directly address the matter of coin production, to charters mentioning preferred forms of payment, to anecdotes in saints' lives or miracle collections shedding light on how coins were used in practice and allusions in literary texts which illustrate deeper understanding of money's significance. The latter are discussed in an important and original chapter in this volume by Elizabeth Edwards, while aspects of money beyond coin are addressed by Gaspar Feliu.

Scholarship on Money and Coinage

The bulk of modern research into this subject is much more specific than the chapters contained within this volume. A high proportion of numismatic work is of necessity highly targeted, concerning an individual mint, reign, coinage, or similar. There is also a tendency for it to run along lines configured by modern national traditions. English numismatists think in terms of England and its generally quite centralized coinage; French numismatists think in terms of a sharp distinction between royal and "feudal" coins (i.e., those issued by non-royal authorities); while German and Italian numismatists only rarely think of Germany or Italy as a whole, and tend to focus on particular regions or cities. All of these approaches result from a blend of prevailing medieval circumstances with the evolving concerns of modern scholarship. Each subsection of the subject has its own preferred chronological breakdown, terminology, and lines of enquiry.

Research on monetary history, however, has always been marked by a strong comparative and international element, recently inspired by Peter Spufford's masterly surveys of money and merchants.[28] The same is true in many other disciplines: anthropologists, art historians, and many others tend to have a wide-ranging conception of money. These approaches gain from the combination of depth, difference, and specificity offered by medieval material; equally, scholars who concentrate on targeted aspects of medieval money and coinage need to be conscious of the larger canvas to which they are contributing.

27 Hayeur Smith, "Thorir's bargain"; and Hayeur Smith, "Weaving wealth".
28 Spufford, *Money and Its Use*; Spufford, *Power and Profit*.

Some impression of the scope of scholarship is communicated by the general bibliography found at the close of this volume, which assembles the key works thought to be most influential or useful in grasping the subject. It includes a mix of specific but exemplary studies, together with more sweeping works of synthesis.

Conclusion

The goal of this volume is not to fill every gap in scholarship touching on medieval money and coinage. Neither is it to survey any conceivable way of tackling the subject. Rather, it is intended as a form of invitation. Points of contact and dialogue are flagged up as authors address selected important aspects of the field in their chapters. If the book leaves the reader with as many ideas and questions as it does answers, it will have done its job.

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PART 1

Thinking about Medieval Money

Chapter 2

Money and Currency

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Translated by Ramon Pujol Gorné

The purpose of my contribution is to study different aspects of medieval money in its two forms, as a unit of value and as a means of payment. After a general introduction about the characteristics of medieval money, I will examine the types of currency, including non-monetary forms of payment, the causes that explain the introduction and the use of every means of payment, and indicate very briefly the problems generated by the relationship between the different types of currency.

Definition and Kinds of Moneys

Money is in essence a concept, an abstract unit of value that is used as a universal equivalent to compare any good or service with all others. The concept of money from a logical point of view must precede any physical monetary reality, but to be fully effective, to be able to act, money as a concept must be brought to life through its materialization in an object that the community accepts as money. Under this double form, money meets the three functions that are considered basic for its characterization and definition: to be a unit of account, a means of exchange (currency), and a store of value. I think that to these should be added a fourth function: to be an instrument of business through credit.[1]

The objects used as currency have varied throughout space and time, but they can be reduced to two classes: goods that have intrinsic value (real currency) and symbols (shells, stones, printed paper, pieces of metal), whose intrinsic value is lower than their value as currency, so they receive the name of fiduciary money.

Although as we will see there are other types of effective currency, in the Middle Ages its most common form was coined currency. It could be issued

1 Munro, "Introduction", p. 1, points out this function ("Standard of deferred payments") but does not refer to the possibility of profit, which is synonymous with credit.

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either by the local authority or an external one; it could be current or old; it could consist of specimens in good or bad condition and might even extend to counterfeit or false money (as long as the deception was not discovered) or pieces which were worn or damaged. In addition, the concept of money could take the form of money of account, with no physical existence; in such cases it was only a unit of value, useful for counting or accounting but not used directly as a medium of exchange or saving.

General Characteristics of Medieval Money

The main features to keep in mind to understand the functioning and the evolution of medieval currency are:[2]

1. The noble metals (silver and gold), the basis of the medieval monetary systems, were almost always insufficient to meet the needs of the demand for currency.
2. There were large differences in the availability and the temporal, spatial, and social distribution of the currency.[3]
3. The value of each coin depended on the sort of metal used and the known parameters of weight standard, number of coins struck, and fineness.
4. Each coin had three currency values – the intrinsic value of the metal coined; the legal value that was attributed by the issuing authority; and the market value – although as a general rule the three values differed little. The legal value was almost always higher than the intrinsic value, due to the costs of coining ("brassage") and also to the fee that the minting authority levied on coins for its own benefit ("seigniorage").[4] Only when the legal value significantly exceeded the intrinsic value did a separate market value appear, which tended to reduce the difference between the other two.[5]
5. Coins circulated with few restrictions outside the territory of the issuing authority.

2 These features apply especially to minted coins; almost none of them is always and everywhere present, but all of them have broad spatial and temporal validity.

3 J. Day, "An outline of money", pp. 1–2.

4 In English this is usually called "seigniorage" or "gros seigniorage", the difference between the price of the metal and the legal price of currency. I follow the continental practice of distinguishing them because it helps to clarify understanding of the process.

5 The difference may come from a very high seigniorage or from a change in the price of metal on the market; Bloch, *Esquisse d´une histoire monétaire*, p. 9; and Munro, "Technology and economics", p. 19.

6. The diversity of local and foreign coins circulating in a given territory explains the need for money of account.

Medieval Means of Payment

Non-Monetary Exchanges

Since the beginning of the 5th century, the economy of Western Europe had entered a state of economic and monetary prostration, with limited exchanges and poor circulation of currency;[6] however, the concepts of currency and price were always present, although at some times and places reduced to a minimum.[7]

Barter, which is considered the simplest form of exchange, appeared in the first centuries of the Middle Ages in marginal areas,[8] but was clearly influenced by the notion of currency, as David Graeber argues that all exchange is ultimately barter.[9] Often a good is exchanged for a jumble of miscellaneous commodities, which indicates an estimated value, next to a price valuation: "six measures of grain, bedding, a tunic or shirt, two rams, four cheeses".[10] In fact, the words "sale" or "price" often appear in documents in which a benefit or good is exchanged for another benefit or good.[11]

The next step up from barter is payment through certain goods that function as standard currency in a certain society, without any mention of price. They are a partial monetary equivalent, even with a certain gradation according to the value of the goods being purchased, from an ox or a horse for large payments to a measure of wheat, a sheep, or a pound of wax for medium-sized payments, or a loaf of bread for small payments.[12]

However, the most common way of making non-cash payments was to set the price in currency and indicate the payment "in rem valentem" or in "res valentes", which may or may not be stated ("bove uno valente"). In this sense,

6 Cipolla, "Primitive money in primitive Europe", p. 7.

7 Bloch, "Natural economy and money economy", p. 231; Cipolla, "Primitive money in primitive Europe", p. 12.

8 For the northwest Iberian Peninsula: Gautier-Dalché, "L'histoire monétaire de l'Espagne"; Davies, "Sale, price and valuation".

9 Graeber, *Debt*, p. 40.

10 Davies, "Sale, price and valuation", p. 159.

11 "Vindo vobis campo … et ipsa area … precium … kavallo placibilie … et duos boves placibiles", in a Catalan document from 817: Abadal, *Catalunya Carolíngia*, Vol. 3: *Els comtats de Pallars i Ribagorça*, doc. 3, pp. 281–82.

12 Cipolla, "Primitive money in primitive Europe", pp. 4–5.

any property can be used as a means of payment.[13] Sometimes a debtor had the choice of making a payment in currency or in a particular good, with expressions such as "quem habuero" ("whichever I might have"); the good had to be considered in this case as an acceptable equivalent.[14] Payments in kind persisted for a long time, even in societies with a wide use of currency: in Catalonia, for example, during the 11th century payments in kind still accounted for 27 per cent among a sample of documents studied by Pierre Bonnassie. [15] In fact, these percentages are surely underestimates: the mention of "in rem valentem" indicates a payment in specie, but expressing a price in currency does not rule out the payment being carried out in specie.[16] Monetary quantification fulfilled the role of expressing value, not necessary as a means of payment.

Object-Coins

Until the end of 8th century there were coins but no monetary system: the scarce currency consisted mostly of later imperial gold coins (Constantinian *solidi* or *aurei*), usually very worn, and *trientes*, theoretically a third of the *solidus*, coined by barbarian monarchs, local authorities, and even private goldsmiths[17] in limited accounts and very diverse emissions,[18] in such a way that they cannot be considered units of value, but weights of noble metal. Coins and goods could be mingled in the same payment, regardless of whether the total amount to pay was indicated: the currency in this case was considered more as merchandise[19] and the coins that were handed over surely did not constitute a fixed monetary value, but rather a weight in metal.

For high-value trade, people in the earlier Middle Ages turned to contemporary Byzantine or Muslim gold currency, of higher value and more reliable and stable. Only in the south of Italy and in the Iberian peninsula, territories

13 Gautier-Dalché, "L'histoire monétaire de l'Espagne", pp. 45–46.
14 For its use in legal codes, Bloch, *Esquisse d'une histoire monétaire*, pp. 27–28; generally, Cipolla, "Primitive money in primitive Europe", pp. 3–4 and 8.
15 Bonnassie, *La Catalogne du milieu du Xe à la fin du XIe siècle*, p. 906.
16 Cipolla, "Primitive money in primitive Europe", p. 6.
17 See Chapter 4 in this volume.
18 Bloch, *Esquisse d'une histoire monétaire*, p. 15; and W.R. Day, "Monetary reforms of Charlemagne", p. 34. Sánchez-Albornoz, *Estampas de la vida en León*, p. 61, shows that Roman *denarii* circulated in León, along with gallican *solidi* (from either Galicia or Gaul?) and simple scraps of silver.
19 Cipolla, "Primitive money in primitive Europe", p. 6. A document from the year 1102 of the monastery of La Grasse, in Languedoc, includes a payment of 15 pounds in silver, 40 shillings from Roussillon, a horse, and two young horses, to cite just one example; Magnou-Nortier and Magnou (eds.), *Recueil des Chartes de l'Abbaye de la Grasse*, doc. 170.

more in contact with Byzantium or the Muslim world, did such coins circulate with some degree of normality. They would end up being imitated by local powers.[20]

The long persistence of non-monetary exchanges (although sometimes including a proportion of coins) is due to several factors:

1. The currency's scarcity, poor reliability and uneven distribution.[21]
2. The hoarding of existing coins and the preference for keeping noble metals in the form of objects (dishes, silverware, jugs, objects of worship) which provided pleasure or utility to their owners.[22]
3. The ease of using these objects as currency or converting them into means of payment.
4. The limitations of the market in a largely autarkic economy: lords received goods or services in exchange for their incomes, so the currency was only needed for the sporadic acquisition of luxury goods as well as bulk purchases, gifts, fines, rents, taxes (sometimes), and so on.[23]

Non-Coined Currency

Medieval currency was not always coined; there were also non-metallic coins. The main ones consisted of pieces of fabric with certain characteristics and of fixed size, used in Friesland; and pepper, documented as currency from the 10th century to the 14th, usually in closed and sealed bags, which was an important part of the economy in Genoa.[24] In both cases these "coins" coexisted in documents with specie payments and coined currency; they are considered an indicator of shortages and at the same time of the poor quality of the circulating currency. Uncoined pieces of metal ("bullion"), assessed by weight, also functioned as currency and were widely used in international trading.[25] All of these were real currency: they had value as a commodity and can be

20 Duplessy, "La circulation des monnaies arabes"; and Grierson, "Carolingian Europe and the Arabs", pp. 1059–74.

21 H. Van Werveke, "Monnaie, lingots ou marchandises?", pp. 453–54.

22 Since the currency was only needed now and then, to keep it was a misuse of wealth; Van Werveke, "Monnaie, lingots ou marchandises?"; Bloch, "Natural economy and money economy", pp. 234–36.

23 "A monetary system cannot exist and cannot work if it is not supported by an efficient market." Cipolla, "Primitive money in primitive Europe", p. 10. Also Naismith, "Social significance".

24 Bloch, *Esquisse d'une histoire monétaire*, pp. 27–28.

25 Munro, "Introduction", p. 2.

considered as “substitute coins”, but in fact, most of the real coins circulating in the Middle Ages were metallic. In an economically sophisticated society, such as that of Genoa, uncoined money served primarily as a substitute currency in periods of monetary scarcity caused by taxes, rents, and especially the exportation of money to other markets (such as those in the east), in which demand was such that one could not sell as much as others wanted to buy.

The Silver Penny

After some earlier attempts in France, Frisia, and England, the Emperor Charlemagne introduced a monetary system based on the silver penny (also known as “denarius” or “denier”), which almost completely dominated the European monetary panorama from the 9th century to the middle of the 13th. It remained for centuries the standard for European currency,[26] and did not definitively disappear until 1972, with the introduction of the decimal system in the English currency. Its basis was a pound unit of weight from which 240 pieces of one penny (*denarius*) were obtained.[27] Gold was at this time worth 12 times more than silver. The equivalent of 12 pennies was used as a multiple with the name of *solidus* (in memory of the old Roman coin) or shilling.[28] This parity converted the shilling into the twentieth part of the pound, and the system was defined as a pound of 20 shillings and a shilling of 12 pennies. Only the penny was coined, however; the shilling and the pound were used only as accounting multiples or for enumerating large amounts. The fact that the base of the system was silver and not gold did not mean an economic setback; on the contrary, it underlined the passage from a coin to hoard to a coin for trade.

As a model, the Carolingian monetary system persisted for a long time; as a reality, it quickly became disorganized. The successors of Charlemagne issued pennies with various contents of silver and from the 10th century many local powers (counts, bishops, etc.) coined pennies on their own.[29] The trend was for the pennies to contain less and less silver, with large differences between

26 Bloch, *Esquisse d’une histoire monétaire*, pp. 22–23.

27 In reality, every pound produced more than 240 pennies to pay the mint cost (“brassage”) and seigniorage. According to a document of Pippin the Short, Charlemagne’s father, each pound was divided into 264 pennies, the excess being distributed equally between the officer of the mint and the monarch; Miskimin, “Two reforms of Charlemagne?”, p. 47. “Denarius” is the origin of the abbreviation “d.” formerly used for pence.

28 As Cipolla, “Ghost moneys”, p. 40, notes, the shilling was the link between the past and the new system.

29 Bloch, *Esquisse d’une histoire monétaire*, p. 21; and Munro, “Introduction”, pp. 4–5.

mints, so that it was necessary to specify the origin of the pennies.[30] When in the same place the difference between an issue and the previous one was too large, it was also distinguished with different denominations. In Catalonia, for example, the first mention of *dinarios curribiles* (current pennies), as opposed to the pennies of silver or of full weight, is from the year 991.[31] Later, throughout the first half of the 11th century, there were several mentions of *moneta nova* (new money) and especially of *moneta grossa* (full money).[32] As we shall see in due course, this monetary duality is at the root of money of account.

Except in England, the degradation of money was a general phenomenon: in 1250, the penny of the Republic of Venice contained only 5 per cent silver with respect to the initial penny, while the English penny maintained 98 per cent.[33] There are four principal reasons that explain the debasement of the different pennies: wear of the circulating currency; shortage of silver relative to demand; crimes against the currency; and the need or ambition of the issuing authorities.[34]

However, stable currency was considered a benefit in itself, which led to the question of whether a ruler could legally change the currency and even whether a tax could be imposed in exchange for avoiding the change of currency during each reign.[35] This is, however, an issue which I will only note in passing.

Full Silver Coins

The mixed effect of the reduction in value of the different pennies and of economic growth, together with the interconnection of trade in the Mediterranean,

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30 In a document of the monastery of La Grasse appears the statement: "quadraginta solidos Ugonencos octonos de Carcassona et … quadraginta solidos milgurienses et una libra de plata ad pensum de Narbona": Magnou-Nortier and Magnou, *Recueil des Chartes de l'Abbaye de la Grasse*, doc. 134.

31 These coins would be new and would be called this, as opposed to the previous ones, which would continue circulating; Jarrett, "Currency change in pre-millennial Catalonia", pp. 226–8.

32 Bonnassie, *La Catalogne du milieu du Xe siècle à la fin du XIe siècle*, p. 387; "gross" refers to a coin, specifically one of full silver.

33 Cipolla, "Currency depreciation in medieval Europe", p. 422.

34 On these various points, Bloch, *Esquisse d'une histoire monétaire*, pp. 60–70; Cipolla, "Currency depreciation in medieval Europe"; Day, "An outline of money", pp. 12–13; and Sargent and Velde, *Big Problem*, pp. 64–67.

35 Bisson, *Conservation of Coinage*; and Spufford, "Monetary practice and monetary theory", pp. 54–55.

achieved what Marc Bloch called the great change of the 13th century:[36] the appearance of full silver coins and, after half a century, of gold coins.

The new silver coins, called generically *grossi*, tended to reach back to the value of primitive money at each location. It was precisely in Venice, whose penny had suffered a further debasement, where the first silver *grosso* was coined in the year 1203; it was called a *matapan* and equated to 24 current pennies.[37] The example was imitated first by cities throughout the north of Italy, which coined *grossi* of similar value, with different equivalences to the local penny, depending on the exact silver content. In the second half of the century almost all the powers of occidental Europe followed suit.[38]

Full silver coinage proved effective and was the first European currency suitable for international trade, but it also added another factor to the deterioration of the pennies. The *grosso*'s silver content was fixed, as a general rule, as equivalent to the sum of the silver contained in the pennies that equated its value. But coining the pennies equivalent to a *grosso* was more expensive than coining a single *grosso*.[39] For this reason, the operators of the mints tended to neglect the minting of pennies,[40] which led to protests against the scarcity of "petty coins", increased wear on the ones which circulated, and the loss of value of the penny with respect to the *grosso* and also to the production of pennies with lower silver content (debasement). This vicious circle was very well described by Carlo Cipolla and by Thomas J. Sargent and François Velde (see also Figure 2.1). The penny became a fiduciary currency, a circumstance which had significant social implications.[41]

Gold Coins and Monetary Systems

Despite the importance of the *grossi*, a still greater monetary change was the minting of gold coins. Although in the middle of the 13th century Sicily and Castile had monetary systems based on gold, these were marginal economies,

36 Bloch, *Esquisse d'une histoire monétaire*, p. 11.

37 The matapan lined up with the English penny, since both contained 1.35 grams of pure silver: Cipolla, "Currency depreciation", p. 418.

38 Bloch, *Esquisse d'une histoire monétaire*, p. 26; Fournial, *Histoire monétaire*, pp. 78–80; and Spufford, *Money and Its Use*, pp. 404–6.

39 Day, "The problem of the standard", p. 75; Sargent and Velde, *Big Problem*, p. 52 also offers examples of the relative cost of minting different coins.

40 Usher, *Early History of Deposit Banking*, p. 198; and Munro, "Technology and economics", p. 19.

41 Cipolla, "The big problem of the petty coins", pp. 27–37; and Sargent and Velde, *Big Problem*, p. 129. See also chapter 8, this volume.

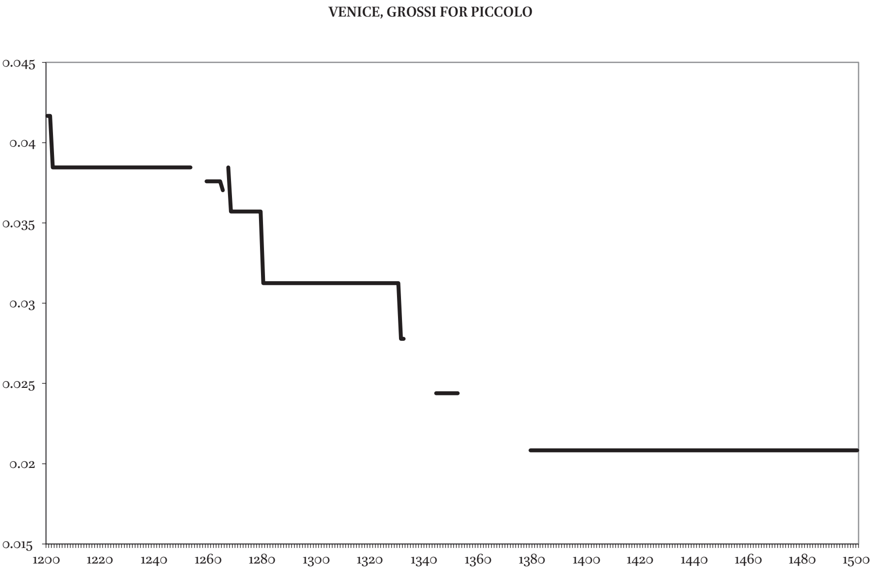

FIGURE 2.1 Valuation of *piccolo* relative to the *grosso* at Venice, 1200–1500.
ADAPTED BY THE AUTHOR FROM SPUFFORD, *HANDBOOK OF MEDIEVAL EXCHANGE*, P. 85.

which is why the introduction of the florin in Florence and the *genovino* in Genoa, minted from around the same time in 1252, is often considered to be the beginning of "the return to gold" in the West.[42] The first imitations in England (1257) and France (1266) were not successful. A new momentum came in the year 1285 with the introduction of the *zecchino* or Venetian ducat and, soon after, of the *royal assis* or French florin (1290). In the majority of European countries, the gold coin was an innovation of the 14th century.

The use of different coins for different purposes was well adapted to the economic and social situation of the time, but it was very difficult to manage. Although sometimes there has been discussion of medieval bimetallism, this was not a bimetallic system, which would have required a fixed exchange between silver and gold.[43] Rather, there were three systems based on three different

42 Lopez, "Settecento anni fa"; and Lopez, "Back to gold". In reality, the *grosso d'oro fino* of Lucca preceded the florin and the *genovino*, but it was of short duration, so its primacy is irrelevant: Fournial, *Histoire monétaire*, p. 80.

43 Only in Florence was there an intention to create a bimetallic system, with a fixed relationship between the three currencies and in which the gold florin was equivalent to the pound and the florin of silver or *grosso* to the shilling – but the system foundered

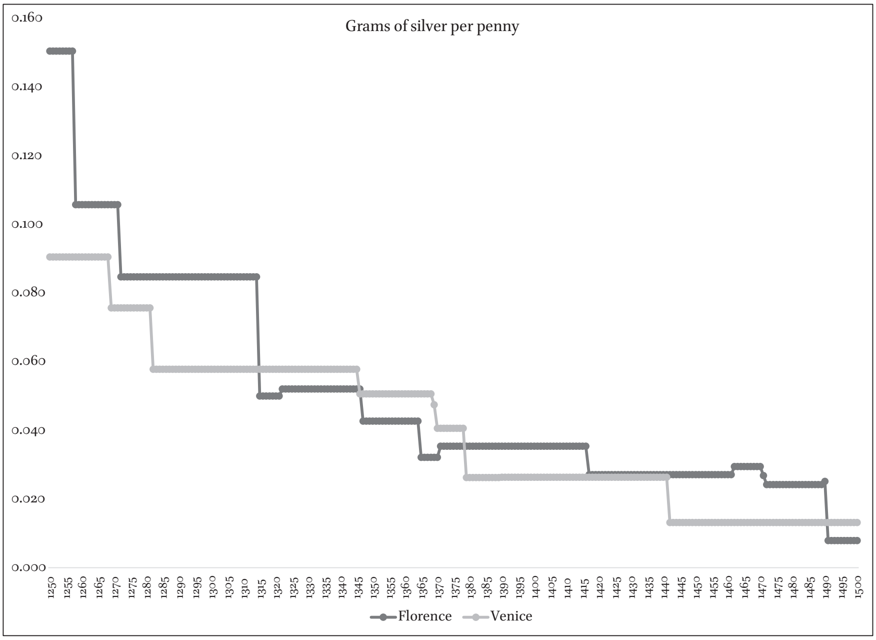

FIGURE 2.2 Grams of silver per penny at Florence and Venice.
ADAPTED BY THE AUTHOR FROM SPUFFORD, *HANDBOOK OF MEDIEVAL EXCHANGE*, PP. 1–25 AND 81–84. ONLY THE FIRST MENTION OF EACH YEAR HAS BEEN RETAINED.

coins: the penny, the *grosso* (silver florin), and the gold florin, based on the necessary adjustment between them,[44] which meant a debasement of the penny in relation to the *grosso* and of the latter with regard to gold (see Figure 2.2).

Fiduciary Money

Fiduciary money is any which has a legal value higher than its intrinsic value. It can be purely fiduciary ("token money"), as with the currency of many primitive peoples or that of modern times,[45] or partially fiduciary if the value

quickly. Usher, *Early History of Deposit Banking*, p. 202; Lopez, "Back to gold", p. 224; and Day, "Problem of the standard", pp. 69–72.

44 Bloch, *Esquisse d'une histoire monétaire*, p. 39.

45 For "primitive" peoples, see Einzig, *Primitive money*. The current currency became completely fiduciary with the abandonment of the gold parity of the US dollar in 1971.

of the noble metal that each coin contains is lower than the legal value ("fiat money"). In medieval western Europe there were no token moneys, although (especially from the 13th century in the Mediterranean), there were numerous partially fiduciary coins, especially pennies with a sometimes-minimal content of silver.[46] At some times and places there were also fiduciary *grossi* and even some fiduciary gold coins whose legal value was fixed above their intrinsic value.[47]

The principal cause for the appearance of fiduciary money was the manipulation of the coinage by the authorities, whether to increase the income from seigniorage or to avoid a scarcity of low-value coins, or indeed both at the same time. In fact, fiduciary money arose and expanded in urban economies whose general growth created a higher demand for money than the available stock of metal could fulfil.[48] Faced with a shortage of real currency, the public accepted the fiduciary coins as a lesser evil.[49] But if there were an excess of fiduciary coins in circulation (that is, if they exceeded the small-change needs), the market reacted first by removing the top coin from circulation (the *grosso*) and hoarding or exporting it. The next step was to demand more pennies per *grosso*. This market value might end up becoming the legal value without the penny's ceasing to be a fiduciary currency.[50]

From around the mid-13th century, fiduciary currency was essential to the good functioning of the medieval economy. It was the most widely used currency and had the highest velocity of circulation: the lower classes did not have another money and the rest of the population would also turn to it for small transactions or collection of income and taxes. As Sargent and Velde have said,

46 The penny was not a partial fiduciary money until after the introduction of the *grossi*, when the sum of pennies began to contain rather less silver than the corresponding *grosso*.

47 Especially in France during the Hundred Years War, but it was a temporary expedient, motivated by the need to collect money for the war.

48 In countries where the issuing authorities did not abuse seigniorage (such as England) or which had a less developed urban economy, fiduciary money was rare or unknown in the Middle Ages.

49 This explains why the circulation of local fiduciary coins was often accompanied by the introduction of foreign coins also accepted at a value greater than the metal they contained, as happened in England with the Venetian *soldini*, which were accepted as halfpennies ("galley half-pence") although they contained 20 per cent less silver than was theoretically requisite; Day, "Outline of money", p. 16.

50 That is, more than 12 pennies (or the corresponding number in the local monetary system) per *grosso*: Cipolla, "The big problem", pp. 30–31; as a general rule, the new market value did not equalize the silver contained in the corresponding *grosso*.

"small coins can be used for large purchases but large coins cannot be used for small purchases".[51] However, its importance lay particularly in the fact that real currency by itself would not have been able to meet demand for means of payment.

Account Money

As stated in the introduction, account money is a unit of value without physical support, which is helpful for counting and quoting but not for paying, since it is intangible ("ghost money").[52] Its advantage lies in the fact that it represents a relatively stable monetary value as opposed to the multiplication and variation of real coins. Account money is practically nonexistent in modern times, but it was very important between the Middle Ages and the 18th century[53] and did not disappear entirely until the middle of the 19th century.[54]

In the Middle Ages there were three forms of account money. The first is defined by the amount of silver or gold contained in an earlier coin that had left circulation, but that persisted as a unit of value. John Day called this "fossil money".[55] The second was based on the noble metal content of a coin in circulation; the metallic content was variable, but account money remained part of a system of a pound of 20 shillings and a shilling of 12 pennies. Changes to the real money had an effect on corresponding monies of account, since the relationship between them was fixed; it is therefore called "link money".[56] The third type of money of account was the equivalent in silver of the value of a gold coin; the account pound took as 240 pennies the value in silver of the gold coin. The gold coin did not change, but its value fluctuated in relation to the

51 Sargent and Velde, *Big Problem*, p. 146.

52 On money of account, the most important works are: Van Werveke, "Monnaie de compte et monnaie réelle"; Bloch, *Esquisse d'une histoire monétaire*, pp. 39–49; Cipolla, "Ghost money", pp. 38–39; Lane, "La mobilità e l'utilità delle monete di conto", pp. 9–31; Spufford. *Money and its Use*, pp. 411–12; and L. Fantacci, "Teoria della moneta immaginaria".

53 The abandonment of money of account was due in particular to the simplification of monetary systems in each country, and to the exclusion of foreign coins from circulation.

54 After the introduction of the euro, many people continued calculating for some time in the suppressed local currency, which therefore functioned as account money. More formal was the ECU, which quoted the different European currencies prior to the euro. Constant moneys used to calculate economic series (dollars of 1971, for example) are also current account moneys.

55 Day, "Problem of the standard", p. 72.

56 Munro, "Monnayage, monnaies de compte", pp. 264–65.

corresponding account money, its equivalent in shillings or pennies of account rising or falling proportionately.[57]

The difference between fossil, link, and bimetallic moneys of account is that the first is a fixed value and the others variable. Some authors also consider as account money the Carolingian system, but it is really only a current coin and its multiples,[58] just as at present we use thousands or millions for counting large quantities. In other words, the Carolingian system was adopted as account money, but it was not in itself a system of account.

Money of account arose due to the coexistence in one place of pennies of different value. When the local currency with more value stops circulating, it becomes fossilized as account money and switches to rating other currencies in the market.[59] In various places, more stable foreign currencies were also used as money of account, functioning first as link money and later becoming fossil money when they disappeared from circulation.[60]

Currency of account expanded in the 11th century and more forcefully from the 13th due to the multiplication of circulating coins. Beginning in the 13th century, account moneys expanded because people were used to counting according to the Carolingian system, but had to accommodate the addition of new coins, whether *grossi* or gold pieces. They had to start thinking of an abstract account money that could express value in pounds and subdivisions of shillings and pennies, thus giving rise to two pennies with different values: the real penny, variable, and the account penny, set as the 240th part of the corresponding pound. If the real coin was in gold, the account pound translated its value in silver. The situation could become even more complicated: a certain value of the real currency could fossilize and become an account money detached from the evolution of the respective coin. In this way, alongside the account money based on the Carolingian system, there appeared account florins, ducats, etc.[61] Cipolla has described this evolution in Milan with great

57 Van Werveke, "Monnaie de compte et monnaie réelle", p. 9; Lane, "La mobilità e l'utilità delle monete di conto", pp. 13–16. Both authors agree on the first two types. Lane adds the third type, based on the bimetallic relationship of gold and silver. Werveke deals with another form of account money, which has no relationship to any real currency ("imaginary currency"), but only to deny its existence.

58 Bloch, *Esquisse d'une histoire monétaire*, p. 43.

59 As Bloch states in *Esquisse d'une histoire monétaire*, p. 38, all currency tended to become account money.

60 In Catalonia, for example, the mancus was a real currency at the end of the 10th century and much of the 11th, but soon it was also used as account money: Bonnassie, *La Catalogne du milieu du Xe à la fin du XIe siècle*, vol. 1, pp. 372–84, vol. 2, pp. 920–24; and Balaguer, "*Parias* and myth of the *Mancus*".

61 Lane, "La mobilità e l'utilità delle monete di conto", p. 20.

clarity: the florin was rated at 120 imperial pennies in 1252, climbed to 384 pennies in 1340, and maintained this rate during the second half of the 14th century, to the point that it became customary to divide it into 12 shillings of 32 pennies (384 pennies). In 1445 the gold florin climbed to 786 pennies, two account florins.[62]

In cities such as Florence and Venice the creation of a new real coin was accompanied by the creation of a separate and corresponding account pound (bimetallic account money) rated in silver currency and divided into 20 shillings and 240 pennies.[63] Thus in both cities existed besides the *lira di piccoli*[64] (pound of pennies) the *lira di grossi*, which was equivalent to 240 *grossi*; the latter tended to be rated as equivalent to progressively more pennies, while the *lira di piccoli* remained fixed at 240. In both cities other account moneys arose. In Florence, from 1269 the *lira affiorino* was the fossilization of the latest value (29 shillings) of the pound or *grosso* of silver, which had ceased to circulate.[65] The 15th century saw the *fiorino largo di grossi* (greater florin in silver *grossi*), account money of the *fiorino largo*, coined from 1422 with the same gold content as the Venetian ducat; and the *fiorino a suggello* (sealed florin) account money equivalent to the silver standard value of the florin of the same name.[66] From 1471, the *fiorino largo* was joined by the *fiorino largo di oro in oro*. The difference between the two was that the first went on being an account bimetallic money whose penny was the 240th part of the (variable) value in silver of the golden florin, while the penny of the second was worth merely the 240th part of the stable golden florin (see Figure 2.3).[67]

In Venice, in 1472, there was a reversal of roles. The *dogo* Nicolò Tron commanded the minting of a pound of silver (*lira* Tron), which meant the translation into real currency of the pound of account (240 pennies).[68] In addition to the pounds of *piccoli* and of *grossi* already mentioned, Venice had a distinct

62 Cipolla, "Ghost moneys", pp. 46–47.

63 "Each time the authorites set a legal tender value for a gold florin, a ghost florin of the same name emerged as a silver based unit of account": Sargent and Velde, *Big Problem*, p. 147.

64 In Venice, *piccioli*.

65 Spufford, *Handbook of Medieval Exchange*, p. 34.

66 Actually the *fiorino a suggello* represented the medium value of a specific number of gold florins enclosed in a bag sealed by a city officer, who ensured that they met the minimum legal content of gold. Such bags were accepted in the market as real currency: Day, "The problem of the standard", p. 72; and Sargent and Velde, *Big Problem*, p. 149.

67 Spufford, *Handbook of Medieval Exchange*, p. 28.

68 The characteristics of each one of these account moneys can be seen in Day, "Problem of the standard", pp. 65–74, and Sargent and Velde, *Big Problem*, pp. 82–83 and 149–85.

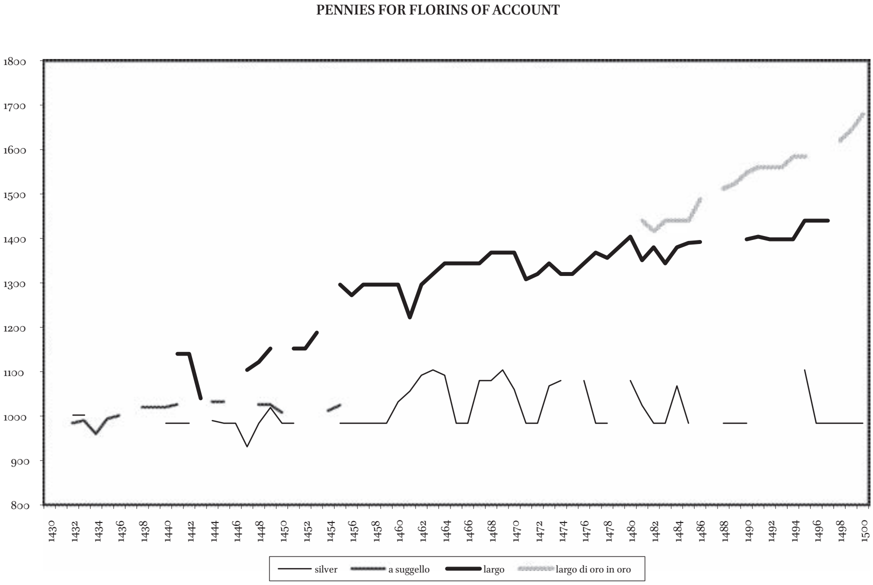

FIGURE 2.3 Number of pennies in different florins of account at Florence 1430–1500. ADAPTED BY THE AUTHOR FROM SPUFFORD, *HANDBOOK OF MEDIEVAL EXCHANGE*, PP. 1–33. THE SILVER FLORIN REFLECTS THE OFFICIAL VALUE, THE OTHERS, MARKET VALUES. ONLY THE FIRST KNOWN VALUE OF EACH YEAR HAS BEEN USED.

lira a grossi, the penny of which represented the 12th part of the value of a *grosso*.[69] The coining of the gold ducat (1285) had provoked a split of the *lira di grossi:* the *lira di grossi a moneta* continued to be linked to the silver coin, while the *lira di grossi a oro* (1328) was tied to the value of the ducat and so increased in value with regard to silver coins. Although the ducat was first fixed at 18 *grossi*, after 1296 it was valued at 24, so that a *lira di grossi a oro* came to be worth 10 ducats.[70]

The most important use of account money was as written money. In fact, its generalization runs parallel with the expansion of commercial accounting. The passage of a notebook of annotation of debts and payments to a true system of account required the use of a single currency in the operations (sums, balances, credits, etc.). The coins actually received were listed in the body of the register, but were translated into account money as totals in the credit and

69 Spufford, *Handbook of Medieval Exchange*, pp. 91–92.
70 Lane, "La mobilità e l'utilità delle monete di conto", p. 16.

debit columns.[71] Rents and debts were also stipulated in written currency, more flexible and more secure than the circulating real coins; nevertheless, holders of written currency, like all creditors, were handicapped by the debasement of the penny and therefore of account money. Whatever currency was actually delivered, the deposit or debt was registered in account money; therefore, in case of debasement, the payment required an amount of real currency lower in value than the sum received. In some cases, pressure by creditors succeeded in modifying the bank registries to reduce the loss;[72] it was safer to note debts, income, and accounting in real currency, or in account money not based on the penny. Although there are some examples of this, account money was almost always the norm.[73]

Although by definition account money was not a means of payment, this rule has an important exception: payments by transfer (between accounts of the same bank or those of different banks), which were carried out without intervention of currency.[74] Obviously, any transfer came from a deposit in currency and had as a last resort a withdrawal in cash, but paying in account money allowed an individual or firm to meet one or successive debts without the coins having to leave the coffers of the bank. It was therefore a considerable increase of the availability of means of payment, or more technically amounted to an increase of the velocity of circulation of the currency for the benefit of economic activity.

Conclusions

Long-term examination of medieval money emphasizes two basic and crucial constants. In the first place, the demand for currency created its own challenges. The scarcity of cash during the barbarian centuries was counterbalanced by payments in kind, in any form. The growing demand of means of payment in the 9th to 12th centuries was settled generally with the debasement of the penny. The needs of urban manufacturing and large-scale trade gave rise to full silver coins and to gold coins, but also needed the support of fiduciary and written account money.

71 Zerbi, *Moneta effetiva e moneta di conto*.

72 In Barcelona, in 1457, for instance, among strong social tensions: Feliu, "Finances, currency and taxation", pp. 33–34.

73 Day, "Problem of the standard", p. 65; and Sargent and Velde, *Big Problem*, pp. 76–78.

74 Usher, *Early History of Deposit Banking*, p. 201; and Cipolla, "Ghost money", pp. 50–51

Secondly, "money matters". Monetary changes are passive neither economically nor socially; coin behaves as a living being.[75] The changes in the value of currencies tended to favour debtors, among them those subject to the payment of fixed sums, and to be harmful to creditors.[76] The currency available to different groups indicates their economic power and social class; in the late Middle Ages, a few had gold coins, but the greater part of the population had access only to the petty money, subject to a constant debasement that converted it into black coin, the coin of the poor. With the passage of time, the increase in the value of gold compared to silver, and the debasement of the penny with respect to the *grosso* and still more to gold, made the rich richer and the poor poorer. Certainly, the authorities did what they could to prevent or slow this process, but the trend was irreversible.[77]

Altogether this leads us to a somewhat pessimistic conclusion: as Michel Dhénin says, currency is made in such a way that there is not a good system, but an evil compromise: the aspects that favour economic activity are at the same time socially discriminatory.[78]

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75 Munro, "Introduction", p. 1; and Dhénin, "L'Or, l'argent, le bronze", p. 839. See also chapter 3, this volume.

76 An important part of agricultural growth was undoubtedly owed to the decrease in value of rents and dues; hence the nobility and the Church would always be opposed to the depreciation of the currency.

77 Cipolla, "The big problem", pp. 33–35.

78 Dhénin, "L'Or, l'argent, le bronze", p. 838.

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CHAPTER 3

Money Orders—and It's Done! Activating Theories of Money's Origins and Orders

Bill Maurer

Monk and senate, prince and prelate,
Layman, cleric, mistress, man,
Give them what you like, they'll sell it,
Get good money if they can.
Money! He's the whole world's master,
His the voice that makes men run:
Speak! Be quiet! Slower! Faster!
Money orders – and it's done.

This 11th-century satirical poem by the French bishop Marbod of Rennes encapsulates medieval ambivalence about money.[1] And not just medieval: the poem's themes are almost timeless, castigating people of all stations and walks of life (even women!) in their pursuit of money; excoriating trade for the sake of monetary gain; upbraiding the hoarder who wants to accumulate good money, not debased or counterfeit (and implying that there are people who would indeed try to pass "bad" money); and positioning money itself as a kind of overlord.[2]

The moral assessment of Marbod's poem can be paralleled in both popular culture and social scientific accounts of money today. Indeed, it could be argued that social science emerged in the throes of a great moral debate over the stuff during the 19th century, with figures like Auguste Comte poking fun at those in his day who would abolish money, and Karl Marx and Georg Simmel warning against its socially corrosive effects. Industrialization and wage labour

1 Quoted in Davis, "The morality of money in late medieval England", p. 150.
2 Cf. chapter 8 by Rory Naismith.

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pulled more and more people in Europe and eventually around the world into relationships with each other based on money and seemingly nothing else. Religion, rank, and station dissolved into a cash nexus in which anything could be bought and sold, even one's time or person. Nineteenth-century social theory was thus very much of a piece with earlier accounts of money as evil, albeit perhaps a necessary one, whose effects needed to be contained by God or government. We are the inheritors of this tradition, and it is a difficult one to break.

It is not surprising, therefore, that the mere presence of something like money in the ethnographic or archaeological record provokes analyses that associate it with markets characterized by universal commodification (everything can be bought and sold) and uniscalar valuation (everything can be measured in terms of money). Along with that presumption comes the idea that money can reduce everything to a number in a great calculative game in which people seek to get what they can for themselves. Any time we find evidence of money, we assume its advent heralded depersonalized relations, asocial behaviour, and abstract quantification.

Now, no one of these factors, in isolation or combination, is necessarily bad: for example, depersonalization allows for exchange among strangers and trade without the need for ongoing social connection. If we do not freight money's asociality with a negative moral burden we can place it in the context of long-distance trade, the making of transregional networks of merchants creating a global flow of commodities, and anonymous transactions which provide people with a certain kind of economic freedom: exchanges uncircumscribed by rank, religion, or ruler. With money, as Georg Simmel observed, we thereby create a new sociality.[3]

Nevertheless, many scholars make the logical leap that the presence of money means widespread commodification or an all-permeating monetization, and that money indexes relations only in terms of numerical figures. In the medievalist literature, Philip Grierson's classic "Commerce in the Dark Ages" was an important exception to the rule.[4] In trying to assess the degree to which trade permeated the greater European Middle Ages, he argued that coin finds did not necessarily mean widespread commerce. Instead, taking a cue from the early 20th-century sociologist Marcel Mauss, he considered myriad non-market or non-commercial relations that involved the exchange of money objects.[5] Among these were theft, political payments, gift exchange,

3 Simmel, *The Philosophy of Money*.
4 Grierson, "Commerce in the Dark Ages".
5 Mauss, *The Gift*.

ransom, fines, compensation for injury, and elite transactions for luxury or high-status items.

More contemporary assessments such as those made by Rory Naismith complicate the picture of money in the European Middle Ages.[6] First, the amount of evidence at our disposal is simply much greater, by orders of magnitude, than it was for Grierson. Second, anthropologists, historians, sociologists, and archaeologists have been moving – fitfully, it is true – towards a more nuanced understanding of money in society. In doing so, we are more faithfully revisiting Mauss and others, like Karl Polanyi,[7] whose thinking has so often come down to us through just-so stories about the presumed gulf between gift economies and commodity economies or the disembedded market. As Naismith writes, "Money has never negated the social underpinnings of human exchange".[8] At the same time, your author and other scholars of money in society are frequently compelled to push back against the claim that money is the root of all evil, especially in the wake of neoliberal globalization – the political ascendance of a particular ideological vision of the place of markets in governance and the rise of a globally, if variably so, integrated capitalist market economy.[9]

In what follows, I first review theories of money's origins and suggest a broadening of the default positions we often take for granted in our understanding of money. This review, in turn, leads me to discuss the role of money in various accounts of the formation of social order, whether state power, market discipline, or other forms of control. I conclude by asking what happens when we take into account not the origins or the orders but the actions of money – what money does, and the manner or style in which people "do" money. What happens when we see money as an action, not a thing, institution, or concept? Several contemporary anthropological accounts demonstrate that money is more than its material and theoretical forms. How people deploy its materials and theories matters. Indeed, money may not be anything but these practices.

Money's Origins

Part of the problem lies with our origin stories for money. The barter origin story, in particular, has proven remarkably resilient. This takes contemporary

6 Naismith, "The social significance of monetization in the early Middle Ages".
7 Polanyi, *The Great Transformation*.
8 Naismith, "Social significance", p. 6.
9 Hart, "Recent transformations in how anthropologists study money", p. 712.

market conditions as given and reads them back into the primordial past to imagine a world of primitive hand-to-hand trade hampered by the lack of a common means of exchange. People develop money to solve the problem of the double coincidence of wants – it is rare that I have what you need and you have what I need, especially at the moment when we encounter each other – and so humans devise by convention and common consent (according to the social contract theorists), or by spontaneous discovery (according to the marginalist economists), a money that can serve simultaneously as a means of exchange and standard of value. It is even better if that same item can serve as a store of value, for then we have a way to preserve surpluses over time. The difficulty is that, as anthropologist Caroline Humphrey has argued, "No example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing".[10] In imagining that primitive scene, David Graeber reminds us that what most likely would have happened was something like my telling you, "Thanks for these fish!" and then, at some unspecified time in the future, coming around with some fruit.[11] In other words, it was not pure barter, but a gift – or more precisely, as Mauss himself would have it, the extension of credit and the creation of a debt.

Furthermore, we cannot take as given the logic of equivalence that guides most interpretations of barter. In the just-so story of money's origins, bartering involves parties coming together and creating equivalences where they did not exist before: how many packets of sago flour equal a pig? This is an extension of contemporary money-based market relations into worlds where the same calculative operation may not obtain. In observing instances of such "barter" exchanges, anthropologists found that it was not so much a logic of equivalence that was taking place as one of substitution. The question was not how many sago packets for one pig, but how many sago packets for *this* pig, the "right" pig, standing in relation with other pigs and people through marriage exchanges and other social relationships.[12]

In addition to the continuing hold of the barter myth on theories of money, there is the enduring legacy of Aristotle. Most contemporary scholarship on money from an anthropological or sociological perspective has drawn from the Aristotelian tradition on money. As the old couplet goes, "Money is a matter of functions four: a medium, a measure, a standard, a store".[13] According to

10 Humphrey, "Barter and economic disintegration", p. 48.
11 Graeber, *Debt: The First 5000 Years*.
12 Strathern, "Qualified value", p. 187.
13 Milnes, *The Economic Foundations of Reconstruction*, p. 55.

Aristotle, money as a medium of exchange can support the natural economy of the household when it is used to purchase household necessities. Here, the ends of money are themselves use values, goods needed by the household to sustain its existence. When money departs from this mediating function, however, it has crossed over into an unnatural and unjust use. As a store of value, not just a medium of exchange, it is acquired for the sake of gain beyond the needs of the household and has become an end in itself. Yet, according to this Aristotelian tradition, money has no natural use other than in exchange. Furthermore, when people use money to make more money – in retail trade or in usury – money usurps the reproductive qualities of animal and human life. St. Thomas Aquinas took up this classical distinction between money's natural and unnatural uses and qualities and affected Christian understandings of money for generations, as reflected in Marbod's poem. It also had a profound influence on contemporary economics.[14]

Think of the shell valuables of the Trobriand islanders – records of relationships across time and space. These items were the subject of a famous disagreement between Bronisław Malinowski and Marcel Mauss, the former rejecting the idea that they were money and the latter criticizing Malinowski for defining money too narrowly within the confines of how it had taken shape in the contemporary West. For Malinowski, for something to be money it had to serve as both a means of exchange and a measure of value.[15] For Mauss, this limited money only to those instances where it had been "inscribed, impersonalized, detached from all relationship with any moral being, collective or individual, other than the authority of the state which mints them". He continued:

> In all societies that preceded those wherein they monetized gold, bronze, and silver, there were other things – stones, shells, and precious metals in particular – that were used and have served as means of exchange and payment. In a good number of those that still surround us, this same system in fact functions, and it is this that we are describing.[16]

Mauss's work has led subsequent anthropologists first down one path, then another, then yet a third. The first path, and probably the most familiar, emphasizes the depersonalizing aspect of money and its role in differentiating so-called commodity economies from gift economies. This path led anthropologists and

14 Cf. chapter 8 of this volume by Rory Naismith.
15 Malinowski, *Argonauts of the Western Pacific*.
16 Mauss, *The Gift*, ch. 2, n. 26.

others to look at certain societies as possessed more or less of the spirit of the gift as opposed to the logic of the commodity, seeing some economies as inherently more personal or social than those defined in terms of a monetary calculus. For Mauss, however, gift and commodity were not so much opposed as they were co-existent and trundling alongside each other: adjacent to the Trobrianders' *kula* exchange, for example, was *gimwali*, the marketplace where everyday, non-ceremonial items were exchanged.

The second path asks whether and when some object serves one or more of the classic functions of money. Are there instances where one money-thing serves as a store of value while another serves as a means of exchange, or still another a measure of value? Under what circumstances do people bundle into one money-thing one or more of the functions, and under what circumstances might that bundling come undone? Karl Polanyi was inspired by early anthropology to define some moneys as general-purpose (filling all the functions and able to be used for any purchase) and others as special-purpose (filling only one or two of the functions and able to be used only for circumscribed exchanges).[17] He and others associated general-purpose money with the "great transformation" of the coming of capitalism, private property, and modernity, as a universal and abstract general equivalent, supplanting special-purpose moneys as all values came to be seen as species of the same, measured in money.

The third path, however, retains Mauss's insight about the origins of money not in barter but in the gift. Rather than counterpoising an idealized gift economy with the commodity economy, David Graeber views humans as continually "moving back and forth between completely different systems of moral accounting";[18] in his view, "we are all communists with our closest friends, and feudal overlords when dealing with small children".[19] For Graeber, it is not the stuff of money that matters so much as its role in managing interpersonal debts. People's systems of recording interpersonal credits and debts, whether with a token or a string of shells or an account book, themselves constitute money. Money's origins lie not in the discovery or invention of some magical object that can, due to intrinsic properties or common consent, come to serve the classic functions, but rather in people's extension of credit to one another – doing favours, giving gifts, exchanging without the expectation of immediate return, or the hand-to-hand trade of goods imagined in the scene of primitive barter. Graeber thus rediscovers the tradition in Western theorizing

17 Polanyi, *The Great Transformation*.
18 Graeber, *Debt*, p. 114.
19 Ibid., pp. 113–14.

about money that stands opposed to the classical perspective. Such alternative theories focus on money not as a medium of exchange but a unit of account enforced by the state.[20]

Graeber's influential work has steered the anthropological conversation about money back to its origins in debt and helped remind scholars of money of the poverty of the barter myth.[21] At the same time, however, he offers an often-underappreciated critique of state and credit theories of money. Although he draws on these as well as Grierson's work on *Wergild*,[22] Graeber worries that replacing the myth of barter with the myth of primordial debt sidesteps a much larger issue: why is it that, in attempting to account for the origins of money, we rely on hypotheses centred around either a pure market or an idealized state? Revisiting Marbod's poem, we might ask why we are drawn to accounts in which money's "order" is either the compulsion of quantification entailed in the market or the commands of a governing institution. After all, interpersonal debts create order, too.

Graeber provides an alternative view of what he calls "social currencies", those objects – cloth, feathers, shells, animal teeth, metal rods – that litter the ethnographic record and were used to mark relationships among people and (more rarely) to exchange for other goods. Social currencies mark debts that cannot be repaid, mutual obligations that indicate interdependency: they acknowledge a relationship's "unique value", one that can never be parsed in terms other than its own self-identity, that is, the relationship or the person itself.[23] Unique values cannot be commensurate and exchanged without remainder; Marilyn Strathern might see them as potentially substitutive without being equilibrated.

Part of Graeber's concern is historical. Like the barter theory of the origin of money, state and credit theories seem to take the current modern condition of state-issued currencies and project it backwards in time. Graeber is especially concerned with the modern notion of "society" presumed in such theories:

> Really, the whole complex of ideas [that state and credit theorists of money] are talking about – the notion that there is this thing called society, that we have a debt to it, that governments can speak for it, that it can be imagined as a sort of secular god – all of these ideas emerged together

20 Mitchell-Innes, "What is money?"; Knapp, *The State Theory of Money*; and Wray, *Credit and State Theories of Money*.

21 Graeber, *Debt*.

22 Grierson, *The Origins of Money*.

23 See Graeber, *Debt*, pp. 131–32.

> around the time of the French Revolution, or in its immediate wake. In other words, it was born alongside the idea of the modern nation-state.[24]

And the modern nation-state and its attendant organization of "society," for Graeber, is a restaging of the founding violence that enables people and things to be ripped from their contexts and rendered calculable. Nation-states require citizens, after all, and citizens are bound to nation-states only by the subordination of other relationships of family, tribe, faith, or feudal bond. How, then, do those "social currencies," tokens of an absolute debt that cannot be repaid, indicators of something uniquely valuable, beyond quantification, turn into "a form of payment by which a debt can be extinguished"?[25] The answer is violence, "not conceptual … but … literal".[26] In the context of the nation-state, this is the violence entailed in enforcing citizenship. In the context of social currencies' transformation into means of payment, it can entail enslavement, murder, rape, or other forms of direct, embodied violence.

Graeber is not denying chartalist theories of money so much as querying their progressivism and rooting them in state and other forms of violence. It is worth pointing out that he is preoccupied with the limitations of the state and credit theories of money because he is articulating his own moral and political position on a post-state, post-market world, one where we make our own relations and obligations with each other as we please under the guise of an invigorated notion of human freedom founded on a belief in individual human particularity. It is not that money is the root of all evil; rather, violence is the root of the subordination of the people's money to state and society. Graeber makes a case against the subsumption of what we might call a kind of everyday, primitive communism – an ethic and practice of sharing – to either society or the state. He also holds out the individual human as inherently unique, such that any commensuration of the person with other valuable things is a denial of that uniqueness.

Whatever one makes of its political claims, Graeber's work on money's origins represents an important corrective to the social science of money emanating from fields outside economics. It also draws attention to money in the creation and maintenance of order as well as to the specific kind of "order" at stake in these processes.

24 Ibid., p. 69.
25 Ibid., p. 137.
26 Ibid., p. 159.

Money's Orders

It is worth pausing here to reflect on a key methodological and conceptual difficulty in understanding money. People from each age and every place who have encountered, invented, or challenged money have their own theories based on whatever money they themselves employ – theories about what it is and is not for, what it does, what it should or should not do, where it came from and, indeed, what it is. It is not particularly surprising that periods during which long-distance trade is on the march witness theories about money's origin in barter and as a means of exchange. Periods during which states or other central authorities exert their influence over wealth and property give us chartalist tales of money's origins. In the contemporary period, our own everyday interaction with state-issued paper bills and coins encourages theories that emphasize money's fungibility, divisibility, portability, and liquidity. Technological change, specifically the rise of ubiquitous digital computing and, along with it, digital payment, seemingly dematerializes money and makes more apparent its animation by systems of accounting and credit – today using digital networks for what had previously been inscribed on clay tablets or in ledger books.[27]

Some scholars have seen in these conceptual shifts recurrent transhistorical patterns. As anthropologists Chris Hann and Keith Hart have argued, taking the long view, wealth in money has long been opposed to property in land.[28] Successive waves of political, economic, and religious transformation have restaged the dialectic between markets based on money and power based on settlement and agriculture. If moral authority resides in the latter, then the former is seen as antisocial, degrading, amoral, or immoral. If moral authority resides in the former, then the latter is seen as retrograde, autocratic, militaristic, overly centralized or controlling, or as stifling what John Maynard Keynes called humanity's animal spirits.[29]

Anthropologists since Mauss and Malinowski have been money sceptics, arguing that it erodes social relations, renders everything calculable on one scale of value, and subverts the logic of the gift underlying social life. Take the classic work of anthropologist Paul Bohannan.[30] Before the introduction of modern Western money, he argued, the Tiv of central eastern Nigeria had a multicentric economy in which goods, services, people, and animals fell into

27 Cf. chapter 1 by Rory Naismith.
28 Hann and Hart, *Economic Anthropology*.
29 Keynes, *The General Theory of Employment, Interest, and Money*, p. 162.
30 Bohannan, "The impact of money on an African subsistence economy".

distinct spheres, "each marked by different institutionalization and different moral values".[31] Transactions between the spheres were morally charged. Yams and other foodstuffs and tools used in subsistence production occupied one sphere; they could not be traded for slaves, cows, or special ritual offices and objects, which occupied another sphere. Focusing on three of money's classic functions – means of payment, standard of value, means of exchange – Bohannan observed that "one object may serve one money use while quite another object serves another money use".[32] Borrowing from Polanyi, he sought to demonstrate that with European colonialism and increasing trade, general-purpose money was supplanting the special-purpose moneys that had been serving some of the functions in some of the spheres of exchange.

This approach influenced generations of anthropologists and other social scientists looking at money in so-called primitive societies, but also those working in the modern West. Thus, the sociologist Viviana Zelizer documented how money's social meanings entail practices of earmarking or sequestering – taking some money out of the general-purpose pool, so to speak, and deploying it only for specific special purposes.[33]

Whether looking at simple or complex societies, past or present, contemporary work continually discovers that money is variegated, not the flat wash so many modern, medieval, or ancient critics decried. It also "multiplies", as Zelizer argues.[34] State and other institutions can create special-purpose moneys such as food stamps or airline miles. People can earmark state-issued currency for specific purposes, too, things like the rent money or the Christmas fund. Money's multiplication also implies a plethora of governing authorities, whether the welfare assistance agency or the airline company, the store issuing coupons or the Time Banking cooperative. Even where there is monetization, then, there is always also differentiation. Money can both de- and re-personalize; it can erode but also create social distinctions and relationships.[35]

Despite this proliferation, however, the top of the pyramid of money – in the modern period, anyway – remains state-issued currency: its use is compelled for the purpose of paying taxes to the state, and only its use in the repayment of a private debt can be enforced by law.[36] This compulsion, in turn, provides an incentive and a guarantee for people to use it in other ways with other

31 Ibid., p. 492.
32 Ibid., p. 492.
33 Zelizer, *The Social Meaning of Money*.
34 Ibid., p. 1.
35 Cf. chapter 8 by Rory Naismith.
36 Bell, "The role of the state and the hierarchy of money".

actors. Alternative monetary theorists in economics read the state's role in forming money back to the period of the consolidation of agricultural empires in the ancient Near East. Money began when early states devised a numeraire for accounting purposes, originally setting it in terms of weights and measures related to grain consumption and then using that unit of account to reckon other transactions,[37] from fees to taxes and tribute.[38]

The legal historian Christine Desan partly accepts the state theory of money.[39] But she focuses on money's role in creating a governing order rather than the other way around. She does this because, at least for the early Anglo-Saxon period where she begins her inquiry, it was not only governments per se that issued money tokens but also "private" organizations such as cities and commercial groups. Money is, she says, a "constitutional project" – that is, it is an act to establish governance, a process of establishing a political order.[40]

To get around the limitations of state theory, then, Desan abstracts an ideal type that allows for other entities besides states to create and enforce money, including entities at other levels of scale, from a small social unit or village to a large-scale commercial consortium or multinational bureaucracy. Broadening the focus from states to what she calls "stakeholders," Desan hypothesizes the moment when money occurs:

> Money is created when a stakeholder uses its singular location at the hub of a community to mark the disparate contributions of individuals in a common way. The moment occurs when the stakeholder takes contributions from people before they are due and gives out uniform receipts in return, each a token intended to document the early contribution. That token, turned in later at a time of reckoning, operates to convert goods and services that were not previously interchangeable or fungible – the variety of contributions due to the center – into matters counted in a standard unit.[41]

Desan clearly echoes Georg Friedrich Knapp's thesis that coins originate as "pay tokens" that provide evidence for a debt, but again, she reverses the causality of state theories of money, insofar as it is the mobilization of resources through the invention of this token or marking of individuals' contributions to

37 Hudson, "The archaeology of money".
38 Tymoigne and Wray, "Money: an alternative story".
39 Desan, *Making Money*.
40 Ibid., p. 69.
41 Ibid., p. 43.

a stakeholder which creates order, not the pre-existent state that makes money by fiat.

Desan's stakeholder theory helps account for the emergence of rulers and money after "the 'catastrophe' that followed Rome's withdrawal from Britain".[42] It also helps us to understand how systems other than centralized empires can create money. By the 7th century, she argues, the gold shillings and silver sceattas that began to appear were made locally by small rulers re-creating in miniature the fiscal basis of the prior Roman authority. They also mimicked Roman iconography. And they were clearly used for more than just repayment of debt or exchange – as jewellery, as amulets, as "displays of prestige".[43]

As an anthropologist, I find this aspect of Desan's story particularly intriguing. Jewellery, amulets, and prestige items imply relationships and possibly even identities based on rank or hierarchy. Desan's stakeholder is a person or entity that establishes order by positioning him-, her-, or itself at the centre and taking note of individuals' contributions to some collective good, making them followers in the process and instituting political community. Yet the ethnographic record is full of much more complicated systems of rank than that. Jane Collier's "unequal bridewealth model" of marriage and inequality outlines a social system in which people of varying ranks – even within kin groups or sibling sets – continually jockey for position with one another. Within a group of siblings, some individuals are perceived to have greater access to valuables than others; an elder brother can command "sharing" within his sibling group, putting himself in a position akin to Desan's stakeholder. A low-ranking man in this system must at least attempt to honour requests from kin for valuables lest he lose his wife; high-ranking men have fewer occasions where they will feel compelled to give because their position is relatively secure so long as they command the labour of those below them. "In unequal bridewealth societies," Collier writes, "as in many other societies, much is given to those who have, whereas those who have little are obliged to part with that which they do not have".[44]

The payments associated with life events such as birth, marriage, remarriage, and death – the occasions when Graeber's "social currencies" would have been deployed – are similarly structured by rank. There is not a single ticket, token, or coupon that one redeems to the centre, as there is in Desan's stakeholder model. Rather, payment varies by rank. High-ranking people pay more (as documented by early 20th-century ethnographer Roy F. Barton's account of

42 Ibid., p. 50.
43 Ibid., p. 53.
44 Collier, *Marriage and Inequality in Classless Societies*, p. 167.

payments among the Ifugao of the Philippines; his book contains fee schedules upon divorce or for remarriage after a spouse's death or according to what was assessed in terms of pigs, pots, and other items "for the wealthy," "for the middle class," and "for the very poor").[45] While the idea of higher-ranking people paying more appeals to our contemporary sense of social equity, Collier cautions that "where high rank is demonstrated by giving things away, the correlation between high rank and high fines strengthens, rather than undermines, the existing system of inequality".[46]

Rank figures centrally in Jane Guyer's reassessment of money in Atlantic Africa, including the Tiv region studied by Bohannan.[47] For Guyer, rank poses two interesting problems. The first is the intersection of rank with geography: where Bohannan found conversions between the Tiv spheres of exchange to be morally fraught, Guyer, revisiting the data in broader historical and regional context, found that people would make a conveyance of goods within a sphere somewhere else. They could then return with items to carry out a conversion across the spheres. Spaces, not just peoples or wealth items, were deployed in complex negotiations over conversion and, with it, social rank and hierarchy. The second, following from the first, is how these relationships of rank allow people opportunities to engage "multiple emergent valuation scales".[48] Guyer draws from this reanalysis of the Tiv economy the insight that there are distinct registers of valuation, which she denotes in terms of the mathematical distinction between interval, ordinal, nominal, or ratio scales. Putting these mathematical scales into play with social hierarchy, she is able to explain how people devise elaborate repertoires for splitting off, retying, and otherwise entangling value in everyday transactions. She pays particular attention to what she calls "tropic points" that create "hooks" between and into the various scales – so, one's social rank (ordinal) might determine whether one receives in a transaction a full, rounded cup of rice for a certain price, or a just slightly underfilled one.[49]

Guyer's work is important because it draws attention to people's play with the emergent scales of value that can obtain once other kinds of numbers and social relations such as rank are taken into consideration. It also draws attention to the fact that when we are talking about quantification and commensuration – processes supposedly central to money and its

45 Barton, *Ifugao Law*, p. 32.
46 Collier, *Marriage and Inequality*, p. 182.
47 Guyer, *Marginal Gains*.
48 Ibid., p. 21.
49 Ibid., p. 50.

reordering of the world – we need to be clear what kind of numbers and what kind of calculations we are talking about. In a provocative analysis of the Han dynasty (A.D. 206–220) monetary imagination, Tamara Chin shows how, after a period of monetization seemingly marked by the kind of calculative logic we might today associate with capitalist markets, a "classicist" revival animated burial money in forms that were non-standardized and personalized.[50] It also took money's numbers and reintegrated them into the so-called correlative cosmology in which all things and phenomena "belong to correlative categories," thereby resacralizing money.[51] Even this gloss is too simple, for Chin shows that Han-era intellectuals engaged in considerable "rhetorical playfulness".[52] Money's quantification thus perhaps opened possibilities for creativity in the process of asserting authority. To Graeber's assertion that equivalence and violence depend on a desacralized mathematics, one might respond that even sacred numbers can do the work of order and rule.[53]

And It's Done!

People use money to do more kinds of work than just commodification or commensuration. Even when they do these things with it, they are also carrying out other actions. From the style with which people deploy it – throwing cash on the table, waving it in the air, folding it, passing it on surreptitiously – to the meaningful practices in which they use it – wedding dances, funerals, gift-giving – "money" can be considered an active verb.

Anthropologists have long paid attention to money's materials, especially the exotic "odd and curious" moneys of the numismatist or collector. Economists and others also emphasize the stuff of money, mainly in debates over its commodity status or the supposed necessity for its token to possess certain inherent qualities (scarcity, durability, beauty). What concerns me here is more people's creativity, ingenuity, and innovation with money. Money is not just about material forms or ideological formations, but their deployment by specific actors in specific ways. It is never just a symbol (of the state, of abstract value, of debt or social relations), but a practice. Paul Kockelman likens money to an infrastructure, one which carries value across time, space, and language

50 Chin, *Savage Exchange*, pp. 237–38.
51 Ibid., pp. 286–87.
52 Ibid., p. 264.
53 Graeber, *Debt*, pp. 14 and 61.

without loss or degradation.[54] In his telling, money is a communicative channel that people can attempt to redirect as they use it to convey any manner of meanings.

There is by now a sizeable literature on money's representational aspects, whether representing the nation,[55] norms of femininity,[56] or relationships with distant kin and complicated geopolitical histories.[57] Several anthropologists have explored how its representational failures – when money does not signify, or signifies in a non-straightforward manner – affect its adoption and use in colonial, postcolonial, socialist, and post-socialist contexts.[58] A difficulty with this perspective is that it sometimes remains rooted in money's symbolism or iconography, neglecting its enlistment in broader semiotic processes. Indeed, in the hands of anthropologist Webb Keane, money becomes the medium to examine Euro-American preoccupations with semiotic processes themselves as strictly representational – words or images standing for things – rather than performative actions in themselves.[59] This Euro-American conceit finds expression, of course, in our folk and expert theories, too: that money is a symbol of the state, that money represents some "real" commodity value, or that money represents price in equilibrium conditions.

As with Guyer's work on repertoires or Chin's focus on money and its intersection with literary genre, such analyses as Keane's ask us to consider money in the hands of people, not just circulating around in abstract flows. Far from treating it as a neutral medium of exchange or a stationary store of value, these lines of inquiry invite us to ask *how* money is done, *when* money happens in the flow of social practice, and *which* other signifying practices accompany money-work. For example, Stefan Krmnicek worries that studies focusing on coin finds as evidence for archaeological context – dating a site, say, or establishing points of economic history or monetary circulation within a specific period – ignore the coin's own context.[60] Krmnicek pays close attention to coins' context in three-dimensional space: the walls or roof rafters, beam sockets, hearths. These potentially provide evidence for the spatial and symbolic practices in which people would have enlisted such money objects. After all,

54 Kockelman, "Enemies, parasites, and noise".
55 Helleiner, *The Making of National Money*; and Hymans, "The changing colour of money".
56 Hewitt, *Beauty and the Banknote*.
57 Pedersen, *American Value*.
58 Foster, "In God we trust?"; Rutherford, "Intimacy and alienation"; and Lemon, "Your eyes are green like dollars".
59 Keane, "Money is no object".
60 Krmnicek, "Coins in odd context".

we pay attention to context when trying to determine the use and function of other archaeological artefacts.

Based on fieldwork in contemporary Vietnam, Allison Truitt similarly attends to money's use, its enlistment into various forms of practice.[61] Despite contemporary Vietnamese people's apparent "currency consciousness" (Karl Polanyi's term for the penchant in the modern era for elevating stable money to the position of society's "supreme need"[62]), their everyday uses for and interactions with a number of different currencies belie money as a pure symbol of invariable value. People produce, display, hide, crumple, and burn money in ways that reveal more complex and often contradictory relationships with it and everything it could be said to signify, whether state, market, value, faith, or something else.

Keith Hart famously called money a memory bank.[63] Inspired by contemporary digital networks that give people the potential to view, manipulate, and reorient their transactional histories so as to chart new economic futures, Hart also recalls the ledger books and cuneiform tablets of earlier eras. This again helps us think about how money is done: its attendant record-keeping, mathematical, epigrammatic, iconic, and aesthetic practices; the ecology of other devices of value into which people place or alternately remove it; and the temporal cycles of its formation, transfer, and deterioration.

It has been said of my own method of studying money that it has the characteristics of what Ludwig Wittgenstein called aspect dawning: "the gestalt switch that occurs when an unnoticed aspect of an image or object dawns on us. 'I *see* that it has not changed; and yet I see it differently' ".[64] The challenge for any of the fields that has considered money is precisely seeing it differently even though many of the objects making it up may look similar. We therefore need to take the time to see things twice, switch figure and ground a few times, ask how something that appears identical to something else might not be, at least not all the time.[65] Because money is all around us, because it is a major preoccupation for almost everyone on the planet today, because it is the root of all evil while also making the world go round, it is almost impossible for it not to be subsumed by the concerns of the age or the platitudes of whatever political economy one subscribes to. To generalize Krmnicek's plea beyond

61 Truitt, *Dreaming of Money in Ho Chi Minh City*.
62 Ibid., p. 6.
63 Hart, *The Memory Bank*.
64 Tooker, "Conversations with … Bill Maurer", p. 21, quoting Wittgenstein, *Philosophical Investigations*, pt. 2, sect. 193.
65 See Riles, *The Network Inside Out*, p. 26.

archaeology, money must be understood in its contexts. These are rich; they are fragmented; they are constituted by people and institutions and objects all together; they are enacted; they are replicated; and they change, even if so often it appears that they remain the same. Seen twice, the last verse of Marbod's poem gives you a fair approximation of my argument: money orders – and it's done!

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PART 2

Key Phases of Medieval Money and Coinage

CHAPTER 4

From the Fall of Rome to Charlemagne (*c.*400–800)

Alessia Rovelli

More than a century ago, in his stimulating reflections on the history of numismatic research, Ernest Babelon highlighted the seminal contribution of the 14th-century Italian humanist Francesco Petrarch. Immortalized for having inaugurated the critical study of classical literature, Petrarch was also the first to begin systematically acquiring and classifying the ancient coins gathered by peasants in the Roman countryside. As Petrarch himself explained in several letters, his aim was to decipher the coins' legends in order to compare them with other epigraphic texts – thereby establishing the foundations of numismatics as a historical discipline.[1] For the 14th-century humanist, the imperial portraits and the reverse types offered early answers, just as they also provoked further questions. The labours and insights of generations of subsequent scholars are amply displayed in the abundance of syntheses, catalogues, and *corpora* published over the course of the 20th century, among which those dedicated to late imperial, Byzantine, and early medieval coinage rank among the finest.

Three decades have now passed since the appearance of the first volume in the *Medieval European Coinage* series, covering the coinage of early medieval Western Europe.[2] Like the series as a whole, the first volume was largely conceived by the great historian and numismatist Philip Grierson. Notwithstanding recent advances in scholarship, the volume remains of fundamental importance, both for its lucid discussion of the historical and numismatic context and for its catalogue of the collection of the Fitzwilliam Museum, which offers a synoptic vision of the principal post-Roman issues from the 5th to the 10th centuries. A decade later, John Kent's volume on the 5th century concluded the corpus of imperial Roman issues (*The Roman Imperial Coinage*) launched by Harold Mattingly and E.A. Sydenham in 1923.[3] Similar achievements can be

1 Babelon, *Traité des monnaies greques et romaines*, vol. 1, p. 83; the first chapter (pp. 66–326) consists mainly of a history of the field of numismatics.
2 Grierson and Blackburn, *Medieval European Coinage 1* (hereafter *MEC* 1).
3 Kent, *The Roman Imperial Coinage X* (hereafter *RIC* X). The same chronological span, which takes the issues of Anastasius I as the starting point for the Byzantine series, was adopted in Grierson and Mays, *Catalogue*.

 | DOI:10.1163/9789004383098_005

claimed for Byzantine coinage, which is crucial to the understanding of Western European issues.[4]

Even a cursory glance at these weighty tomes reveals the underlying method, which refuses to bracket off historical considerations from those which might ostensibly seem more specifically numismatic in nature. In this regard, the VIII Settimana di Studi held in Spoleto in 1960 by the Centro italiano di studi sull'alto Medioevo, which brought together historians and numismatists, represents a crucial turning point.[5] As Cécile Morrisson observed, that gathering marked "le véritable départ de l'histoire monétaire européenne de l'Antiquité tardive et du haut Moyen Age".[6] The lively "discussions" which (in keeping with the tradition of the Settimana) followed each of the lectures still merit careful reading for the challenges and topics they raised, and for the ways in which these might be addressed through the appropriate analysis of coins. Identifying the issuing authority (along with distinguishing imitations and forgeries), the chronology, the mints, the intrinsic values, and the volume of issues remain the necessary first steps. This stage of research is especially complex for many of the issues of the period under consideration here, which are often characterized by very corrupt types and legends. The challenge is especially acute for bronze issues.[7]

The 5th Century: Late Roman Issues

The coinages which developed in Europe over the course of the early Middle Ages have their roots in late Roman coinage: namely, the monetary system in use within the Roman Empire from the late 4th century A.D. through the end of the 5th.[8] This in turn derived from the Constantinian reforms, which substituted gold for silver as the basis of the imperial coinage. This significant change notwithstanding, it bears noting that throughout late antiquity the Roman monetary system maintained the trimetallic system as conceived under Augustus.[9]

4 Hendy, *Studies in the Byzantine Monetary Economy*; Morrisson, *Byzance et sa monnaie* (with references to earlier bibliography).

5 *Moneta e scambi nell'alto Medioevo.*

6 Morrisson, "Histoire monétaire et numismatique", p. 281.

7 Hohlfelder, "A sixth-century hoard from Kenchreai", p. 101; *RIC* X, pp. 31–33; Grierson and Mays, *Catalogue*, p. 239; and Hahn, *Money of the Incipient Byzantine Empire*, p. 13.

8 MEC 1, pp. 1–16; and Hendy, *The Economy, Fiscal Administration and Coinage of Byzantium*, no. 7.

9 The following synthesis of late Roman coinage is based largely on the texts cited in nn. 2, 3, and 4.

FIGURE 4.1 Constantine I (306–337), gold *solidus*, Ticinum mint.
SOURCE: CNG.

The basis of the new late Roman system was the *solidus*, a coin weighing (in Roman terms) 24 carats/*siliquae*, equivalent to 1/72 of the Roman pound (4.54 grams) (Figure 4.1). This new coin was probably introduced in 309 in the mint at Trier, which was then the most important of the mints controlled by Constantine, who had established his residence in the city. It was progressively struck by the other imperial mints, replacing the heavier Diocletian *aurei* (weighing 1/60 lb = 5.46 grams).

Multiples of the *solidus* (the so-called "medallions") were also issued on occasion, but these are generally taken to have been celebratory issues and did not form an integral part of the monetary system. The heaviest known specimen is the 12-solidus medallion struck in the name of Libius Severus, weighing 53.62 grams.[10] Most specimens have been discovered beyond the frontiers of the empire, indicating not only their appeal among the Germanic tribes, but also their use as tribute payments alongside gold and silver coins.

Other gold issues included the *semissis* (1/144 lb, therefore a half-*solidus*), which was similarly an essentially ceremonial coinage distributed as *donativa*; and the *tremissis* (1/216 lb, *c.* 1.5 grams), likely introduced in 383. Within the Romano-Barbarian series, the *tremissis* (or *triens*), the smallest of the gold denominations, enjoyed the broadest diffusion, while the *solidus* remained the principal denomination of the Byzantine monetary system. In Western Europe, however, the *solidus* did not entirely disappear; it survived mainly as a unit of account, no longer represented by a physical coin. In the systems that

10 Grierson and Mays, *Catalogue*, p. 253.

continued to be based on gold, it was worth three *tremisses*, while in the silver-based Carolingian system it was worth 12 *denarii*, as we will see.

Although silver continued to be coined, it no longer enjoyed the importance it had maintained under the Principate, instead playing a secondary role compared to gold. The most widely used silver denomination, especially towards the late 4th century, was the so-called *siliqua*. These coins owe their names to the mistaken assumption among earlier numismatists that they had the value of one gold *siliqua* (1/24 of the *solidus*) as a money of account. In fact, the *siliqua* (carat/*keration* in Greek) was a fraction of a Roman pound (1/1728 = 0.19 grams). At the moment of its introduction, probably in 358, the silver *siliqua* weighed roughly 2 grams (1/156 lb according to some scholars, 1/144 according to others), but we find considerable variation, likely due to the flexible metal ratios.[11] Some specimens dating to the end of the 4th century would seem to have been struck at 1/288 lb (1.13 grams). We also find fractions (e.g., half-*siliquae*, particularly common in the West) as well as larger denominations of varying weights; like gold, these latter were originally struck in two different denominations: heavy and light *miliarenses*, weighing respectively 1/60 and 1/72 lb.

The circumscribed volume of silver issues should not lead us to imagine a dearth of this metal. In late antiquity, silver circulated above all in unmonetized forms, whether in ingots (with weights often equivalent to fractions or multiples of the pound) or as objects (and fragments thereof), often found together with coins in hoards, sometimes in significant quantities.[12]

The third branch of the monetary system consisted of an articulated series of bronze issues. The identification of the bronze denominations mentioned in written sources raises problems analogous to those that we encounter with silver issues; as a result, these are generally referred to on the basis of their diameter, namely, AE 1, AE 2, AE 3, AE 4. This last had a diameter around 14 mm and a weight of roughly 1.4 grams. Over the course of the second half of the 4th century and the first decades of the 5th, the coining of larger denominations was gradually abandoned. In the second half of the 5th century, the AE 4 (often referred to as the *nummus*) remained the only bronze denomination struck by the imperial mints. During this period the AE 4 underwent various

11 For an echo of these aspects, with particular attention to the ratio AV:AE, see the anonymous treatise *De rebus bellicis* (English edition and commentary in Ireland, *De rebus bellicis*).

12 Baratte, "Les ateliers d'argenterie au Bas-Empire"; *MEC* 1, pp. 96–97; Delmaire, *Largesses sacrées et res privata*, pp. 471–94; Baratte, "Les objets précieux"; Johns, *The Hoxne Late Roman Treasure*. See also a volume on the Traprain Law hoard: Hunter and Painter, *Late Roman Silver*.

changes in weight, which are especially evident if we compare the Eastern issues (which saw their weight fall to 0.20 grams during the reign of Zeno) with the Western ones (which suffered a less marked drop, maintaining a theoretical weight close to 1 gram). The dimensions of the AE 4 likewise diminished during this period, with most specimens under 10 mm. Together, the reduced weight and diameter justify the common practice of referring to these coins as *minimi* (Figure 4.2).[13]

The imperial monetary system of the 5th century therefore appears much simplified in comparison to earlier periods. The reduction in denominations was accompanied by the gradual closing of the mints that were still mentioned in the *Notitia Dignitatum* (*c.*400): for the West, Siscia, Aquileia, Rome, Lyon, Arles, and Trier were the sites of the *moneta publica*, responsible for the issuing of bronze coinage; the coining of precious metals, in turn, took place principally at Sirmium, Milan, and Ravenna.[14] This decline likewise figures among the consequences of the loss of the western provinces, Britain above all. Gaul offers a clear example: Arles remained the only active mint through to 475–476, and even there the activity was discontinuous. Rare *solidi* in the name of Romulus Augustulus can in fact be attributed to Arles, but the bronze issues stopped with the AE 4 in the name of Johannes (423–425), while silver issues ceased even earlier – the last *siliquae* are those issued in 418 in the name of Honorius. Trier had minted significant volumes of coins in all three metals during the 4th century, but it halted bronze issues in 395 and thereafter was only sporadically active. Lyon, the oldest mint of Roman Gaul, ceased its activity following a series of gold and silver issues in the names of Constantine III and Jovinus (both usurpers) issued between 407 and 413. Under the Burgundian king Gundobad, Lyon would once again mint silver and bronze (and perhaps gold), but by then the political and institutional context was dramatically transformed.[15]

In Italy, as might be expected, the developments followed different rhythms, but the overall trends were essentially the same. In the second half of the 5th century, the *moneta publica* at Rome was the only imperial mint in the West still producing bronze coins.

Notwithstanding the changes described here, and even in its simplified form, the late Roman monetary system remained an articulated system with at least one denomination for each of the three metals being coined. It likewise remained multifunctional, sufficiently flexible to accommodate both

13 Morrisson, "Nummi byzantins et barbares du VI siècle", p. 187.

14 Hendy, *The Economy, Fiscal Administration and Coinage of Byzantium*, nos. 4, 5, 6; Delmaire, *Largesses sacrées*, pp. 495–528.

15 Brenot, "Du monnayage imperial au monnayage mérovingien".

FIGURE 4.2 5th/6th-century *minimi* from the *Basilica Hilariana* (Rome). Rovelli, "Aspetti della circolazione monetaria", pp. 209–10, nos. 174 (0.55G, 3.20mm Diameter), 179 (0.53G, 3.20mm Diameter) Source: author's photographs.

significant payments and quotidian transactions[16] in the context of an economic and monetary framework in which not only the state (through its fiscal structures, the *annona*, and the provisioning of the military)[17] but also the market provided an engine for continuing monetary circulation.[18]

16 This salient feature of Roman monetization was underscored by Michael Crawford, notwithstanding his essentially "primitivist" interpretation of the Roman economy and of the role of coinage: Crawford, "Money and exchange in the Roman world", p. 41. On the debate inspired by this article, see Howgego, "Why did ancient states strike coins?".

17 See the survey in Reden, "Money in the ancient economy". For an early medieval perspective, Wickham, "The other transition"; Wickham, *Framing the Early Middle Ages*, pp. 56–150; Hendy, "East and west"; and the bibliography noted above, nn. 8, 12.

18 Different approaches are given in Kajava (ed.), *Gunnar Mickwitz nella storiografia europea tra la due guerre*; Carrié, "Les échanges commerciaux et l'État antique tardif"; Carrié, "Were late Roman and Byzantine economies market economies?"; and Banaji, *Exploring the Economy of Late Antiquity*.

5th to 7th Centuries: The Fragmentation of the Monetary Systems

As in so many other respects, the 5th century was a turning point for the monetary system: although the persistence of its overall structures ensured that it remained deeply connected to its Roman heritage, it was also expressive of the transformations underway. To put this in focus we must briefly broaden our horizons. If the discussion so far has focused on Roman coinage and the state structures that it reflected, it is now necessary to survey the geographical, political, and economic shifts which gradually led northwestern Europe to reorient itself around the Carolingian Empire and its coin: the silver penny.[19] The Mediterranean South witnessed a different shift, thanks to the persistence of its Romano-Byzantine heritage and to the Arab conquest of Spain (705–711). In Spain, the introduction of a new system – that of the *dinar* and its fractions (similar to what was then current in north Africa) – kept the Iberian peninsula anchored to gold, as it had been under the Visigoths, rather than silver.[20]

Within this framework, Italy – first Byzantine and then Lombard – served as a sort of bridge between the different monetary systems. At the end of the 8th century, Charlemagne's conquest of the Lombard kingdom pulled north central Italy into the Frankish monetary zone. But it bears mentioning that the introduction of the Carolingian silver-based system (in which silver *denarii* replaced the gold *tremisses* of the Lombards) was the result of a military defeat and not, as in Gaul, the endpoint of a coherent political and monetary process. It is not by chance that the duchy of Benevento, in which Carolingian power was more nominal than effective, remained largely anchored to the Byzantine *solidus* throughout this period. The silver pennies struck in the mints of Benevento and Salerno never achieved the volumes attested for the local *solidi* and *tremisses*.[21]

The early medieval monetary fragmentation is unsurprising if we consider that in the Greco-Roman juridical tradition, coinage found within the state is its own *raison d'être*. If we observe the diversity that characterized the individual Roman provinces, even within their shared imperial structure,[22] one can easily appreciate the difficulty of generalizing about not just early medieval

19 Spufford, *Money and Its Use in Medieval Europe*, pp. 1–54; Bompaire, "Du solidus d'or au denier d'argent"; Devroey, *Économie rurale et société dans l'Europe franque*, pp. 158–69; Bruand, *Voyageurs et marchandises au temps carolingiens*, pp. 155–84; and Naismith, *Medieval European Coinage* 8.

20 Sénac and Gasc (eds.), *Monnaies du haut Moyen Âge*; Castro Priego, "Absent coinage"; and Doménech Belda, "Moneda y espacios de poder en el reino visigodo".

21 Arslan, "Sequenze dei conii"; and Rovelli, *Coinage and Coin Use in Medieval Italy*, no. XVI.

22 Wickham, *Framing*, p. 3.

society, but also the monetary systems that emerged from a common Roman matrix. A wide array of variables led to an initial distinction between those societies marked by statelike structures, such as Italy, Gaul, Spain, England (to an extent, though it struck no coinage for over two centuries),[23] and those societies organized predominantly along tribal lines, or *Barbaricum*, as it is called in contemporary sources (e.g., the areas of Germany furthest from the Rhenish and Danubian *limes*, Scotland, Ireland, and the Baltic and Black Sea regions).[24] Each of these two broad groups could be further subdivided, given that each province had not only developed its own particular expressions of Romanization, but had also undergone accordingly different processes of ethnogenesis.[25]

In seeking to understand the making of the new economic systems and political entities, there is much to be learned from first understanding the patterns of use and diverse reasons for non-use of coined money,[26] the commercial[27] and other[28] pathways of coin diffusion, and the chronology of the adoption of monetary instruments (occasionally through the initial production of paramonetary objects, such as the so-called *bracteates*, whose function was predominantly ornamental or apotropaic).[29] It is interesting to note that provisions regarding money often featured among the first legislative acts of new sovereigns, even in the absence of a clear royal monopoly over coin issues.

23 On the resumption of coin production in Britain, see Abdy, "After Patching"; and Williams, "The Circulation and function of coinage in conversion-period England".

24 Le Jan, *La société du haut Moyen Âge*, pp. 30–54.

25 Halsall, *Barbarian Migration and the Roman West*; Pohl and Mehofer, *Archaeology of Identity*; and Mathisen and Shanzer, *Romans, Barbarians and the Transformation of the Roman World*.

26 Naismith, "The social significance of monetization in the early Middle Ages"; and Bougard, "Le credit dans l'Occident du haut Moyen Âge".

27 McCormick, *Origins of the European Economy*, pp. 681–88; Blackburn, " 'Productive' sites and the pattern of coin loss in England"; Morrisson, "*Emporia*, money and exchanges"; Naylor, "Coinage, trade and the origins of the English emporia"; Skre, "Markets, towns and currencies"; and Skre, *Means of Exchange*.

28 Grierson, "Commerce in the Dark Ages". The originality of Philip Grierson's approach toward the "gift economy" is highlighted in Devroey, *Économie rurale*, pp. 175–78 and n. 74. For more recent contributions to this vast theme, see Laiou, "Economic and noneconomic exchange"; Feller, Gramain, and Weber, *La fortune de Karol*; Curta, "Merovingian and Carolingian gift giving"; Davies and Fouracre (eds.), *The Languages of Gift in the Early Middle Ages*; Morrisson, "La monnaie byzantine hors de l'Empire"; and Feller and Rodriguez (eds.), *Objets sous contrainte*.

29 Werner, *Münzdatierte Austrasische Grabfunde* laid out the fundamentals of the problem; Magnus, *Roman Gold and the Development of the Early Germanic Kingdoms*.

This was the case, for instance, in the so-called *Lex Gombetta* (after Gundobad of Burgundy), which regulated the circulation of *solidi*.[30]

Although an exhaustive study of these processes is beyond the scope of this chapter, let us examine a few instances more carefully, starting with the Ostrogothic coinage, the most structured of all those which emerged in the post-Roman West. For our purposes, the Ostrogothic monetary system exemplifies two different themes: coinage as a means of legitimizing power[31] and coinage as both a fiscal tool and a means of exchange.[32] The Ostrogothic sovereigns made sophisticated choices in each, wielding gold, silver, and bronze issues to achieve a specific political objective.

It is well known that the issue of gold coinage (and of *solidi* in particular) was a prerogative reserved for the emperor. This perhaps explains why the Ostrogoths, who ruled Italy by a mandate from Zeno (who had named Theodoric patrician and general), not only avoided contesting this principle, but actively struck gold coins that faithfully reproduced the types, alloys, and weights of their imperial counterparts. Indeed, the Ostrogothic gold issues bear the name of the emperor, with the sole modification being the monogram of Theodoric that appears on some *solidi* at the end of the reverse legend. Moreover, it seems likely that the personnel of the Ostrogothic mints at Rome, Ravenna, Milan, Ticinum/Pavia, and Sirmium – all of which had been active during the preceding imperial period – were also Roman. Under the Goths, Ravenna and Rome remained the principal mints, and they preserved at least in principle the distinction between the palatine mint (Ravenna) and the *moneta publica* (Rome).[33]

Quite different, and original, were the iconographic choices adopted for the silver and bronze coinage. Following the capture of Ravenna in 493, Theodoric had his soldiers elect him king with a formula signifying "king in Italy". The double-nature of his titles – as both king and Roman functionary – and the dualistic structure of his kingdom (in which Romans continued to occupy important roles in the civil administration) is reflected in the silver issues. For the so-called *siliqua* fractions, the obverse continued to be reserved for the emperor; on the reverse, however, and therefore in a subordinate position, appeared the monogram or the name of the Ostrogothic king, that is, the ruler

30 *MEC* 1, p. 5; and Lafaurie and Pilet-Lemière, *Monnaies du haut Moyen Âge découvertes en France*, p. 19.

31 Arslan, "Dalla classicità al Medioevo"; and Asolati, *Praestantia nummorum*, pp. 53–111.

32 Vera, "Dalla liturgia al contratto"; Vera, "Stato, fisco"; and Rovelli, "Contextes urbains *vs* ruraux", pp. 149–52.

33 Metlich, *The Coinage of Ostrogothic Italy*, is the most recent corpus of Ostrogothic coinage at this writing.

FIGURE 4.3 Theodoric (493–526), silver quarter-*siliqua*.
SOURCE: CNG.

of the delegated authority (Figure 4.3). These coins would enjoy broad circulation north of the Alps, an initial push having been given by the Ostrogothic expansion into Provence. Their role, not only political but also economic, is underscored by the fact that the Byzantines continued to issue *siliqua* fractions after reconquering Italy, even though this denomination was struck in neither Constantinople nor any of the other eastern mints.[34] Even the so-called *minuti argentei* of the early Merovingian period, to be discussed below, can be considered heirs or imitators of these issues.

Yet another argument can be made for the bronze issues, whose circulation was mainly local but which had the capacity to reach a vast public – Roman and Gothic alike – through their use in everyday exchanges. The choice of types, which evoked national sentiments for each people, summarizes neatly Theodoric's political programme. The wolf with twins which appears on the *folles*, for example, dated variously to the late 5th and early 6th centuries, obviously descended from a venerable tradition in Roman coinage, even though the type itself had not been struck since the Constantinian era. Its return two centuries later therefore signified the deliberate recovery of an evocative iconography for the Romans, as well as an embrace of the Germanic imaginary in which wolves figured prominently. Moreover, it is precisely in the bronze issues that the royal claims of the Ostrogoths affirmed themselves most explicitly, and on occasion most spectacularly: consider the *folles* of Theodahad which feature on the obverse a bust of the king wearing the *Spangenkappe*, the Germanic symbol of power; and on the

34 Brenot, "Du monnayage impérial au monnayage mérovingien"; Callegher, "Tra Bizantini e Longobardi in Friuli", pp. 673–79; and Morrisson, "Le zecche nell'Italia bizantina", p. 417.

FIGURE 4.4 Bronze *follis* of King Theodahad (534–536).
SOURCE: CNG.

reverse the equally evocative depiction of Victory on the prow of a ship, with SC (*senatus consulto*) in the field and the legend *victoria principum* (Figure 4.4).

It is worth noting that even the kingdom's final issues upheld the original iconographic choices, notwithstanding the onset of Byzantine aggression. Even as defeat loomed, the Ostrogothic gold issues continued to respect the imperial monopoly on gold *aurei*, though they abandoned the types bearing the name of Justinian in favour of those bearing the name of Anastasius, who in 497 had legitimated Ostrogothic power in Italy.

Innovation, but also a return to "classical" Roman models, also characterizes the bronze issues insofar as the denominations themselves are concerned. At the end of the 5th century, Byzantium, the Ostrogoths, and the Vandals all resumed coining multiples of the *nummus*. The origins of this innovation, which some scholars attribute to the Vandals and others to the Ostrogoths, remain controversial and will not be discussed here.[35] What is crucial, however, is the new importance accorded to bronze. Even if the return to a multidenominational bronze coinage in the West lasted only briefly, the phenomenon reflects continuing demand for petty coinage, especially in the Mediterranean region, as is also well-demonstrated by the persistent circulation of late Roman bronzes and the sizeable production of *minimi* (frequently illegible, but probably often dateable to the 6th century). In Africa between *c.*450 and 533, the Vandals

35 Hendy, *Studies in the Byzantine Monetary Economy*, pp. 488–90; *MEC* 1, pp. 21–22 and 31–32; *RIC* X, pp. 218–19; Morrisson, "L'atelier de Carthage", p. 72; Metlich, *Coinage*, p. 47; Arslan,"Dalla classicità al Medioevo", p. 438; and Rovelli, "En marge de quelques émissions d'Odoacre et de Baduila", p. 44.

FIGURE 4.5 Gold *solidus* of King Theodebert (534–548).
SOURCE: WIKIPEDIA COMMONS.

issued both the *nummus* and multiples of 4, 12, 21, and 42 *nummi*.[36] In Italy, the Ostrogothic system was articulated (like the Byzantine system designed by Anastasius) on a decimal base: a *follis* of 40 nummi; denominations of 20, 10, and 5 *nummi*; and *minimi* of uncertain value.

If the respect of the Gothic rulers for imperial prerogatives can be understood as a means of attesting the legitimacy of their own power in Italy, equally significant is the opposite choice, as evidenced in Gaul during roughly the same years, under the reign of Theodebert (534–548). The Frankish king, lacking imperially delegated authority, had entirely different aims: namely, to demonstrate the legitimacy of a power that had been independently acquired. Justly famous is the *solidus* that he issued in his own name, which did not fail to elicit the indignation of Procopius (*The Gothic War*, III.33.5–6), proof of the effect that the series had on contemporary observers (Figure 4.5).[37] Theodebert's gesture remained for a time an isolated instance; from the late 5th century through to the end of the 6th, the gold issues of the barbarian kingdoms limited themselves to imitating Byzantine imperial models.

The adoption of pseudo-imperial types also responded to the need to encourage circulation by choosing well-known and respected types, notwithstanding their gradual alteration. In Gaul and Spain, it was only toward 580 that imitations of imperial types were abandoned in favour of "national" types. The simultaneity of the shift might lead one to think of the parallel evolution of similar processes, but in reality the differences were significant. Consider, in

36 Morrisson, "L'atelier de Carthage".

37 *MEC* 1, p. 5.

regards to the Merovingian issues, the preeminent role assumed by the moneyers, whose name appears alongside that of the mint, whereas the king is mentioned only rarely.[38] Conversely, in Visigothic Spain, it is the name of the king that dominates. In both cases, it can be difficult to define the nature of the issues (royal or otherwise) and the degree of control exercised by the authorities, and, as studies have shown, one cannot rely only on the legends.[39]

Lombard coinage offers a further example of the ways in which apparently similar developments might in fact follow quite distinct trajectories, dictated by local conditions. The Lombards also developed a "national" coinage roughly a century after settling definitively in a territory that had previously been under imperial control. (Their migration came to an end only in 568 when, having left Pannonia, they entered Italy through the eastern Alps.) The acquisition of national types, after an initial phase of pseudo-imperial issues, therefore likens the Lombard coinage to the Visigothic and Frankish experiences, but the outcome proved markedly different from either.

In the Lombard realm, the abandonment of Byzantine types occurred under Cunincpert (688–700), who launched a monetary reform in two phases. The first phase (688–692/3?) affected iconographic aspects and led to the replacement of the imperial bust with that of the Lombard king, the accompanying legend making him all the more easily identifiable. The name of the ruler (designated as *rex*) was repeated on the reverse.[40] It is interesting to observe that here, the abandonment of the imitation type in favour of a new iconography entrenched itself only after the peace accord of 680 between the Lombards and the Byzantines, which legitimized Lombard sovereignty over much of Italy.[41] This delay is all the more striking if one considers that the Edict of Rothair, promulgated in 643, was the first instance in Germanic legislation to grant the king a monopoly over coinage.[42] Even so, and although royal and ducal monograms had appeared on the silver issues from the very beginning,[43] the visible expression of royal power on gold issues seems to have waited until after the treaty with the Byzantines.

The second phase of Cunincpert's monetary reform was similarly important, and, for our purposes, the most significant. To a further iconographic innovation was added a change in the intrinsic value of the *tremisses*. The reverse

38 *MEC* 1, pp. 97–102, 113–17; and Lafaurie and Pilet-Lemière, *Monnaies du haut Moyen Âge*, pp. 13–23.

39 Martín Viso, "Circuits of power in a fragmented space"; and Chambon, "L'identification des noms d'ateliers monétaires mérovingiens".

40 Arslan, "Una riforma monetaria di Cuniperto, re dei Longobardi".

41 On the importance of this agreement, see Delogu, *Le origini del Medioevo*, pp. 11–38.

42 *Edictum Rothari*, cap. 242.

43 On the attribution of the monograms, see Callegher, "Una moneta di re Arioaldo".

FIGURE 4.6 Gold *tremissis* of King Cunincpert (688–700).
SOURCE: CNG.

was henceforth characterized by a winged Saint Michael (a reworking of the imperial *Victoria*), whose cult had already become a major element of national cohesion (Figure 4.6). As for the intrinsic value, Cunincpert decided to match the fineness of his *tremisses* to those issued in Constantinople and the Byzantine mints in Italy. The Lombard *tremisses* therefore reached an exceptionally high degree of fineness, between 94 and 99 per cent, with negligible oscillations between minimum and maximum values.[44]

The fineness of the Lombard issues remained high (92 to 93 per cent) through the reign of Aripert II (701–712). Cunincpert's monetary policy appears all the more original if one considers that in the very same years in which the Lombard *tremissis* was raised to an intrinsic value above 90 per cent, its Merovingian counterpart – whose fineness had already dropped below 20 per cent – disappeared altogether, to be replaced by the silver penny. It was only from the reign of Liutprand onward that the Lombard gold issues saw a drop in their fineness, in a process paralleling that of the Byzantine mints of Ravenna and Rome.[45]

One can wonder, however, about the real reasons behind the decline in the intrinsic value of Liutprand's *tremisses*, whose fineness ranged from 39 to 74 per cent. In searching for a possible answer, it is necessary to keep in mind the evidence concerning the volume of issues and its considerable increase, insofar as this can be reconstructed based on coin finds and the study of dies. Ermanno Arslan has estimated that a total of 15.14 dies were used under Cunincpert, as

44 Arslan, "Una riforma monetaria".
45 Rovelli, *Coinage and Coin*, nos. V, VI, XIV.

compared to 293.28 for Liutprand.[46] As regards Lombard coinage, the latter number is rivalled only by the Beneventan issues of Arechis II.[47] If these statistics are set against the parallel decline of Byzantine issues in Italy, the interruption of Byzantine tribute payments to the Lombards after the peace of 680, and the probable impact of both on the Lombards' available gold reserves, the reduction in fineness of Liutprand's *tremisses* might instead be read in a "positive" sense, and from a totally different perspective than the Frankish decision to embrace silver. The reduction in the intrinsic value might have been an expedient to address the demand for coinage, assuring appropriate monetary production despite the decline in available gold supplies.[48]

The evidence presented here (however briefly) raises questions that go well beyond purely monetary concerns, suggesting that over the course of the 8th century Byzantium continued to be the principal political, monetary, and economic interlocutor of the Lombards. In this sense, as mentioned above, the introduction of the silver penny into Italy would seem to have been the monetary consequence of the Lombards' military defeat, rather than the natural embrace of silver monometallism that we find in northern Europe. We are therefore dealing here with a very different path than that taken in Merovingian Gaul around 680, or in Frisia and England, where the adoption of silver issues, the so-called *sceattas*, followed in the wake of renewed trade contacts.[49]

7th to 8th Centuries: From Gold to Silver

To identify the stages that marked the passage from gold to silver, it is helpful to look in greater detail at the issues from Merovingian Gaul. Indeed, it is through these issues – which span nearly 250 years – that one can trace a theme that has continued to inspire historiographical debates since Henri Pirenne proposed his famous thesis.[50]

Merovingian coinage is traditionally seen as undergoing three distinct phases.[51] The first, already touched on above (*c.*500–587?), was characterized

46 Arslan, "La monetazione di Ratchis, re dei Longobardi".
47 Arslan, "Sequenze dei conii".
48 Delogu, *Le origini del Medioevo*, pp. 84–85; and Rovelli, "La moneta al tempo di Desiderio".
49 On coin circulation and monetary reforms in northern Europe, see Naismith, "Kings, crisis and coinage reforms in the mid-eighth century"; and Naismith, "Social significance". See also n. 55 below.
50 Delogu, "Reading Pirenne again".
51 The following synthesis is based mainly on *MEC* 1, pp. 81–154; Bompaire, "Du solidus d'or au denier d'argent"; and Lafaurie and Pilet-Lemière, *Monnaies du Haut Moyen-Âge*, pp. 9–31.

by imitative *solidi* and *tremisses*. One finds the names of the emperors Anastasius I (491–518), Justin I (518–527), Justinian I (527–565), and Justin II (565–578). In *Provincia*/Provence, which remained under Ostrogothic control until 536, issues in the name of the Eastern emperors continued through to the beginning of the 7th century, as demonstrated by imitations of the Heraclius-type datable to 610–613. These series occasionally bear monograms with the name of the king, though strikingly there is no known specimen with a monogram that can be plausibly associated with Clovis.[52] Some monograms have enabled Burgundian issues to be distinguished, while archaeological finds have led to the identification of Visigothic *tremisses* minted in *Septimania*.

Alongside the gold issues, we also find the production of bronze *nummi* and lightweight silver fractions, the so-called *minuti argentei*. Among the latter, it seems possible to distinguish two different denominations, one theoretically weighing 1 *siliqua* (0.188 grams) and the other 2 *siliquae* (0.377 grams). Until recently, these were assumed to have been produced above all in Provence, probably at Marseille. Based on archaeological findings, however, it is now possible to imagine a more sustained production over the course of the 6th century, in an area that also included much of the Rhineland-Moselle region, particularly around Worms, Strasbourg, and Metz (which would become the capital of Austrasia). Some specimens, probably issued in the Île-de-France, seem to have remained in circulation through to the early 7th century.[53]

The second phase (587?–*c.*670) saw the creation of a coinage which lacks any reference to imperial authority and is hence considered "national", even though explicitly royal issues are rare. The largest group consists of *tremisses* with a place name on the obverse (some 1200 sites are known, often qualified with terms such as *castellum*, *castrum*, *civitas*, *portus*, *vicus*, and *villa*); the reverse features the name of a person followed by the title of *monetarius* (some 1600 are known), evidently the one responsible for the issue. A distinct subgroup consists of coins with names of ecclesiastical institutions (e.g., *racio basilici sci martini*) and some bishops. The weight of these *tremisses* (1.3 grams) is generally reduced as compared to the Roman standard (1.5 grams), and the alloy underwent various reductions. Some specimens struck at Marseille in the name of the emperor Mauritius Tiberius are of exceptional fineness (98 per cent), whereas a *tremissis* of Avitus, bishop of Clermont (674–689), has a gold content of roughly 10 per cent.[54]

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52 Lafaurie and Pilet-Lemière, *Monnaies du Haut Moyen-Âge*, pp. 17–18.

53 Bompaire, "Du solidus d'or au denier d'argent", p. 108; and McCormick, "Coins and the economic history of post-Roman Gaul", pp. 337–54.

54 Blet-Lemarquand, Bompaire and Morrisson, "Platine et plomb dans les monnaies d'or mérovingiennes" p. 180; and Bompaire, "Du solidus d'or au denier d'argent" p. 116.

The third phase began around 670–675. With its introduction of the silver penny, this phase marks one of the most debated topics in the history of early medieval Europe. The name of this coin – the *denarius* – is known from its appearance on a handful of specimens, such as the pennies coined at Lyon with the legend *lugduno dinarios*; it therefore revived the name of the archetypal Roman silver coin, even though it did not share any metrological links with its classical inspiration. The chronology (imprecise though it is) is suggested by some pennies minted at Tours in the name of Childeric II (663–675) and others issued by the aforementioned Avitus, bishop of Clermont.[55]

Unlike what one might assume, the transition to silver does not seem to have entailed significant changes in the patterns of coin issues (at least not in the short term). The name of the king remained generally absent, but episcopal issues grew more common, and it is above all thanks to certain lists of bishops (especially for Paris) that we can determine a precise dating for some issues.[56] The weight and dimensions remained roughly those of the *tremisses* (1.3 grams). The volume of coin issues not only did not increase, but in fact appears to have decreased. The corpus of single-finds within the boundaries of modern France is only just over 200 *denarii*, as compared to 780 *tremisses* from the preceding phase. In 1996, Jean Lafaurie estimated the total number of known specimens at ca. 3500, while underscoring that 2294 of these came from a single hoard (that of Nice-Cimiez, dép. Alpes-Maritimes, found in 1851). A further 780 hailed from the other seven known hoards containing Merovingian pennies in clusters ranging from 30 to 380 specimens. The Rodez (Aveyron) hoard provided an additional nine specimens.[57]

These are necessarily cautious estimates, given the difficulty in producing a census that takes into account private holdings and auction sales, but they at least provide us with relative orders of magnitude. The reduced number of known specimens is unquestionably striking, particularly if one considers the symbolic value that this monetary reform has taken on in early medieval historiography. It is also striking when set against the much more dramatic surge in issues in England and Frisia (especially given the lack of an earlier monetary

55 Bayless et al., *Anglo-Saxon Graves and Grave Goods* offers new hypotheses on the transition from gold to silver in England, positing a much earlier date for the transition than has previously been assumed – perhaps even earlier than (or at least contemporaneous with) the Merovingian transition from gold to silver. For a sceptical response to their arguments, see Marion Archibald's chapter in the same volume.

56 Lafaurie and Barrandon, "Monnaies épiscopales".

57 Geneviève and Sarah, "Le trésor de deniers mérovingiens de Rodez", p. 480 (with further references).

tradition in the latter).[58] Here, then, we can note the development of quite distinct pathways within a broadly shared framework, i.e., the replacement of gold with silver and the persistence of shared weights. (Note that the first pennies and *sceattas* conserved the weight of 1.3 grams, equivalent to *c.* 20 Troy grains, which had been the standard of the *tremisses*.)

Without entering into the details of these developments, it is worth signalling the insights that might come from a multidisciplinary approach towards the still-unresolved questions concerning the roles of public authorities and moneyers, the factors behind the extreme fragmentation of mint sites, the crisis of the fiscal system, and the possible role of Mediterranean commerce in the supplying of precious metal, notably gold.

Jean-Pierre Chambon's linguistic analysis of the Merovingian *tremissis* legends shed light on the public nature of the sites in which minting activity occurred, which in turn prompted a reconsideration of the decentralized structure of the Merovingian administration. Here taking up some hypotheses proposed by Jean Lafaurie, Chambon argued that the extreme fragmentation of the issuing sites (with some mints attested on a mere handful of specimens) was due not to the lack of control on the part of the public authority, but rather to the need to adapt to growing ruralization.[59] Philip Grierson and Mark Blackburn, in contrast, argued that Merovingian coinage was "essentially non-royal in character".[60]

As for metallurgical analyses, these (coupled with a close study of the written evidence) have offered valuable insights into the rhythms of the decline in intrinsic value, the role of Byzantine gold in the supplying of the Merovingian mints, and the cause-and-effect relationship between the slowing of monetary circulation and the crisis of the fiscal system inherited from Rome.[61]

58 On sceattas, see Metcalf and Op den Velde, "The monetary economy of the Netherlands" and Abramson (ed.), *Studies in Early Medieval Coinage*. Even before the widespread use of metal detectors, it was already clear that sceattas were issued in far greater numbers than were Merovingian pennies. The differing regulatory regimes governing the use of metal detectors by amateurs and in archaeological research now make it difficult to compare finds from France with those from the United Kingdom and the Low Countries; see Naismith, "Kings, crisis," pp. 294–95. The same can be said for Italy, though it is worth adding that for both France and Italy (as well as other countries with similar laws governing the use of metal detectors), current techniques allow for a thorough recovery of coins in the context of archaeological excavations. As such, the ups and downs in monetary circulation that are evidenced in excavation reports can be considered reliable indicators of the trajectories of local circulation and the level of local monetization.

59 Chambon, "L'identification des noms".

60 *MEC* 1, p. 90.

61 Blet-Lemarquand, Bompaire, and Morrisson, "Platine et plomb".

Similarly interesting are the results of the analyses of the silver pennies. Notwithstanding the small sample size, the evolution of their intrinsic values offers innovative evidence for studying the rise of the Carolingian dynasty and the strengthening of royal power. The pennies coined from 751 onward are distinguished from the earlier Merovingian issues by improved silver content and increasing uniformity within issues. Starting from the reign of Pepin the Short, the systematic mention of the king's name and the reduction in the number of mints provide further signs of the progressive centralization of monetary production under royal control.[62]

The modifications introduced under Pepin reflect a genuine reform effort, made clear by the increased dimensions of the coins (while keeping the same theoretical weight). Royal intervention in monetary issues was codified with the capitulary of Ver of 755,[63] the first legislation issued by a Frankish king concerning monetary matters. The capitulary defined the weight of the penny, declaring that from one pound of silver (i.e., 327.45 grams if one follows the weight traditionally attributed to the Roman pound; 322.22 if one accepts the position of Lucien Naville[64]), one could not mint more than 22 *solidi* worth of *denarii*. If we consider that one *solidus* (as a money of account) was made up of 12 pennies, the relationship between the pound and the penny was therefore 1/264 (22 × 12). Light pennies – such as those which had earlier been widely diffused in Provence, with a weight of ca. 1.14 grams, or 1/288 of a Roman pound – were therefore eliminated. Charlemagne in turn reinforced the penny, raising its weight to 1.7 grams as part of a general reform of weights and measures that also affected the pound (which was increased to 408/409 grams) (Figure 4.7). The relationship of 1/240 between the pound and the penny that had been established in the meantime remained unchanged. Charlemagne's reform left a trace in a clause of the Council of Frankfurt in May 794, with its mention of "new pennies [*novi denarii*] [which] bear our name [*nominis nostri … habent*]." This brought to a close the process of normalization launched by Pepin. It introduced a definitive basis for a monometallic and single-denomination monetary system featuring a single coin (the penny), accompanied by two moneys of account: the *solidus* (equivalent to 12 pennies) and the pound (equivalent to 240 pennies). The Carolingian system can therefore be synthesized

62 Geneviève and Sarah, "Le trésor de deniers".

63 On the identification of the place where the capitulary was issued, see Bompaire and Dumas, *Numismatique médiévale*, p. 87.

64 Lafaurie, "Numismatique", pp. 126–28; *MEC* 1, p. 107–8; Portet, "Remarques sur les systhèmes métrologiques carolingiens"; and Naville, "Fragments de métrologie antique".

FIGURE 4.7 Silver denier/*denarius* of Charlemagne (768–814), Pavia mint.
SOURCE: CNG.

according to the following framework: 1 pound (of account) = 20 *solidi* (of account) = 240 pennies (minted); and 1 *solidus* = 12 pennies.[65]

The Uses of Coinage: Some Open Questions

Thus far we have focused on predominantly technical themes, which are useful for describing coin production rather than patterns of actual use. Yet it is in the latter domain that recent scholarship has in fact made the most significant progress, while inevitably also raising new issues. It is also worth emphasizing – and this view is widely shared – that the study of early medieval Europe (including from a numismatic perspective) is among the topics that has benefitted most from the massive increase in archaeological evidence produced in recent decades. It has become possible to start to fill the void of "faits de masse" that Henri Pirenne identified as one of the most serious barriers to the reconstruction of pre-industrial economies.[66] The growing use of metal detectors has also increased the volume of coin finds, though the differing European regulatory norms concerning the use of these tools have had significant consequences not only for the quantity of material legally brought to light, but also

65 Lafaurie, "Numismatique"; *MEC* 1, pp. 206–9; and "Synodus Franconofurtensis", c. 5, ed. Boretius, p. 74.

66 Grierson, "Problemi monetari dell'alto Medioevo", p. 67, citing Pirenne, *Mahomet et Charlemagne*, p. 219.

from a qualitative perspective, given the greater attention given by detectorists to coins struck from precious metals.

Such consequences may be especially important for our period, which saw the transition from the late Roman trimetallic system to monometallic gold or silver systems. First, it becomes too easy to overlook, and therefore systematically underestimate, the final phases in the production and use of late bronze issues of uncertain authority and the prolonged circulation of properly imperial issues. Second, it becomes too easy to overestimate gold and silver issues which, precisely on account of their rarity, are sought after and examined with more care than the small late antique *minimi* or the billon pennies that were struck throughout Europe from the late 12th century onward.[67]

Mark Blackburn, who did much to support projects that would make it easier to analyse evidence of coin finds, was the first to draw attention to these concerns: "After 1180 coin finds in England become too plentiful and the currency was too uniform to make comprehensive recording of single-finds a practical proposition. For the later Middle Ages the study of coin circulation in England has to be based on samples from a limited number of sites".[68] Even if the development of the Portable Antiquities Scheme makes it easier than previously to quantify and analyse the increased volume of coins in circulation in late medieval England, Blackburn's remark neatly captures the massive increase in monetary production starting in the 12th century, which stands in marked contrast to the early medieval panorama, and is more akin to levels under the Roman Empire. At the risk of being slightly provocative, it is worth recalling that according to some estimates, the two Gallic mints that were issuing coins for the usurper Tetricus in the 3rd century produced nearly a million coins a day.[69] Pepin's coinage, by contrast, is known from 124 single-finds (as of 2014),[70] and from specimens recovered from four hoards.[71] One can only agree with Rory Naismith's call to go beyond merely acknowledging early medieval Europe's low level of monetization in order to explore those sectors in which coined money could in fact fulfil certain functions;[72] and yet it is also crucial to stress the dramatic reduction in the scope of coin use.

On this front, one must keep in mind not only the tiny scale of issues, but also – and especially – the rigidity of the single-denomination systems that

67 See also above, n. 58.
68 Blackburn, "Coin circulation in Germany during the early Middle Ages", p. 37, n. 1.
69 Burnett, *Coinage in the Roman World*, p. 123.
70 Coupland, "The use of coin in the Carolingian Empire in the ninth century", p. 273.
71 Naismith, "Kings, crisis", pp. 312–13.
72 Naismith, "Social significance"; Naismith, "Kings, crisis"; and Naismith, "Gold coinage and its use in the post-Roman West".

emerged in the post-Roman West, whether gold or silver. Even the Carolingian system, although based on silver rather than gold, envisioned only the coining of the penny – a choice which, from a functional perspective, reflects a rather rudimentary system, poorly equipped to absorb fluctuations in the prices of everyday goods. Given the lack of fractional coinages (the minting of *obols* is attested in only a few mints within Francia), any price increase for goods valued at one penny could have been accommodated only by doubling the price to two pennies. How such a simplification of the earlier monetary system occurred, and how it must be interpreted, remain core questions in the study of early medieval economic history. Furthermore, the available evidence for the issuing of Merovingian pennies or of those Carolingian pennies which, in Italy, replaced Lombard *tremisses*,[73] indicates that the abandonment of gold in favour of silver did not always do much to increase the functionality of the monetary system and the level of monetization (save in the long run),[74] even though silver was locally available. Moreover, it remains an open question which areas were supplying the silver; equally open to discussion is the role of silver hoarded by the Church and then melted down.[75]

The first step towards understanding the uses, as well as the limits, of the unidenominational systems of the early Middle Ages is to deepen our understanding of the factors that led to the definitive crisis of the trimetallic Roman system, and therefore to the disappearance of bronze and of silver fractions.

At the beginning of this chapter was mentioned the difficulty of reading and classifying many specimens, especially the late bronze issues, usually on account of their extremely poor quality. Yet their coarse appearance, due in some cases to the high proportion of lead they contain, must be carefully examined, rather than dismissed as simply the result of decreasing technical skill. Pursuing this phenomenon, we enter into much vaster historical problems, of both an economic and institutional nature. Already at the end of the 4th century and the beginning of the 5th, even some issues from the mint of Rome itself seemed to be characterized by a decline in quality that affected the legends (frequently irregular), the clarity of the types, and the alloy. This decline makes it difficult to distinguish official issues from imitations, but it also reveals two interesting features: on the one hand, a desire to reduce the costs of minting by adopting methods already observable in the mass production of other goods

73 Saccocci, "Rinvenimenti monetali nella Tuscia dell'Altomedioevo"; and Rovelli, "La moneta al tempo di Desiderio".

74 Hendy, *The Economy, Fiscal Administration*, no. VII, especially pp. 72–73.

75 *MEC* 1, p. 96; Op den Velde and Klaassen, *Sceattas and Merovingian Deniers from Domburg and Westenschouwen*, pp. 65–67; and Naismith, "Social significance", pp. 15–16.

(such as lamps made using worn-out moulds); and on the other, an effort to satisfy the demand for petty coinage.

Thanks to the numerous archaeological excavations that have examined 6th-century contexts from the Mediterranean region as well as near the Rhenish frontier, there is increasing awareness of the heterogeneous and sometimes quite substantial presence of bronze issues, both official and imitation, alongside mostly illegible blanks – a monetary landscape that until recently would have been entirely unexpected.[76] Renewed attention has been paid to the phenomenon of the persistent circulation of late Roman issues, which in some cases were voluntarily broken into pieces in order to obtain the desired weight.[77] And it is precisely from the (admittedly challenging) analysis of this material that it is becoming possible to examine anew the levels of monetary production and circulation in the crucial transition period between the 5th and 6th centuries.

Similarly interesting is the evidence concerning the production and use of the final series of late Roman – style silver fractions, not only in Ostrogothic, Lombard, and Byzantine Italy, but also in northern Gaul, between the Rhine and the Seine. These so-called *argentei minuti* weighed generally between 0.15 and 0.40 grams and had a diameter of less than 10 mm. The extreme fragility of such light and tiny issues obviously threatens their survival in the ground as well as their visibility in the course of excavations, which likely explains why they have largely been recovered from funerary contexts.

These finds make tangible the references to *argentei* in Gregory of Tours.[78] Like the bronze *minimi* of uncertain attribution and older Roman coins that remained in circulation, they point the way for future research. Until recently, the historiographical debate had focused on a different major theme: the abandonment of gold in favour of silver. At the end of this chapter, it seems worthwhile to highlight two outstanding questions of early medieval European economic and monetary history: first, the factors underpinning the creation of systems

76 In the Mediterranean context, especially unexpected is the Spanish example, first studied by Crusafont i Sabater, *El sistema monetario visigodo*, attributing certain bronze series to the Visigoths. These attributions remain disputed; see Marot, "La peninsula ibérica en los siglos V–VI"; Doménech Belda and Gutiérrez Lloret, "Viejas y nuevas monedas en la ciudad emiral de Madīnat Iyyuh"; Mora Serrano, "Old and new coins in southern Hispania in the 6th century AD". For Gaul and the Rhineland, see the broad synthesis in McCormick, "Coins and the economic history of post-Roman Gaul". For Italy, see Rovelli, "Contextes urbains".

77 Gricourt, Naumann, and Schaub, *Le mobilier numismatique de l'agglomération secondaire de Bliesbruck*; Chameroy and Guihard, *Produktion und Recyceln*; and Bompaire, Cardon, Geneviève and Marani, *Les trouvailles de monnaies romaines en contexte médiéval*.

78 The importance of Gregory of Tours (*Liber in gloria confessorum*, 110) in this regard has been noted by McCormick, "Coins and the economic history", p. 354.

lacking both multiple and fractional currencies; and second, the economic implications of this phenomenon. As we have seen, the archaeological discoveries of recent decades have supplied evidence for the production and use of petty coinage, whether of bronze or silver, across a much wider chronological and geographical span that was previously believed. Through the careful examination of archaeological finds and attendant classification efforts, there is hope that future research will establish more precisely the chronological limits and economic spaces that defined the minting and use of such specimens.

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CHAPTER 5

From Charlemagne to the Commercial Revolution (*c.*800–1150)

Andrew R. Woods

Relatively few general works in English cover money in the period between the 8th and 12th centuries. Perhaps unsurprisingly, the further east and south within Europe one goes, the less accessible scholarship there is in English or other major Western European languages. In general terms, the production of coinage is reasonably well served, with general works providing a broad overview of when, where, and by whom it was struck. For readers completely unused to coinage, there is a good general survey by Philip Grierson, who introduces the subject on a century-by-century basis.[1] For the first half of the period covered by this chapter, Grierson and Mark Blackburn's *Medieval European Coinage* still provides the best overview of European coinage to the 10th century.[2]

For those more interested in how money was used across Europe – when, where and by whom – there are greater challenges. The second half of the period is very well served by Peter Spufford's contributions to the subject, which provide an approachable and broad analysis of money.[3] However, understanding the use of money for much of the period rests upon the interpretation of archaeological material: hoards, excavated coins, and single-finds. Here, the student of money runs into the challenges of modern international borders, as every country across Europe has differing approaches to its archaeological heritage. A clear example is attitudes to the use of metal-detectors, with countries such as England and the Netherlands permitting use and creating systems to record the thousands of finds that result. This is a contrast to most other areas, where it is banned, restricted or varies on a regional basis. This can lead to imbalances of evidence; there are, for example, nearly 50 times as many single-coin finds reported from England, where detecting is legal, as from Ireland, where it is not.[4] This type of imbalance has the potential to mislead when

1 Grierson, *The Coins of Medieval Europe*.
2 Grierson and Blackburn, *Medieval European Coinage*.
3 Spufford, *Money and Its Use in Medieval Europe*.
4 Comparing figures from Naismith, "The English monetary economy," and Woods, "Monetary activity in Viking-age Ireland".

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we consider how coinage was used across the modern political boundaries of Europe. This has led to archaeological studies which have tended to be more regionally specific, with relatively few attempts to draw together an understanding of how money was used at a more general level.[5]

The Triumph of the Penny

The story of money between about 800 and 1150 in Europe is intimately connected to the adoption and adaptation of the silver *denier*, or penny.[6] Following its creation in Francia in the mid-8th century the denomination became dominant across Europe over a course of centuries. However, how it was administered and used, and what it replaced, varied enormously across this period and the differing areas where it came to be used.

At the eve of the penny, a variety of coinages existed within Europe, reflecting both the fragmentary political units of the period and a variety of external influences. Gold was struck across southern Europe; in those areas with Byzantine connections, there were also silver and copper coinages.[7] Across Northern Europe, the coinage was silver, quite thick with a small diameter, typically *c.*11 mm. Francia's coins are typically referred to as *deniers* while those of England, the Low Countries, and Denmark are often described as *sceattas*.[8] The pre-existing patterns of currency were fundamentally altered by the gradual adoption by Carolingian rulers of broad, thin silver coins between 751 and 840.[9] Charlemagne was at the heart of these changes. The monetary system he created, described as a "single European currency", replaced the variety that had existed previously.[10] The reforms he enacted, which were continued by his 9th-century successors, altered almost every aspect of the coinage.

Carolingian changes entrenched the dominance of silver, consolidating it as the only significant metal means of exchange. Gold coinage was largely abandoned, assuming an almost entirely symbolic role.[11] This Northern European

5 A notable exception is a recent volume which brings together a range of case-studies: Gelichi and Hodges (eds.), *From One Sea to Another*.
6 The terms "denier" and "penny" refer to the same form of coin. Penny will be used for simplicity.
7 Grierson and Blackburn, *Medieval European Coinage*, pp. 55–72; Grierson, *The Coins of Medieval Europe*, pp. 30–32.
8 Grierson and Blackburn, *Medieval European Coinage*, pp. 138–89.
9 Ibid., pp. 190–217.
10 Coupland, "Charlemagne's coinage", p. 211.
11 Blackburn, "Gold in England".

pattern gradually extended south, with the gold coinages of kingdoms in the southern parts of the empire largely eliminated in favour of silver.[12] The small-module silver coins of northern Europe were also dispensed with, with the Carolingian rulers instead issuing broad, thin deniers. While some of these changes began under Pepin the Short, they were taken a stage further by his successor, Charlemagne. The weight of the coinage was increased to *c.*1.3 g and the flan size to *c.*20 mm, with a corresponding drop in thickness.[13] The ratio of 240 pennies to the pound begun by his predecessors was entrenched and would become the standard across Europe for hundreds of years.

The increase in coin size may seem a minor technical aspect, but it had revolutionary effects, allowing for larger and more elaborate imagery as well as for more extensive legends. These had huge implications for both the administration and the iconographic potential of coinage. The small silver coins which preceded the Carolingian pennies incorporate a great deal of iconographic variety which has been extensively explored, with powerful results.[14] However, it would appear that one of the motivations behind the striking of the larger pennies was the desire to incorporate more onto each face of the coin. On the Carolingian coins, there were clear moves to incorporate more overt indications of royal authority. This began with Pepin in the 750s when the contracted Latin legends RP (*Rex Pipinus*) and RF (*Rex Francorum*, King of the Franks) were included (Figure 5.1).[15] The consistency of the legends is very noticeable in Charlemagne's reign, with the various Frankish mints rendering it in the form CAROLVS, replacing the numerous forms that had existed previously. Following further reform in 793–794, there was even greater consistency, with a cross and the royal title in the form +CARLVS REX FR on the obverse and the name of the mint surrounding the royal monogram on the reverse.[16] This coinage could circulate across the vast territories of the Carolingian empire.[17]

The trend was not just towards consistency but also exploiting the iconographic possibilities that coinage offered. As discussed below, coinage represented one of the only significant means of mass communication in the early medieval period, a possibility which offered much to bolster the authority of medieval rulers. This is very apparent on the coins struck late within Charlemagne's reign, where he is depicted in Roman imperial garb with the legend

12 Grierson and Blackburn, *Medieval European Coinage*, p. 206.
13 Grierson, *The Coins of Medieval Europe*, p. 34; Coupland, "Charlemagne's coinage", p. 211.
14 Gannon, *The Iconography of Early Anglo-Saxon Coinage*.
15 Grierson, *The Coins of Medieval Europe*, p. 34.
16 Ibid., pp. 34–35.
17 Coupland, "Charlemagne's coinage", p. 211.

FIGURE 5.1 Silver *denier* of Pepin the Short. CM.PG.8988-2006.
SOURCE: ©THE FITZWILLIAM MUSEUM, CAMBRIDGE.

KAROLVS IMP[*erator*] AVG[*ustus*]. A broad range of imagery exploited by later Carolingian rulers added monograms, busts, crosses, and temples to bolster royal authority.[18]

The Carolingian coinage was not produced in a single mint, but at many places across the empire. In a pattern common across Europe, the Latin name of the mint town and/or the name of the moneyer (*monetarius*) was included on the coins themselves. It is important to recognize that the monetaria were likely to be high-status individuals responsible for overseeing the production of coinage rather than those physically striking the coins. While both mints and moneyers had occasionally been named on coins before the advent of the penny, the new coinage made this a much more consistent feature. Nearly one hundred mints have been identified on Carolingian coinage, although many were only small or temporary.[19] The major mints were at Melle and Dorestad, and they serve to emphasize the point that silver was minted at the places where it was needed. Dorestad was a major port, where foreign silver would be expected in quantity and which provided the raw material for the striking of coinage. Similarly, the mint at Melle was close to the largest silver mines in Europe.

Carolingian coinage reforms also demonstrate that alongside quite precise mechanisms for the production of coinage there were also rules in place to prohibit the use of other coinages. This is most clearly articulated in Charles the Bald's Edict of Pîtres, issued in 864, which recorded that only the "new money" (*novae monetae*) was to circulate in his kingdom, replacing the varied currency that had come before.[20] This edict articulated two major policies: the exclusion of "foreign" currency and the renewal of older types of coinage. In the case of the former, it would appear that steps were actively pursued to ensure that currency from beyond the boundaries of a kingdom was not allowed to circulate within it.[21] This is represented in contemporary hoards, where only currency from within the kingdom is present. The second aim of the Edict of Pîtres saw the "renewal" of coinage, often referred to as *renovatio monetae*.[22] This can be conceptualized in a similar manner to the introduction of the Euro: older types were removed from circulation, leaving only the current and

18 Garipzanov, "The image of authority in Carolingian coinage"; Biddle, "XPICTIANA RELIGIO and the tomb of Christ"; Coupland, "The portrait coinage of Charlemagne".

19 Coupland, "Charlemagne's coinage", pp. 214–15.

20 Grierson, "The gratia dei rex coinage of Charles the Bald"; Naismith, *Money and Power in Anglo-Saxon England*, p. 181.

21 See Coupland, "Money and coinage under Louis the Pious".

22 Cf. Grierson, "Numismatics and the historian", p. x.

new type. This process created profits for both the issuing authority and moneyers. That this was successfully achieved during the Carolingian period can be seen in the large hoards from Apremont-Veuillin and Belvézet, both of which contain almost exclusively coins of the type then current.[23] The ability to demonetize older types was seldom achieved across the early medieval period but can be detected at a number of points, particularly where the hoard record indicates that only one type of coinage was circulating.

Charlemagne and his successors created a silver coinage, the penny, which came to dominate Europe. Across most of Europe this was as a fairly direct result of Carolingian control, but in England, beyond Charlemagne's power, the penny also became the dominant currency of the time. Offa, head of the largest kingdom within England, seized upon its symbolic potential.[24] By the middle of the 9th century only the slightly anomalous coinage of the kingdom of Northumbria in northern England continued to be manufactured using the older, smaller module.[25]

While the form of the coinage that would eventually cover much of Europe looked fundamentally similar to that created by Charlemagne, it is important to acknowledge that the way silver pennies were made, administered, and used varied significantly. The administrative control exhibited on Carolingian coins – with consistent types, excluded foreign currency, and well-maintained weight and fineness – was not achieved consistently elsewhere. The symbolic aspects of the coinage, reinforcing a powerful royal authority, are also relatively seldom found elsewhere in this period. Even more unusual was successful *renovatio monetae*, which was only infrequently achieved across much of Europe. While a high-quality silver coinage with a well-maintained weight standard produced for a strong ruler, backed by an efficient administration, and deploying imagery which bolstered royal authority can certainly be claimed for Carolingian Francia and Anglo-Saxon England, it remained an unusual occurrence for most of this period.

Furthermore, there remained areas which did not embrace the use of the large silver penny in any significant way. At the southern edge of the empire, and in areas with Byzantine and Arab influence, other coinages persisted. These were issued in a variety of metals, as can be seen in Southern Italy, where several different coinages were used.[26] Furthermore, a relatively widespread

23 Coupland, "Money and coinage under Louis the Pious", p. 32.
24 Naismith, "Kingship and learning".
25 Metcalf, "Introduction".
26 Rovelli, "Some considerations"; Blackburn "Money and coinage", 539–44; Rovelli, "Coins and trade in early medieval Italy".

monetary economy did not respond well to the fairly high-value silver penny, with silver and copper-alloy coins of lower fineness persisting in several regions.[27] Gold, struck at a number of mints and from a significant number of dies, also continued to play a greater role in Italy than in areas further to the north.[28] The Italian peninsula is an excellent case-study of a region where a number of different monies in different metals were used, reflecting both its complex history and links to other parts of the Mediterranean and north of the Alps. This example serves a reminder that caution must be exercised regarding generalizations.

New Boundaries

One of the clearest trends during this period was coinage produced and used across many new areas of Europe. It was at this time that significant areas beyond the old boundaries of the Roman Empire began to utilize silver coinage as a major means of exchange. Where the preceding centuries had largely seen coinage reintroduced to places where it had existed previously, between the 9th and 11th centuries it expanded beyond these boundaries. Eastern Europe, Ireland, and much of Scandinavia all saw coinage struck and used on a significant scale for the first time. While noting this, it is important to distinguish between the chronology of production and use in these areas, as the two seldom occurred simultaneously. In most areas where coinage was a novel phenomenon, the use of silver led the way, with production following thereafter.

In Scandinavia, where evidence for the expansion is most clear, coinage was known in small quantities in the 8th and 9th centuries, with mints at Ribe and Hedeby.[29] Both produced only small quantities of coinage and it appears that this did not penetrate far beyond the hinterlands of the two towns.[30] The use of silver as a means of exchange became increasingly common during the course of the 9th and 10th centuries.[31] However, this was seldom in the form of whole coins, with silver much more commonly found in the form of bullion,

27 Rovelli, "Some considerations", 208–11.

28 Rovelli, "Some considerations", 218–20; Blackburn, "Money and coinage", 541–43.

29 Wiechmann, "Hedeby and its hinterland"; Malmer, "South Scandinavian coinage in the ninth century".

30 Heijne, "Viking-age coin finds from south Scandinavia"; Hilberg, "Silver economies".

31 A summary of this, including a chronological framework, is provided in Williams, "Silver economies, monetisation and society".

valued according to its weight.[32] The precise mechanics – when, where, and why – of how weighed silver came to be used as a means of exchange are complex, with enormous variation across Scandinavia.[33]

In the early part of the 9th century, small numbers of coins were imported into Scandinavia from both the East and the West.[34] However, these were only a tiny part of the means of exchange. In Norway, only 2 per cent of the total volume of silver found in hoards from before 900 was in coined form.[35] The form that this silver took varied enormously, being composed of a mix of objects, frequently jewellery and ingots. These could be whole or fragmented, as could the coins that they were found alongside. The Spillings hoard, which has been described as the "largest Viking-Age silver hoard", gives a sense of the types of material that can be found mixed together (Figure 5.2).[36] Weighing 67 kg, it contains 486 arm rings, 25 finger rings, and 80 ingots, as well as over 14,000 coins. The coinage is highly fragmentary, suggesting it was valued for its weight, while many of the arm rings have lost their display function, having been squashed together to form consistent units of *c.*200 g weight.[37] The hoard highlights the importance of the bullion or weight value ascribed to silver in the period and also the manner in which it was frequently transformed from one form to another.

The coins in the Spillings hoard were overwhelmingly *dirhams* imported from the Arabic Caliphate. Beginning around 800 a small trickle of silver coins flowed up the Russian and Ukrainian river systems into the eastern parts of the Baltic.[38] The gradual expansion in the use of Arabic silver is usually analysed through a consideration of hoards, with these dated by their *terminus post quem*, the date of production of their latest coin. There are difficulties with this methodology, as it is uncertain how quickly the coins travelled from the mints of the Near East to Scandinavia. This could be a relatively speedy process: the last dirham lost at Torksey in England was struck in the mid-860s and likely deposited in 872–873, a gap of only six or seven years to cover several thousand miles.[39] In other cases, coins could remain in circulation for very long periods

32 There is a very extensive literature considering the use of weighed silver; see Skre, *Means of Exchange*; Graham-Campbell, Sindbæk, and Williams, *Silver Economies*.
33 Hårdh, *Silver in the Viking Age*.
34 Blackburn, "The coin finds", pp. 56–58; Kilger, "Kaupang from afar", pp. 211–21.
35 Gullbekk, *Pengevesenets fremvekst*, p. 32.
36 Ostergren, "The Spillings hoard(s)".
37 Ibid., pp. 327–28.
38 Kilger, "Kaupang from afar", pp. 211–21; and Bogucki, "The beginning of dirham import".
39 Blackburn, "The Viking winter camp at Torksey".

FIGURE 5.2 The Spillings hoard.
SOURCE: ©GÖRAN STRÖM, GOTLAND MUSEUM.

after they were struck, further complicating judgements about the chronology of their circulation.[40]

During the course of the 9th century the volume of silver dirhams, struck for the rulers of the Abbasid Caliphate, in use in Scandinavia increased. These were not found evenly across the whole of the region, but are more common in areas which display some characteristics of towns or central places. Ribe, Uppakra, Birka, and Kaupang all have evidence for coin use in this period, often substantially earlier than their hinterlands.[41] The only major exception to this is on the island of Gotland, where silver hoards from an early date have been found in rural areas. It has been argued that these may represent the money of traders engaged in exchange in the Russian rivers, concealed in a domestic setting.[42] In more general terms, the volume of coin finds from the latter part of the century is far greater than the earlier, suggesting that the flow of silver into Scandinavia increased and also that its use as a means of exchange became more common.

The hoards show a brief break in the supply of silver in the late 9th century, before the flow from the East became a flood in the early part of the 10th century.[43] Coins struck for the Samanid Caliphate (892 onwards) are found in very large numbers across Scandinavia; the number of hoards and the volume

40 Cf. Blackburn, "The coin finds", pp. 38–47.
41 Heijne, "Viking-Age coin finds from south Scandinavia"; Gustin, "Coin stock and coin circulation in Birka"; and Blackburn, "The coin finds".
42 Skre, "Commodity money", pp. 84–85.
43 Gustin, "Coin stock and coin circulation in Birka", pp. 238–39; and Jonsson, "Sweden in the tenth century", pp. 249–54.

of coins that they contain both increased significantly.[44] There was also a corresponding decrease in the importance of other forms of silver.[45] The distribution of the hoards is much more varied than in previous periods, with the use of silver becoming more common in rural areas, beyond the towns which had dominated its use during the course of the 9th century.[46]

The large volume of silver, valued according to weight, circulating in Scandinavia required specialized equipment to ensure that the correct amounts were measured out. Bullion weights were placed on the scale pan of a balance with the corresponding amount of silver measured out thereafter. Some of these weights were of a relatively standardized form and were possibly related to those used in the Near East, the source of the dirhams that made up many of the transactions.[47] Corresponding with a desire to ensure that the correct weight was achieved was a requirement for the right purity of silver. Testing occurred in a number of ways, including edge-nicking and pecking, where a knife is used to lift a small section of the silver surface to check its hardness.[48] This was likely to have been reasonably accurate if undertaken by a skilled person. Testing of this sort appears to have occurred primarily when there were silvers of differing purities circulating alongside one another.

If the period to 950 had seen the majority of silver in Scandinavia take the form of bullion, then the following century saw a gradual transformation of money. The relative importance of bullion decreased greatly such that in 11th-century Norway the majority of silver was in the form of whole coins.[49] Similar patterns can be discerned in other parts of Scandinavia, with Cecilia von Heijne noting neatly that at the very end of the 10th century coins begin to dominate and "Generally speaking, the older a hoard is, the higher the percentage of its contents consisted of non-monetary items".[50]

Towards the end of the 10th century and into the early years of the 11th, the circulating currency of Scandinavia came to be dominated by coins from England and Germany. This is very clear from the hoards, where a majority are imported silver pennies, with the relative proportions of English and German silver varying depending on the hoard's geographic

44 Heijne, "Viking-Age coin finds", pp. 190–91.
45 Ibid., p. 191; and Gullbekk, *Pengevesenets fremvekst*, p. 32.
46 Heijne, "Viking-Age coin finds", p. 199.
47 Kilger, "Hack-silver, weights and coinage", pp. 264–66.
48 Moesgaard, "Grisebjerggård hoard".
49 Coinage made up 9 per cent of Norwegian silver in the period 900–950 and 84 per cent in the period 1050–1100: Gullbekk, *Pengevesenets fremvekst*, p. 32.
50 Heijne, "Viking-Age coin finds", p. 191.

location.[51] How the large number of coins made their way to Scandinavia has been a matter of some debate. [52] The inflow of currency coincides broadly with the historically attested payments of "gelds" in England. These were used as a way of dissuading prospective raiders, with large payments recorded in the years 991, 994, 1002, 1007, 1012, and 1018. There were also regular "Heregeld" payments levied in England to pay for Scandinavian mercenaries until 1051.[53] The extent to which the large numbers of coins found in Scandinavia represent these political geld payments or underlying trade, and the routes by which they reached the region, are still contested.

What can be stated with a greater degree of certainty is that imported English currency provided the iconographic models for the "royal" coinages struck in the 990s in the kingdoms of Denmark, Sweden, and Norway.[54] In each instance, the coinage imitated English designs but included the local king's name: Sven Forkbeard in Denmark, Olof Skötkonung in Sweden, and Olaf Tryggvason in Norway. Their success varied somewhat: royal coinage proved longest-lived and most significant in Denmark, abortive after a strong beginning in Sweden, and slow-starting in Norway.[55] This likely reflects both the varying strength of royal power and the pre-existing patterns of coinage, which were strongest to the south. The "regal" coinages produced across Scandinavia in the 990s followed royal conversion; it has been argued that they were connected to the adoption of models of Roman Christian kingship.[56] These emphasized a strong relationship between church and state, each working together to provide the structures for society. Coinage provided one such structure, legitimizing kingship and emphasizing Latin piety. In the case of the latter, it is notable that all the coins used Christian imagery and Latin legends.

The coinage issued in Scandinavia was not instantly accompanied by attempts to remove old and foreign currency from circulation. In all cases, the newly struck royal coinages circulated alongside older types which had previously dominated. In almost all hoards, locally struck coinage remained in the

51 Moesgaard, "The import of English coins to the northern lands", p. 392.

52 Ibid.; Metcalf, "Inflows of Anglo-Saxon and German coins"; Blackburn and Jonsson, "The Anglo-Saxon and Norman element of north European coin finds".

53 Moesgaard, "The import of English coins to the northern lands", p. 390.

54 Gullbekk, "Coinage and monetary economies", pp. 162–64; and Williams, "Kingship, Christianity, and coinage", pp. 190–96.

55 Skaare, *Coins and Coinage in Viking-Age Norway*; Jensen, *Danish Coins from the 11th Century*; and Gullbekk, "Coinage and monetary economies", p. 162.

56 Williams, "Kingship, Christianity, and coinage" p. 206.

minority for many decades.[57] Attempts at the exclusion of foreign currency and the "renewal" of currency stock by forcing users to utilize the recent, official currency appear to have taken place only some time later. In Norway, this occurred during the reign of Harald Hardråde (1046–1066) and again under his son Olaf III.[58] Similarly, in certain areas Danish coins only became the dominant medium several decades after they were first struck.[59]

The expansion of silver and coinage into new areas of Europe was not a simple or linear process, varying depending upon time and place.[60] However, it is possible to draw some broad trends from the Scandinavian example. First, the use of silver in an economic context was almost always initially in its weighed form. Bullion led the way across Scandinavia and remained dominant for decades or even centuries. Similar patterns can be observed in other areas with little previous history of economic use of silver, such as Ireland and Slavic-speaking areas of the south Baltic.[61] The use of silver as money appears to have been catalyzed by a relatively small number of sites such as Kaupang, Ribe and Birka, which show evidence for its earliest use. The extent to which these places represent "towns" and the importance of long-distance trade in this process is a matter of some debate, but it is clear that they had a very important role in the adoption of silver as money.[62] Following initial use at a relatively small number of sites, the trend expanded outwards into rural areas.

In many areas of Scandinavia, coinage followed in the wake of weighed silver, although this often took quite some time and was certainly not universal. In most cases, the adoption of coinage followed peaceful contact with areas which were more familiar with its use. The production of coinage was the last stage in this process across much of Scandinavia and was somewhat sporadic for some time. Throughout the period, it was unlikely that users would have been handling locally produced money; a well-struck local coinage remained the exception rather than the rule. Rarer still was the exclusion of foreign currency and periodic renewal of the local coinage. However, this did not stop the widespread use of silver, and then coinage, as a means of exchange.

57 See hoard summary in Blackburn and Jonsson, "The Anglo-Saxon and Norman element"; and Gullbekk, "Renovatio monetae".

58 Gullbekk, *Pengevesenets fremvekst*, pp. 60–65; and Gullbekk, *Norges myntvesen*.

59 Heijne, "Viking-age coin finds from south Scandinavia".

60 It is best summarized in Williams, "Silver economies, monetisation and society".

61 Sheehan, "The form and structure of Viking age hoards"; Blackburn, "Currency under the Vikings"; and Bogucki, "The use of money in the Slavic lands".

62 Skre, "Dealing with silver".

Feast and Famine

The relative abundance or lack thereof of coinage throughout much of this period can be connected to the volumes of silver available to be struck.[63] There remained a strong connection between newly discovered or exploited silver mines and significant coinages. The converse was also the case with dwindling coinages – in absolute numbers, weight or fineness – connected to periods of "silver famine", when the precious metal was difficult to acquire. In each case, it is difficult to quantify the relative abundance of silver across Europe, as the many differing coinages struck and the amount of silver in non-numismatic forms complicate matters. However, with these caveats in mind, it is possible to trace some of the trends.

From the outset of the period, significant mints associated with mines can be found, such as the very large coinage struck at Melle in France during the Carolingian and later period.[64] Rising from obscurity in an earlier period, Melle's mints became among the most important in the entire Carolingian empire. Indeed, the name of the town – derived from the Latin *metallum*, meaning mine – speaks of the importance of the silver below the ground. Coins of Charlemagne and Louis the Pious picture the implements to produce coinage surrounded by the name of the town.[65] The silver from Melle's mines influenced the circulating currency, as demonstrated by hoards from across the Carolingian empire which contain very significant numbers of Melle coins.[66] Indeed, the general volume of currency across the various Carolingian mints increased in line with Melle's production and it is likely that the resources for this rise were found in the mines beneath the town.

However, perhaps the most significant exploitation of silver occurred in the late 10th century and early 11th centuries, centred upon the Harz Mountains in the kingdom of Germany.[67] Historical references record the discovery of a silver mine during the 960s but it was only a generation later, during the reign of Otto III in the 990s that production of large numbers of silver coins commenced. The amount of silver mined was large; it represented the largest new source in early medieval Europe. Tenth-century texts suggest that up to 400 kg may have been mined in a single year.[68] With an average coin weight of around

63 Spufford, *Money and Its Use*.
64 Grierson and Blackburn, *Medieval European Coinage*, pp. 235–40; and Coupland, "The use of coin", p. 282.
65 Coupland, "Carolingian single finds", p. 308.
66 Ibid., pp. 308–9.
67 Spufford, *Money and Its Use*, pp. 74–105; and Blanchard, *Mining*, pp. 566–74.
68 Blanchard, *Mining, Metallurgy, and Minting in the Middle Ages*, p. 566.

1.5 g this was equivalent to hundreds of thousands of new coins in circulation every year.

Much of this new silver was transformed into coins which are usually known as "Otto Adelheid *pfennige*", named after Otto III and his regent in the period 991–995, Empress Adelheid (Figure 5.3). Many of their coins were struck at the mint local to the mines, Goslar. The scale of silver mining was such that it spread over the following decades and led to the establishment of a number of mints. In the area to the east of the Rhine, coinage was struck only sporadically and in small numbers until the mid-10th century.[69] The new silver saw the creation of a network of over 80 mints stretching east across Germany to the Elbe, spreading outwards from the mines which were key to this process.[70] This meant that coinage was used in areas where it had previously been scarce, and on a scale that would have been unthinkable a century before.

The very large volumes of currency from the mines of Saxony also found their way across Europe. Coins flowed in large numbers to the east and north, where they have been found in significant numbers in hoards. More than 90,000 German coins have been found across Scandinavia, where the hoard evidence suggests that they dominated the circulating currency in certain areas.[71] In other parts of Europe it is slightly more challenging to trace the flow of silver, as German silver was minted into the local form upon arrival. In England, analysis of the metallic composition of coins suggests that very quickly after exploitation of the mints began, the chemical signatures of England's coinage switched to match that of German mines.[72] The number of English coins in circulation also increased at this time, as evidence by a tripling of the number of single-finds dating from the second half of the 10th century.[73]

Although large-scale coinages could be produced during periods of relative plenty, there were also periods during which silver was scarce, often referred to as silver famine. The output from the German mines was large but short-lived, declining dramatically in the middle of the 11th century. Without new sources of ore, silver became scarcer as a means of exchange. There were differing responses to this challenging set of circumstances. In Saxony, which had seen large outputs of coins from the 990s, the coinage ceased in the 1040s. This was not unusual: a number of German mints reduced their outputs drastically or

69 The best summary of this period in English remains Spufford, *Money and Its Use in Medieval Europe*, pp. 74–82.

70 Ibid., p. 76.

71 Ibid., p. 81.

72 Metcalf and Northover, "Interpreting the alloy of the later Anglo-Saxon coinage", p. 47.

73 Naismith, "The English monetary economy", p. 203.

FIGURE 5.3 Silver "Otto-Adelheid" penny. CM.PG.6100-2006.
SOURCE: ©THE FITZWILLIAM MUSEUM, CAMBRIDGE.

ceased entirely at that point.[74] These effects can be traced across much of Europe. In England, where some quantification is possible, it can be argued that there was approximately half the volume of circulating silver at the end of the

74 Spufford, *Money and Its Use*, pp. 95–96.

11th century than there had been at the beginning.[75] In general, fewer coins were being struck at a smaller number of mints across Europe.

In other areas, there were attempts to make the smaller amounts of silver stretch further through debasement of the coinage. This occurred in two ways: some coins were struck to a much lighter standard, while in others the fineness of the alloy was reduced. In Rouen in northern France, the weight of the coinage declined from *c.*1.20 g to *c.*0.70 g between the 10th and 11th centuries, a pattern matched at many other mints in northern Europe.[76] There was also a tendency for the alloy to be diluted with non-precious metals. In Northern Italy, coins were struck with almost no silver content, a pattern replicated at the other end of Europe in Norway, where in the mid-11th century Harald Hardråde oversaw a reduction of his coinage's fineness by two-thirds.[77]

The dearth of silver into the early years of the 12th century may have contributed to the emergence of "bracteates" (Figure 5.4).[78] These were incredibly thin coins which often had quite elaborate imagery but utilized only small amounts of silver. They can be construed as a pragmatic approach to coinage, continuing production and ensuring the mass dissemination of appropriate political and ecclesiastical imagery in the face of dwindling supplies of silver. They appear to have originated in the monastery of Pegau in Saxony around 1115 but came to be struck across much of eastern Europe during the 12th century.[79] A strikingly similar phenomenon was occurring in Ireland, where the shortage of silver prompted the Dublin mint to first reduce the weight of its coinage, then to strike bracteates and gradually reduce their coins' fineness.[80] While the responses varied, the evidence is strongly suggestive of a "silver famine" in Europe during the late 11th and early 12th centuries.

Between the 8th and 12th centuries the volume of currency was closely connected to the presence or absence of the raw materials used for production. Where new silver sources were found, this had a noticeable effect upon the volumes of coinage, both how much was struck and the numbers circulating. This spread relatively quickly from the source to other areas within and beyond the immediate region. This suggests active routes for the movement of silver and an important role for it in both regional and international exchange.

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75 Allen, "The volume of the English currency, *c.*973–1158".

76 Spufford, *Money and Its Use*, pp. 102–3.

77 Spufford, *Money and Its Use*, p. 103; Skaare, *Coins and Coinage in Viking-Age Norway*, 9–11, 79–85.

78 Good summaries of the bracteate coinage in English are challenging to find, but a recent book has summarized the current state of research: Svensson, *Renovatio monetae*.

79 Ibid., pp. 63–65.

80 Dolley, *Sylloge of Coins of the British Isles*.

FIGURE 5.4 Silver bracteate of Conrad I of Meissen (1130–1156). CM.PG.11405–2006.
SOURCE: ©THE FITZWILLIAM MUSEUM, CAMBRIDGE.

There appear to have been near continent-wide shortages of precious metal that were felt particularly acutely in the late 11th and early 12th century. These provoked a range of reactions, in which it is possible to see some of the significant changes Europe had undergone between the 8th and 12th centuries. In areas of eastern Europe and Scandinavia which had little previous history of coined money, the response to the challenge of decreasing silver availability was not to give up on coinage but to try to eke out the supply as far as possible. It can be argued that coinage had become a part of the means of exchange within Europe, one which was not easily abandoned even when the raw materials required to strike it were becoming increasingly rare.

Coinage and Authority

Coinage represented a medium with enormous political potential; an official object that was mass-produced and could convey symbolic meaning through its combination of text and image. It was exploited by many medieval rulers who recognized these possibilities. That the very act of striking coinage was seen as regal enhanced its potential significance. A number of monarchs used their coinage and its iconographic potential to their advantage. Offa, for example, an English contemporary of Charlemagne, created a spectacular array of coins which included those which intended to represent the king in the form of a new Constantine I the Great.[81]

However, while the right to strike coinage was generally taken as a royal prerogative throughout the period, it was one which was also granted, in certain cases more willingly than others, to significant secular figures or to religious institutions. In the case of the former, the "feudal" coinage which emerged in 10th-century France is a prime example.[82] While the king retained authority for the striking of coinage, the privilege of minting devolved to many counts throughout the kingdom. The nature of this devolved authority took different forms and usually involved the count taking some or all the profits in exchange for producing the coinage. Some counts were granted further jurisdiction to prosecute those who contravened monetary laws. In many cases, these privileges were gradually extended or usurped, leading to the emergence of distinctive local coinages. Initially, many of these were issued anonymously, referring only to their place of origin or continuing to use older designs.[83] Only later, as the counts became more certain of their own power, did they begin to issue coinage in their own names, rather than that of the king.

In the middle years of the 10th century under the dukes William Longsword (*c.*927–945) and his son Richard I (*c.*942–996), Normandy struck its own coinage.[84] This abandoned the name of the king in favour of that of the local ruler. This was an important step, one which other magnates across France followed relatively swiftly. The Fecamp hoard, hidden in Normandy during the 980s, includes coins struck at more than 30 different mints and acknowledging a range of different issuing authorities.[85] The hoard also highlights the fact that coinage of several differing types issued by several different authorities circulated side by side. Other hoards from Normandy also have a mix of differing types, suggesting only a limited ability to ensure that local coinage was used in preference to others.[86] Limitations on the extent of control are also visible on the explicitly royal currency, the production of which was almost entirely focused on Paris and the areas immediately surrounding it by the mid-to-late 10th century.

81 Naismith, *Money and Power in Anglo-Saxon England*, pp. 54–64.
82 A geographic survey of the coinage is provided by Mayhew, *Coinage in France from the Dark Ages to Napoleon*, pp. 19–58.
83 Spufford, *Money and Its Use*, pp. 55–59.
84 Moesgaard, "A survey of coin production and currency in Normandy", pp. 111–14.
85 Spufford, *Money and Its Use*, p. 58.
86 Moesgaard, "A survey of coin production and currency in Normandy", pp. 116–17.

The coinage had become very different from that established under Charlemagne more than a century earlier, with the changing nature reflecting the growth of the counts' power in relation to the king. However, even while it seldom named the reigning monarch, the right to issue it was always seen as a royal prerogative. While counts added their own names to coins, it was only *after* they had been granted the rights to mint them by the king.

Perhaps even more common than secular minting was coinage struck with or by ecclesiastical authorities. High-ranking churchmen – archbishops and bishops – or religious institutions were responsible for much coinage during this period. The nature of their involvement varied in many of the same ways that it did with secular figures. One of the most spectacular examples of the co-operation between ecclesiastical and royal authority can be found on the coinage of 10th-century York.[87] The town was conquered by a Viking army in the 860s, who took control and ruled it until 954. Before their arrival York had been the economic heart of the northern English kingdom of Northumbria, with a very extensive coinage. It was also the seat of an archbishop. The incoming Scandinavians replaced the secular authority in the town, but the archbishop remained, perhaps surprisingly given the fact that the new kings were "pagan".

The kings of this new dynasty struck coinage in York from the 890s onwards and for the following 60 years created a series of coins with rich Christian religious symbolism.[88] The earliest examples laid out the obverse legend, CNVT REX, in a complex manner, requiring the reader's eyes to make the sign of the cross to interpret it (Figure 5.5). A variety of crosses are used on the coinages of York, including some with Byzantine parallels. Coinage struck *c.*905–919 utilizes the name of St. Peter in preference to that of the king. Its iconography is largely unparalleled among contemporary English currency. That it should emerge in York with Scandinavian rulers who originated in areas where both the use of coinage and the Christian faith would have been unusual is remarkable. This fact has contributed to a debate as to whether these coins represent the output of the king or archbishop within the town.[89] It is difficult to be definitive with many of the anonymous coins, but it does seem apparent that the archbishop had an important role in their production even if the coinage was struck under royal authority. This would fit with patterns which had previously existed, where coinages had been struck naming both king and archbishop. In this case, the archbishop clearly had a role in the iconographic choices and quite possibly the administration of the coinage.

87 Blackburn, "The coinage of Scandinavian York".
88 Ibid., pp. 329–35.
89 See discussion in Gooch, "The swordless St Peter coinage of York".

In other cases, the right to strike coinage was granted more completely to religious institutions. This is very clear in Germany, where many institutions struck their own coins in the 10th and 11th centuries. These were overwhelmingly religious in nature, with 166 charters bestowing minting rights, over 90

FIGURE 5.5 Silver penny of King Cnut (*c.*900), York. YORYM:2000.607.
SOURCE: ©YORK MUSEUMS TRUST.

per cent of these granted to either episcopal or monastic institutions.[90] It is of some importance to distinguish between the two, as monastic coinages were much more directly accountable to the king than were the episcopal. In chronological terms, early grants occurred in the 9th century – the first was to Corvey Abbey in 833 – but it was during the 10th century, particularly the reign of Otto III, that significant numbers of grants occurred.[91] In general, most of the 40 Ottonian mints in Saxony which opened during this period were ecclesiastical rather than secular or royal.[92] The expansion of minting to religious institutions also resulted in a move away from acknowledging royal authority on coinage. Mints which had previously struck coinage depicting the king, either with or without a corresponding bishop, focused increasingly upon episcopal iconography, naming saints or archbishops. This is visible on the coinage of Cologne, which struck royal coinage until the death of Henry II in 1024.[93] Following his death, the coinage named both the king and the archbishop of Cologne; the name of the king was abandoned entirely over the coming decades.

Throughout the whole of the period in question the right to strike coinage was a royal prerogative. This was a right which could, and often was, granted to others, allowing a variety of secular and ecclesiastical persons to become involved in the process of producing and administering money. The extent to which authority was relinquished varied hugely, mirroring the diverse range of relationships enjoyed between kings and their subjects. Coinage could be highly centralized, administered by royal authority and with regal imagery. Conversely, authority could be granted almost entirely to another, including the right to strike, to take profits, and to determine iconography. Much of Europe fell between one of these two extremes, but it should be acknowledged that the former, a highly centralized coinage, was the exception rather than the rule in this period.

Monetization

One of the preoccupations of scholars studying this period has been "monetization". A single definition of the term is elusive, but arguments usually focus around the volume of currency in circulation, how frequently it was used, for

90 Steinbach, "From HEINRICVS REX to ROTHARDVS ABBAS", p. 187.
91 Ibid., pp. 186–87.
92 Spufford, *Money and Its Use*, pp. 76–77.
93 Grierson, *The Coins of Medieval Europe*, p. 66.

what purposes, and by whom. This has fed into wider debates about the role of commerce within medieval society, as opposed to more socially motivated exchange.[94] The issue has provoked debate in many contexts, with the period seen at times as one where "natural economy" – emphasizing an agrarian and non-commercial economy – dominated, with a "money economy" peripheral.[95] Trying to determine when Europe became monetized and shifted from a natural to a money economy has proved an unhelpful approach and it seems increasingly accepted that it was a variable phenomenon which occurred differently across Europe. A more nuanced approach, accepting that coinage could be used in different ways by different people and in differing amounts, is increasingly at the forefront of research. Furthermore, the idea that monetization is a "process" by which an ever-expanding number of people used coinage is unhelpful and can actually obscure periods where coin use declined or altered.

With these caveats in mind, it must be stressed that during this period the use of silver for exchange, particularly in coin form, became much more common. The form of this silver, in its coined or uncoined state, varied hugely across the period. It was used in more places, for a greater range of transactions, and by a larger number of people in 1150 than it had been around 750. However, it is highly unlikely that silver, in any form, ever represented the means of exchange in a majority of transactions. Whilst it was clearly of some importance, it is imperative to remember that it also represents the most archaeologically visible means of exchange.

One of the important aspects of research on monetization has been a focus on the volumes of currency struck. In simple terms, the greater the number of coins in circulation, the more common a means of exchange they represent. In England, there have been attempts to quantify the volumes of coinage for many decades.[96] These estimates are usually based upon a statistical estimate of the number of dies used to strike any given coin type, multiplied (usually by the slightly arbitrary figure of 10,000) to give an approximate number of coins originally struck. There are wide margins of error within this process, but the figures give an indication of the scale of coinage struck and are most effective when applied consistently over a given period to model changing scales of minting through time. Estimates in England have suggested that thousands

94 Cf. Dagfinn Skre's contributions in Skre, *Means of Exchange*.

95 The classic debate, surrounding the Carolingian coinage, is summarized in Coupland, "The use of coin in the Carolingian empire", pp. 259–62; See also Gullbekk, "Monetisation in medieval Scandinavia".

96 See discussion in Allen, "The volume of the English currency, *c.*973–1158".

of dies were used to produce tens of millions of coins during the late 10th and early 11th centuries.[97] These figures are significant and suggest that coinage was more common than we might envisage from the relatively small volume of modern finds. However, they pale in comparison to later periods, particularly from the 13th century when coinage was struck on a scale inconceivable two centuries earlier.[98]

If the volume of currency represents one aspect of discussion around monetization then the other evidence is connected to the intensity of use, or velocity of circulation. Estimates of this usually rely upon the evidence of "single-finds", coins found individually during archaeological excavation or by chance. It is assumed that the single coins are most likely to have been lost during exchange, with more finds suggestive of a greater number of exchanges using coinage. In England, understanding of the use of coinage has been transformed in the past 40 years as metal-detectorists have found thousands of coins, transforming the amount of evidence available and interpretations of money.[99] This has allowed a much more nuanced picture to emerge, highlighting chronological and geographical patterns. In the case of the former, the 8th century emerges as a peak for the use of currency, followed by a severe decline during the 9th. An increase towards the end of the 10th century is very clear, the many coins of the second half of the century presenting a clear contrast to what had gone before.[100]

To move beyond the general trends that can be discerned from the single-finds into the more specific issues of who used money and how requires the integration of historical evidence. At a simple level, this can give a sense of its relative buying power. For example, Carolingian references discuss the buying power of the 8th-century penny: one would have purchased 12 loaves of bread and four a sheep or pig, while in the early 9th century 360 silver coins would have been enough to purchase land.[101] However, to move into a more nuanced impression is challenging, as the view of coin use given by the historical and archaeological evidence is at best complementary, and occasionally seemingly contradictory. It requires careful interpretation to understand how and why different impressions of the use of money and coinage emerge. Rory Naismith's work on the charter evidence from England has skilfully brought together charters to allow comparison with the single-find data.[102] These offer

97 Ibid., pp. 493–94.
98 Allen, "The volume of the English currency, 1158–1470".
99 Naismith, "The English monetary economy".
100 Ibid., pp. 202–4; cf. Allen, "The volume of the English currency, *c.*973–1158".
101 Coupland, "Charlemagne's coinage", pp. 212–13.
102 Naismith, *Money and Power in Anglo-Saxon England*, pp. 267–73.

a level of detail – who, when, where, why, and how much – that is invaluable, although with the caveat that most concern transfers of land, an exceptional rather than typical type of transaction. The picture that emerges is one where boundaries between "gift" or socially-motivated exchange and commercial exchange are very blurry. Furthermore, precious metal features heavily as a means of exchange although silver coins specifically are relatively rarely mentioned. This leads to the conclusion that their use was not particularly appropriate for land purchase and implies a more mundane use below the elite level which the historical evidence typically describes.

Trying to reconcile these varying approaches, it does seem that there were substantial falls in the amounts of money in use in England, particularly in the late 8th century and, to a lesser extent, in the later 11th. There were also significant rises in the scale of coin use, particularly in the late 10th century. The changing number of finds from these periods is closely matched by the volumes of production, suggesting that as the number of coins increased, so did the level of use. The historical evidence would suggest that these coins were not just used for elite transactions; indeed, the charters would suggest that they were not appropriate for the purchase of land. They are likely to represent currency used by people slightly further down the social scale who utilized them in transactions which did not primarily revolve around gift exchange. Even in the periods when there were relatively few coins circulating, it appears that coinage was not completely restricted, but was used by a range of people within the English economy. However, even at times when coin use was at its highest, perhaps in the years following 1000, it is unlikely that it ever fulfilled a very widespread role. Coin finds from either the late Roman or the High Medieval period completely dwarf those from this period, suggesting that any case in favour of extensive monetization must remain cautious.

Summary

Attempting to summarize the period in question is a challenge, given the varied political situations across the expanse of Europe and the quite different ways in which coinage was used at the beginning. Nonetheless, it is possible to draw a few broad trends. The first is that the period saw the emergence of the silver penny – thin, broad, and with the possibility of complex iconography – across Europe. During the height of the Carolingian empire, more of Europe was using a single type of coinage than had done so at any point since the fall of the western Roman empire. Even beyond the limits of the Carolingian empire the silver penny was adopted, becoming the norm across Europe even in areas with little previous history of coin use. Silver pennies drove out other forms of money, creating a more homogenous means of exchange across the continent. This homogeneity would probably have been at its peak shortly after the year 1000 when the fundamental medium would have been quite familiar across almost all of Europe even if the specific imagery used on the coins varied enormously.

The second trend is that a growing number of people and institutions became involved in the expanding volume of silver production. Throughout all of the early medieval period, the right to strike coinage remained a royal prerogative. However, many kings across Europe granted these rights to other people and institutions, both ecclesiastical and secular. Some merely administered the coinage on behalf of the king while others struck coins in their own names. This phenomenon became more common during this period, with the production of coinage expanding from a handful of kings in the 8th century to literally hundreds of others over the course of the following three centuries.

The various issuing authorities contributed to the responses to the dwindling supplies of silver that Europe experienced around 1100. A clear "silver famine" resulted in reductions in coin weight, fineness, and absolute numbers. This highlights the fact that the supplies of money in Europe at the time were reliant upon the availability of raw material: supplies of bullion were the key to determining the availability of precious metal monies, and the peaks and troughs of bullion supply were matched by production.

Last, more people in Europe were utilizing coinage in the year 1150 than had been in 750. While this statement conceals huge amounts of chronological and geographical variation, it holds broadly. Many new areas of Europe beyond the boundaries of the old Roman empire were using coinage, often for the first time. Levels of coin production recovered from a nadir in the 9th century, suggesting steady increases thereafter. These are matched by growing numbers of finds: that is, more coinage was being used by more people for an ever greater range of transactions. While it is unlikely this was ever anything like a majority of people or most transactions, in certain contexts (particularly towns and ports), coinage would not have been exceptional or unusual. Perhaps most tellingly, the approach to the dwindling silver supplies of the 12th century was not simply to give up on coinage and revert to other media of exchange, but to stretch the silver as far as possible, striking light and debased coins or bracteates. This implies that a coin-using mentality was well entrenched across much of Europe; a point which is much more difficult to make for the 8th century.

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CHAPTER 6

From the Commercial Revolution to the Black Death (*c.*1150–1350)

Richard Kelleher

In 1986–1988 excavations at a medieval Black Death cemetery at East Smithfield in London (on the old site of the Royal Mint) yielded an important group of burials, some of which were accompanied by coins. One of these was of particular significance, as it provided a rare glimpse into the composition of the stock of "everyday" money available to Londoners in the 1340s. Excavators discovered the burial of a woman aged 25–36, who had been interred with two distinctly different groups of silver coins.[1] Of the 181 coins recovered, most of the pennies were found to the side of the chest, probably in a pouch slung around the neck or under the shoulder. The second cache – which consisted entirely of fractional denominations – was found within the pelvis cavity. The lesser denominations were available at the waist for ease of access, and the pennies kept closer to the body, hidden under the armpit.[2] This tale from London was no doubt replicated countless times across the rest of Europe. That this evidence survives at all is a consequence of the horrific reality of death and hasty burial that overwhelmed town and country alike as the Black Death gripped Europe in the mid-14th century. The pandemic, which wiped out between one-third and one-half of the population, fundamentally altered the social, economic, and political landscapes over which it so mercilessly swept, arresting the economic progress of the previous two centuries. This chapter explores the major monetary changes that occurred between the Commercial Revolution of the long 13th century and the Black Death of the late 1340s and early 1350s.

1 Grainger, *The Black Death Cemetery, East Smithfield, London*, p. 15. A second female inhumation in the same grave row was found with eight coins. Gilchrist and Sloane, *Medieval Monastic Cemetery*, pp. 100–1.

2 Kelleher, Leins, and Cook, "Roman, medieval and later coins from the Vintry, City of London", pp. 235–36. Gilchrist and Sloane suggest the likely reason that coins (and other objects) were not removed from a body during its preparation for burial was advanced putrefaction, *Requiem,* p. 102.

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The coinage of the period discussed here is better served in the literature than that of the previous chapter, but the evidence can be patchy and in some areas of Europe published finds and syntheses remain scarce. A good introduction to the coins of medieval Europe was published by Philip Grierson,[3] and several volumes of the *Medieval European Coinage* series, inaugurated by Grierson to provide an English language survey of the currencies of Europe *c*.600–1500, are currently available, with many more in preparation.[4] Of fundamental importance to the student of medieval coinage is Peter Spufford's *Money and Its Use in Medieval Europe*, which offers a magisterial analysis of the use of money in Europe across the full course of the Middle Ages, accompanied by his useful *Handbook of Medieval Exchange*.[5] This volume introduces the reader to the complex world of medieval exchange rates, tracking the relative values of the principal European currencies against the florin over time. It provides a starting point for further research.

The volume of material evidence, in the form of hoards and single-finds, increases dramatically across this period. This is largely due to the increased levels of production at mints all over Europe – through the exploitation of new sources of bullion – and a concomitant increase in levels of monetization within society. Beginning in the 12th century and accelerating through the 13th and 14th, the quantity of surviving records relating to monetary affairs increases significantly. These take a wide variety of forms: the most useful are records of mint production, taxation documents, coin lists, exchange rates, and commercial records, but tangential sources such as monetary policy advice documents, correspondence, conversion manuals, and chronicles can also provide useful information.[6] These sources have framed how we understand the dynamics of coin production and use and the development of non-coin transaction mechanisms

3 Grierson, *Coins of Medieval Europe*; relevant here are ch. 8, 9, and 10.

4 Two of the three proposed *Medieval European Coinage* Italian volumes have been published. These cover northern and southern Italy, respectively: see Day, Matzke, and Saccocci, *Italy* (*I*); and Grierson and Travaini, *Italy* (*III*). For Spain and Portugal, see Crusafont, Balaguer, and Grierson, *Iberian Peninsula*.

5 Spufford, *Money and Its Use in Medieval Europe*, ch. 5–11 are of particular relevance for the long 13th century. See also Spufford, Wilkinson, and Tolley, *Handbook of Medieval Exchange*.

6 Grierson, "Numismatics", p. 123. The classic sourcebook for trade-related monetary documents is Lopez, Raymond, and Constable, *Medieval Trade in the Mediterranean World*. The contemporary coin list of Pegolotti, *Mercatura,* edited by Evans, and the mercantile manuscript of *Zibaldone da Canal*, edited by Stussi, Lane, Marston, and Ore, are also useful resources.

in Europe. Historically, documentary sources have been more widely used in informing the debate than the evidence from hoards or archaeological finds, which have great potential for exploring patterns of consumption. In recent decades the picture has begun to shift, thanks to the impact of metal-detecting on the finds record. However, because of the widely differing laws relating to cultural property ownership and metal-detecting in European countries, there is a huge imbalance in the quality and abundance of comparable data.[7]

Money in Europe on the Eve of the Commercial Revolution

> Money, as represented in documents and physically preserved in coin collections, is the most available and possibly the most sensitive instrument to feel the economic pulse of the Commercial Revolution.[8]

This quotation from the historian Roberto Sabatino Lopez identifies money and coinage as a central source for understanding the development of the commercial economy in medieval Europe. It was the two centuries from 1150 to 1350 that witnessed the most vigorous monetary developments in the entire medieval period. It has been argued that the origins of the Commercial Revolution in the Mediterranean lay in the 10th century, as a period of economic expansion connected Western Europe with the Byzantine and Muslim world. Italians led the way in gradually relocating the centre of economic gravity away from the eastern Mediterranean to the powerful city-states of northern Italy.[9] The wealth and economic sophistication of the Muslim states, particularly Egypt, was on a scale unmatched in Europe and, in this sense, it is surprising that Italian competition was tolerated, let alone allowed to flourish.[10] Peter Spufford characterizes the Commercial Revolution as one in which fundamental changes took place in the methods

7 For a wide-ranging survey of literature on the subject of metal-detecting, archaeology, and the law, see the bibliography in Thomas, "The future of studying hobbyist metal detecting in Europe", pp. 148–49.

8 Lopez, *The Commercial Revolution of the Middle Ages*, p. 70.

9 Lopez et al., *Mediterranean Trade*, p. 50.

10 Smith, "Calamity and transition" outlines a process in which Muslim traders incorporated the Italian maritime cities into existing networks of trade and "by the mid-12th century the Italians had established their own quarters in Muslim cities, overpowered their shipping, and negotiated advantageous treaties with their rulers", pp. 55–56.

of doing business. Rather than simply a response to growing international trade, a "critical volume" was reached when a three-way division of labour was required by the sedentary merchants based in Italy, the specialist carriers, and the full-time overseas agents.[11] This condition encouraged the growth of coin use and an evolution in the types and denominations that would be produced. In England, as elsewhere in Europe, the long 13th century witnessed large-scale economic, demographic, and social change. The population was growing, which in turn led to the expansion of towns and fed the urban demand for local agricultural produce and imported luxury goods. At the same time the network of markets and fairs was expanding, as were general levels of taxation, the commutation to money of rents and wages in kind, and the availability of credit. Additionally the mechanisms of recording commercial transactions were spreading, and thus the documentary sources become more readily available beginning in the 13th century.[12]

In the mid-12th century the Carolingian empire's monetary system could still be recognized in many coinages across Europe, both within the former empire and indirectly among her neighbours. In the lands formerly ruled by Charlemagne the denier or penny was the principal denomination, although halfpence (or obols) were also struck. Without the empire, the penny was virtually the sole denomination. Despite sharing a common numismatic ancestor, the coinages in the former imperial lands evolved in distinctive ways, based upon region or locality. In Germany and France in particular, the right to coin had been granted to or usurped by an array of secular and ecclesiastical authorities, from princes to priors, bishops to barons, and monasteries to magnates. In Germany, the coinage tradition diverged into two characteristic forms. The most widespread was the traditional penny, with a favourite form being a facing figure on the obverse, usually a bishop or king, and an elaborate building on the reverse. Elsewhere the form evolved in a quite different way (Figure 6.1). Thin, often uniface pennies, known from the 14th century as bracteates, were struck in Lower Saxony, Brandenburg, Meissen, Upper Lausitz, Thuringia, Hesse, Augsburg, Donauwörth, Ulm, Constance, Basel, Baden, Württemberg, and Alsace.[13]

11 Spufford, *Money,* pp. 251–33; and Spufford, *Power and Profit,* pp. 19–25.

12 Allen, "The English currency and the commercialization of England before the Black Death", p. 31.

13 Svensson, *Renovatio Monetae*, p. 11; and Grierson, *Coins in Medieval Europe*, pp. 163–64.

These coins, struck from a single die and materially fragile given their purpose as money, were large enough to allow for a more expressive and varied visual language. A factor in the multiplicity of iconographic expression was practical, as the fragility of the coins made it necessary to frequently replace the current specie with newly struck types in a common system known as *renovatio monetae*, which financially enriched the issuing authority at regular intervals.

The idea of frequent changes of type was de rigueur in many states across Europe, but it was by no means the only model employed. In some cases, communities would pay a tax known as a *monetagium* in order to avoid change to the coinage.[14] The coinage tradition in France was split between those of the Capetian kings and the great feudatories, with a plethora of smaller local issuers. The royal coinage increased in volume from the reign of Philip I (1060–1108), thanks largely to episodes of debasement which reduced the fineness of the royal coinage to 58 per cent,[15] but also to an increased mint network within the royal domain. Under Philip's successors Louis VI (1108–1137) and Louis VII (1137–1181), debasement continued, forcing the fineness below 50 per cent. The so-called feudal coinage of France is complex.[16] The fragmentation of royal authority over the right to coin began in the 9th century and progressed slowly in a three-stage process. The first saw the crown grant away the profits of a mint (fully or in part); next came the right of prosecution of forgers and others who infringed upon monetary regulations. The last stage, which was never formally conceded but invariably implemented, was the right to alter types, weights, and fineness.[17] The result, by the mid-11th century, was a miscellany of stylistically varied regional issues lacking any semblance of fixed standards of weight or fineness. The composition of many hoards reflects the ubiquity of issuing authorities and mixing of types. A large find of silver coins, dated to 1152–1160, was discovered in Massay in the Cher department of central France in 1873. Of the 4,103 coins, more than half came from the large local mints at Vierzon and Issoudun; others came from mints of the royal domain and the Île-de-France to the north, Anjou and Brittany in the east, Limoges and Angouleme to the southwest, and even Melgueil on the Mediterranean coast.[18]

14 Bisson, *Conservation of Coinage,* pp. 14–28 for its origins in Normandy.

15 Mayhew, *Coinage in France from the Dark Ages to Napoleon*, pp. 63–64. Mayhew links this phenomenon to the general baronial search for cash to fund their Crusades.

16 Ibid., pp. 19–58 provides a comprehensive survey of the feudal issues.

17 Ibid., p. 21.

18 Duplessy, *Les Trésors Monétaires Médiévaux et Modernes Découverts en France*, pp. 83–84.

FIGURE 6.1 a) Archbishops of Cologne, silver pfennig of Adolf I (1193–1205), diameter 19mm; b) archbishops of Mainz, Henry I of Haarburg (1142–53), silver bracteate struck at Erfurt, diameter 33mm.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE.

Numismatists find it frustrating that many of the series defy proper dating. This is the result in part of the striking of the same static type over decades, or even centuries. The excesses of such immobilized types can be seen in the Poitevin coinage, which continued with coins of Melle in the name of Charles the Bald (843–877) until the 12th century, or those of Angouleme, immobilized in the name of "Louis" from the 10th to the 13th centuries. The repetition of names within particular houses, such as the Fulks and Geoffreys in Anjou or the Williams of Aquitaine, adds an extra layer of ambiguity to the process of dating some of the feudal issues. This process shows that there was a tangible disinclination to alter a familiar and successful coinage. While some coins

FIGURE 6.2 12th-Century anonymous silver denier of Blois diameter 20mm.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE.

persisted in unaltered form, others became increasingly stylized, none more so than the Blois-Chartres deniers which dominated central France. By the 12th century the profile head of the original coin is barely recognizable, having assumed a Picasso-esque level of abstraction (Figure 6.2).

A serious problem for the utility of the French coinage was the wide variability in fineness seen in products of different mints. A general shortage of silver in the early and mid-12th century encouraged competition between mints to attract bullion and make what silver they had go further. Debasements (through the addition of copper) and weight reduction became common practice. Regionally dominant types had emerged by the 12th century, and because of the variability in fineness between them a hierarchy of deniers emerged. In the north, two deniers *angevin* or *tournois* were the equivalent of one denier *mansois*, two of which were equivalent to the English sterling penny. In the south, two deniers *melgorien* and *raymondin* (which were equivalent to the *tournois* in the north) were the equivalent of one denier of Toulouse or Carcassonne.[19] By the end of the 12th century, however, the worst of the debasements were over.

In the mid-1100s England was emerging from a prolonged and damaging period of civil war. The 1153 Treaty of Winchester brought a peace settlement and King Stephen was allowed to die on the throne provided that Empress Matilda's son, Henry of Anjou, succeeded him as King Henry II. The civil war had left a deep scar on the English coinage. During the conflict

19 Mayhew, *Coinage in France*, p. 25.

Stephen had lost control of mints in northern and western parts of England and, for the only time in English history, coins were struck by nobles and bishops without the consent of the king. Many are irregular copies of the royal type, but others name Stephen's rival Matilda and her supporters, such as Patrick, earl of Salisbury, or adopt quite remarkable design elements, as in a group of types from York. The hoard record suggests that the last penny type in Stephen's name was effective in displacing the various baronial and irregular types that had been circulating in England.[20] In 1154 Stephen died and Henry II succeeded him. The first of Henry's two major coinage reforms took place four years later. This Cross and Crosslets coinage departed significantly from the frequent changes of type seen in England in the preceding two centuries: a single design was minted between 1158 and 1180, between 1180 and 1247, and between 1247 and 1279 as part of a system which owes more to traditions of Anjou and Aquitaine than England. Surviving Cross and Crosslet pennies are often ill-struck and irregularly shaped despite the dies being fairly well engraved.

The emergence of a royal coinage for the Scottish kings was intimately linked to events in England. In 1136 David I of Scotland (1124–1153), uncle of Matilda, invaded Cumbria and took the mint at Carlisle, inaugurating the minting of the first Scottish coins. New, long-lived mints would be opened throughout the 12th century. Scottish pennies from before the 13th century are generally scarce and often borrow design elements from English contemporaries. The monetary reforms seen in England in 1180, 1247, and 1279 were incorporated into the Scottish coinage in due course.

As an extension of the coinage of Angevin England, the money coined for Ireland was heavily influenced by that produced at the English mints. Minting in the name of Prince John as lord of Ireland commenced towards the end of the century, first with rare pennies bearing a profile portrait, and later a facing bust type.[21] However, it was only with two currency reforms of the 13th century (by Henry III in 1251 and Edward I in 1279) that the Irish coins adopted the same reverse types as the English.

In the 12th century the coinage of the Low Countries was released from the shackles of imperial and, to some extent, French coinage traditions. The most

20 Blackburn, "Coinage and currency", pp. 198–99.

21 Colgan, *For Want of Good Money*, pp. 11–18. These coins were issued in 1185 and were followed in *c.*1190–1199 by a somewhat more common second coinage. The fact that both issues were halfpennies has led to the suggestion that this was a deliberate policy to reflect the subordinate position of Ireland within the Angevin empire; however, it is more probable that coins of a lower value than the penny would be more useful and readily adopted in an economy that had seen no locally produced coin for a generation or more.

popular coins issued here were pennies struck in good silver but on a small module (*c*.0.5 g) that employed a wide range of iconography which varied from issuer to issuer. Some adopted a martial image, such as a mounted knight at Louvain and Brussels, a standing warrior at Bruges, a helmeted bust at Ghent, and a figure brandishing a sword at Alost. Buildings were popular at Hainault and Guelders, as was the eponymous castle at Cassel. Utrecht and Liege adopted the figures of their bishops, reflecting the authority under which coins were issued, while Holland used a lion.

In northern and central Italy, the penny or *denaro* was dominant. Beyond the borders of the empire in the south, by contrast, a mixed system endured. It was in northern and central Italy that many monetary innovations were first tested and adopted.[22] The legacy of the empire is visible in the dominance of the former imperial mints of Pavia, Verona, Lucca, and Milan and the continuation of the Ottonian types of the previous century. However, from the 10th to the mid-12th century, the coinage was subject to heavy debasement, with silver content reduced by up to 80 per cent. There were no regular recoinages.

The complexity in the coinage of the southern peninsula and Sicily lies in its historic position at the crossroads of the Mediterranean, where Norman, Byzantine, and Arab influences met and interacted. Unlike the monometallism of the rest of Europe the coinage system comprised gold and copper coins, with only small amounts of silver produced by either the Normans or Angevins. The gold is more fully considered below, but consisted of *tarenì* weighing about one gram. Although originally produced at the Sicilian mints of Palermo and Messina after Arab models, both the mainland mints of Amalfi and Salerno soon began minting *tarenì* under the Normans.[23] The copper coinage is varied and puzzling. Those dating from after the 1140 reform of Roger II move away from Byzantine influence and carry Kufic script. A silver *ducalis*, copying the Byzantine *tracheae* of Alexius I from Thessalonica, was introduced as part of this reform.

In the mid-12th century Portugal and the Spanish kingdoms of León, Aragon, Castile, and Navarre were engaged in the Reconquista. As such, their monetary policies were influenced, to a greater or lesser degree, by the monetary realities of those areas that they conquered from the Almohads, Taifa kings, or Almoravids. The currency then began to coalesce into a fusion of silver and billon (an alloy of less than 50 per cent silver and copper) traditions from Europe and Andalusi gold.[24] The billon coinage of the Spanish kingdoms was very similar

22 Day, Matzke, and Saccocci, *Italy (I)*, p. 8.
23 Grierson, *Coins of Medieval Europe,* p. 95.
24 Crusafont, Balaguer, and Grierson, *Iberian Peninsula*, p. 7.

to that of feudal France, although the obols (equivalent to half a denier) were rather more important in the Christian states south of the Pyrenees than in the north.[25] The Portuguese coinage comprised billon *dinheiros* and their halves.

Despite all these developments, money, and specifically coined money, was not yet a familiar facet of the traditions of exchange in many parts of Europe, particularly on the western, northern and eastern peripheries and in rural areas generally. These areas, in which coin tended to be issued under royal monopoly, can be briefly summarized here. In Scandinavia, the only coinage of note was that of Denmark. For the most part this comprised broad pennies of poor alloy with a definite German influence, although it was punctuated by a phase of bracteates from the civil war period (1146–1157). In Norway, small, light bracteates or half-bracteates were made, while in Sweden coinage was only revived in the second half of the century with regional variations in the types minted. None of these coins played a major role in the economy.[26] In Poland, the currency was made up of small pennies and bracteates, while in Bohemia, there was a continuation of the small silver pennies of the previous century, albeit with a variety of new religious pictorial designs. Hungary struck biface silver pennies and obols; to the south and east lay the former Balkan provinces of the Byzantine Empire, where any coinage minted was in imitation of imperial types.[27]

In the 1150s the Crusader States comprised the principality of Antioch in the north and the kingdom of Jerusalem in the south, with the county of Tripoli sandwiched between the two. The coinages of the three states drew inspiration from a combination of the local currencies they encountered and the customary coinage of their founders' homelands.[28] At the top of the scale were the Fāṭimid gold dinars minted by the caliphs in Egypt and Syria, which were in plentiful supply. The Crusader copies include imitations of two prototypes, those of al-Mustansir (1036–1094) and al-Āmir (1101–1130), but are typically lighter and of lower fineness and display blundered Arabic legends.[29] By the mid-12th century the Antiochene coinage had moved

25 Grierson, *Coins of Medieval Europe,* p. 104.

26 Ibid., p. 98.

27 Ibid., pp. 99–100.

28 The post-reform Byzantine coinage of Alexius I that the crusading armies encountered was a far more sophisticated system than those of their homelands, with the possible exception of that of the Normans from southern Italy under Bohemond: Porteous, "Crusader coinage with Greek or Latin inscriptions", pp. 360–62.

29 Metcalf, *Coinage of the Crusades and the Latin East in the Ashmolean Museum,* pp. 43–51. Metcalf attributes the al-Āmir imitations to the kingdom of Jerusalem and those of al-Mustansir to Tripoli.

away from the Byzantine-inspired copper folles of the early century and fully embraced the European-style billon denier. While the denier was a familiar coin type at home, the iconography of the "helmet"-type coinage of Bohemond III (1162–1201) was entirely new, featuring a helmeted bust reminiscent of the mounted Crusader knights seen on murals in the Templar church at Cressac (Charente) and the miniature plan of Jerusalem on a manuscript in the Hague.[30] Around the same time as at Antioch (1140s), the kingdom of Jerusalem issued a regular coinage of deniers with schematic representations of the Holy Sepulchre and the Tower of David. Baronial issues from Jaffa, Beirut, Sidon, and Tyre would be struck in small numbers later in the century. The county of Tripoli, which was less rich than its neighbours, issued a plethora of named and anonymous issues. The Provençal influence of Raymond of Toulouse can be seen in the style of the crescent moon and stars of the Tripolitan coins. The county's interest in coining is of little surprise, as Raymond exercised the right of coinage as count of Melgueil, and two of his retinue, Gaston of Béarn (at Morlaas), and Gerard of Roussillon, possessed mints back in France.[31]

In the mid-12th century monetary transactions in most parts of Europe were conducted in silver pennies. The scourge of debasement and reduction in the physical size of coins – whether from a lack of silver on the market or for purely financial gain – was driven by an increasing demand for money on a continent short of silver bullion. The responses were not universal. Probably the starkest contrast is visible in the English maintenance of fine silver compared to the reduction in fineness in Italy, France, and the southern Netherlands. Both had their advantages, with large silver more useful for certain payments and small low-value coins preferable for daily business. Only in those areas in direct contact with Islamic and Byzantine influences were multi-metal, multi-denominational systems present. It would take the fundamental growth of the bullion supply and new ways of thinking about monetary systems to elicit the changes that would transform money in Europe in the following 200 years.

Mines, Mints, and the Money Supply

The period beginning in the 1160s witnessed a series of precious metal discoveries that fundamentally transformed patterns of minting and the quantity

30 Porteous, "Crusader coinage", p. 372. The Hague Map is in the Koninklijke Bibliotheek, 76 F 5.
31 Porteous, "Crusader coinage", pp. 360–62.

of money in Europe. Chief among these was the town that would become Freiberg near Meissen in Saxony. Estimates suggest that hundreds of millions of pfennigs were added to the currency over a 20-year period.[32] Typically such mines would grow rapidly, peak early, and then level off, but remain viable for up to a century. Other new silver mines were emerging at about the same time as Freiberg's, and these would invariably transform the local areas and the fortunes of those who held the rights to mine. A village sitting above a rich seam might be elevated to a town or even a commune. Montieri in Tuscany is one such case. Mined for the bishops of Volterra, it was a significant source of silver and remained profitable to the 1250s; other, less rich sites were exploited at Cellerfeld and Oberharz in the Harz Mountains (*c.*1200); south Tirol (*c.*1185); Massa in Tuscany; Ems on the Lahn river; and Mechernich in the Eifel.[33] However, the only mine that could compete with Freiberg was at Friesach in the eastern Alps, under the archbishops of Salzburg and dukes of Carinthia. Here, an intensive period of *friesacher Pfennige* production lasted until 1230. These coins have been found in huge numbers in Hungary, from the Alps to the Carpathians, and formed a large proportion of the silver imported into Venice.[34] As these sources petered out, new ones emerged in the 1220s and 1230s. The most important were at Jihlava on the Bohemian-Moravian border, which, under the king of Bohemia, was producing four tons of silver a year, and Iglesias in Sardinia under Pisan authority, which was productive until the 1330s.[35] Smaller enterprises were known elsewhere: at Brskovo in Serbia; Schemnitz, Göllnitz, and Rodna in the kingdom of Hungary; Ziering in Styria; Longobucco in Calabria; Lüderich on the Rhine; and even an unlikely and comparatively unproductive endeavour at Beer Alston in Devon.[36] By far the most impressive new find of the period came in 1298 at Kutná Hora in Bohemia, where peak output rose to 20 tons a year.[37]

The opening up of new silver mines generated a massive surge in output of the local coinage, but much silver would be sold uncoined to other mints or used in ingot form for large payments.[38] Old mints could be reopened or new

32 Spufford, *Money,* pp. 109–13.
33 Ibid., pp. 114–18.
34 Ibid., pp. 136–38.
35 Ibid., pp.120–21.
36 Ibid., pp.127–28; Allen, "Silver production and the money supply in England and Wales", pp. 120–21.
37 Spufford, *Money,* p.125.
38 Ibid., p. 131. Spufford's assertion that ingots were in widespread use has been questioned. For recent work on the use of ingots in Western Europe, see Phillips, "The monetary use of uncoined silver in western Europe in the twelfth and thirteenth centuries"; and for the

ones created to facilitate the conversion of bullion to coin, often under Tuscan or Lombard management. Over the course of the long 13th century large-scale factory mints comprising several workshops were established in some places. The 17 mints of Bohemia were brought together at one site at Kutná Hora, and London and Canterbury increasingly monopolized the production of English coins. But this was not the case everywhere. Between 1140 and 1270 more than 400 new mints were opened in Germany, and north of Rome the number of Italian mints jumped from four in 1130 to 37 in 1250.[39]

As well as flowing into Italy, Central European silver moved west into the Rhineland (Cologne was an important bullion market), the Low Countries (the cities that dominated the woollen and cloth industries), and eastern France (particularly the Champagne Fairs of Troyes, Provins, Bar-sur-Aube, and Lagny).[40] The silver that came into these key nodal points then spread into other parts of France, England, and Italy and the Hanseatic towns of the Baltic. Certain coin types in these regions began to dominate: those of Cologne in the Rhineland, *Melgorienses* in the coastal plain of the Languedoc and northwest Spain, the *Provinois* in Champagne, and the *Parisis* in northern France.

For kingdoms such as France and England, which lacked rich silver mines, bullion had to be earned through trade. In this period several national coin types acquired an international reputation for quality. Perhaps surprisingly, given its position on the periphery of Europe, one of these was the English sterling penny. It was in the context of Continental money flows that the English sterling made its unlikely mark on the European monetary landscape.[41] Unlike many of its Continental contemporaries, the English coinage was under strong, centralized royal control and maintained a high silver content. Records show sterling pennies moving from Champagne to Italy and into Venice by 1202. They moved primarily with trade, but also through large international payments like those levied for Richard I's Crusade and ransom and Richard and John's financial support for Otto IV's pursuit of the imperial crown.[42] Figure 6.3 shows the findspots of Short Cross pennies in Continental hoards. While the western French finds come from lands held

date at which gold coins replaced silver ingots as a means of making large payments, see Stahl, "Ingots and the Venetian mint in the later Middle Ages".

39 Svensson, *Renovatio Monetae*, p. 38; and Spufford, *Money,* p. 189.

40 Spufford, *Money,* pp. 138–39.

41 England, Wales, Scotland, and Ireland made up the "Sterling Area", in which sterling coins of each circulated until the 1400s, when Scottish debasement led to its disengagement from the standards set by the English mints. See Allen, "The first Sterling area".

42 Spufford, *Money,* p. 161 cites the figure of 6,000 marks, equivalent to a million coins, as given in 1207.

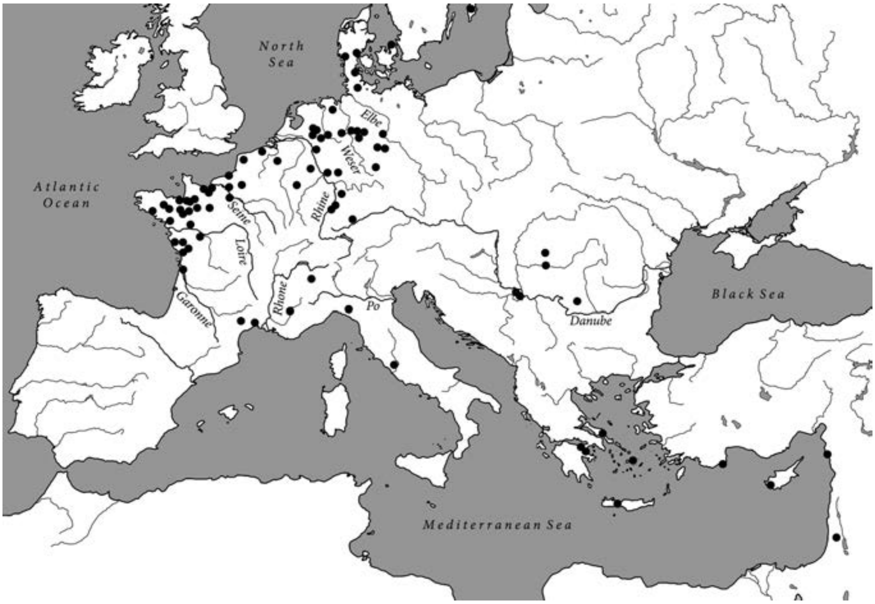

FIGURE 6.3 Map showing location of hoards of the Short Cross (1180–1247) period found in Continental Europe.[43]

by the English crown, other clusters of finds, particularly in the Rhineland, show high levels of coin use there. They also travelled to southern France and Italy, Croatia and Romania, and the Aegean and Near East. The dowry of Isabella, sister of Henry III, for her marriage to Frederick II in 1235 was 30,000 marks, or five million coins. Henry's brother Richard of Cornwall made an expensive yet futile attempt on the imperial crown, which sent huge numbers of Long Cross pennies to the Rhineland, and Edward I spent greatly on subsidies against the French. These large sums may seem exceptional, but hoards of sterlings have been recovered, which shows that impressive numbers of pennies were available at different levels of society. The Colchester hoard discovered in 1969 comprised a lead canister containing 14,065 Long Cross pennies.[44] Another find, made in 1831, was even more extraordinary, as it probably contained as many as 360,000 pennies of Edward I and II.[45]

43 The map was drawn with reference to the listing of hoards found in Allen, "Circulation", pp. 118–20.

44 Archibald and Cook, *Coin Hoards I*, pp. 67–142. The plot on which the hoard was found was likely owned by Jewish moneylenders. A second hoard of 11,000 Short Cross pennies was found on the adjacent plot in 1902.

45 Kelleher and Williams, "Tutbury Hoard", pp. 62–87. The hoard was undoubtedly the war chest of Thomas of Lancaster, which was lost or buried close to his castle at Tutbury in 1322.

FIGURE 6.4 English silver penny of Edward I (1272–1307) struck at Bristol (*c.*1280–1282), diameter 20mm.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE.

The Brussels hoard of more than 145,000 pennies has a long numismatic pedigree. Found in 1908 and a description only recently published, this find supports the notion, seen in documentary sources, of a flood of sterlings entering the near continent. The abundance of English Long Cross pennies in Westphalia spawned a great number of imitations, most famously those of Bernhard III of Lippe, but it was the English (and Irish) pennies of Henry III's son Edward I (Figure 6.4) that would be imitated on a hitherto unprecedented scale. The main areas for imitation were the Low Countries, specifically Brabant, Flanders, Hainault, Holland, and Luxemburg, but with many smaller mints also getting in on the act. Nicholas Mayhew estimates that more than 100 million sterling imitations were struck, with great numbers of these exchanged for English wool or entering France.[46] In Denmark, sterlings would have a considerable role up to the 1360s when they were replaced by Hanseatic *wittens*.[47]

As coinage became a more familiar and useful medium of exchange across Europe, the physical size of coins began to change. The most important development in this period was the introduction in Italy of a silver coin larger than the penny. The first of these was traditionally seen as an unexpected consequence of the Fourth Crusade rather than the fulfilment of any monetary policy. The story goes that the silver *grosso* was introduced to facilitate payment to the workmen building the fleet for the Fourth Crusade

46 Mayhew, *Sterling Imitations of Edwardian Type*, pp. 23–27.
47 Steen Jensen, "Danish money in the fourteenth century", p.165.

(1202–1204), but other evidence suggests that the Venetian and Genovese *grossi* were already in use by 1200 if not before.[48] The *grossi* of Enrico Dandolo (1192–1205) were of almost pure silver, weighed 2.18 g, and adopted a strongly Byzantine design. One face depicts the figure of Christ, while the other shows the doge receiving a banner from St Mark, patron of the city. The introduction of fine silver *grossi* in northern Italy completely altered the pattern of coinage throughout Europe in a short time.[49] Genoa followed Venice in the early 13th century and Marseilles in 1218. *Grossi* spread across northern Italy in the 1220s and central Italy in 1230, but not everywhere and not in a uniform manner. However, their impact beyond Italy was profound. Veronese *grossi* provided the prototype for the later *kreuzer*.[50] The 14th-century heirs of the *grossi* in Central Europe were the Prague *groschen* from the Kutná Hora mines. The opportunity to strike large coins presented by a prolific silver mine on one's doorstep did not always mean there was a market to absorb such coins, as was the case in Bohemia, and so a high proportion of its silver was struck into smaller pieces while many of the *groschen* were exported to Italy.[51] A coin twice the size of the Venetian *grosso* appeared in Rome in 1253 and inspired the *carlino* and *pierreale* of Naples and Sicily in southern Italy, and thence the *gigliato* of Rhodes and Chios.[52]

It was, however, the French *gros tournois* that would be the most influential and widespread of the large silver coins in the West, although their uptake was slow from their first appearance in 1266 under Louis IX and Charles II (Figure 6.5). In the east, the Venetian *grosso* was more important than the French *gros*.

The popularity of the *gros tournois* is visible in its wide distribution in hoards across northern Europe.[53] In the Low Countries it stimulated the issue of the *petit gros* (worth two-thirds of a *gros tournois*) and after 1305 played a more prominent role.[54] *Gros* soon entered Germany, as shown in the hoard from Silschede dated 1294, and were being imitated in the Rhineland by 1328.[55] The Danish hoard of Ebbelnaes included 767 *gros tournois*.[56] In Mediterranean Europe they appear

48 Day, Matzke, and Saccocci, *Italy* (*I*), pp. 637–40.
49 Ibid., p. 16.
50 Spufford, *Money*, pp. 232–33.
51 Ibid., p. 233.
52 Ibid., pp. 228–29.
53 Duplessy, *Trésors Monétaires*, p. 159 lists 58 French hoards, 22 Belgian, and three apiece from the Netherlands and Switzerland which include *gros tournois*.
54 Phillips, "Low Countries", p. 99.
55 Ilisch, "Imitation *gros tournois* from north of the Alps", p. 105.
56 Steen Jensen, "Danish money", p.165.

FIGURE 6.5 Silver *gros tournois* of Louis IX of France (1226–1270), diameter 26mm.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE.

among coin finds and in documents in varying numbers.[57] *Gros tournois* entered Italy soon after they emerged in France, but did not have the prolonged later circulation that one sees in the German evidence. In Italy, the coin had little time to flourish, as it occupied the brief period between the end of the *grossi* and the emergence of the first gold coins, after which they disappeared from records and hoards.[58] The hoard and documentary evidence from northern Italy is good; indeed, imitative *gros* were minted at Asti in some numbers. In central Italy they are found in papal accounts and in Tuscan sources in the late 13th century, but not from hoards.[59] A contract agreed between Genoa, the king of Valencia, and the archbishop of Taragona regarding salt mining in Ibiza used *gros* as a standard value.[60] In the Regno, Charles of Anjou made clear attempts to inhibit the use of *gros* (and foreign coins more generally) in favour of his *gigliati*, which from 1303 became dominant in the Mediterranean.[61] The Near Eastern evidence is patchy but shows some circulation in the Latin states of Tripoli and Cyprus and the kingdom of Jerusalem.[62] Two hoards – "Syria 2" and Ras Shamra – show that *gros* were still in use 30 years

57 Much of the following draws on a survey of relevant material from Mediterranean sources by Phillips, "*Gros tournois* in the Mediterranean".
58 Ibid., pp. 299–301.
59 Ibid., p. 287.
60 Ibid., p. 297.
61 Ibid., p. 284.
62 Ibid., p. 301 says the hoard evidence suggests that the *gros* came directly from France, rather than through Italy. See also Kool and Arav, "Khirbet Shatta", p. 262. *Gros* were found

after the abandonment of the mainland Crusader settlements, but arrivals to the mainland into the 1320s were not on any great scale.[63]

Evidence for the *gros* in England is limited to two hoards, from Mayfield in Sussex and Dover in Kent, and seven single-finds. Both the Mayfield hoard, with its seven *gros tournois* alongside 348 English pennies, and the Dover find, with its array of foreign coins, among them 39 *gros*, have been argued not to have come from the English currency pool at all.[64] Barrie Cook suggests, however, that *gros tournois* were used by merchants in England. There was certainly a lack of English high-value silver coins, and it may be that these French issues found acceptance, particularly in London and the southern ports.[65] *Gros* are thought to have inspired the short-lived English groat introduced by Edward I in 1279. The groat's unpopularity came from its heavy weight (six grams) and high value (four pence, which was impractical for internal use). Spufford links its abandonment to its incompatibility with daily and weekly wage-earners.[66]

The Spread of Gold

Though a novelty in northern and western Europe in the 12th century, gold coins were a familiar monetary object across the Mediterranean world. They were an enduring presence in the monetary systems of the Byzantine Empire and the Muslim world from their earliest days, and continued to be so throughout the 12th to 14th centuries. The complex geopolitical inheritance of three areas of Latin Christendom – southern Italy and Sicily, the Iberian Peninsula, and the Crusader States of the Levant – meant that they developed quite exceptional monetary systems rooted in Islamic and Byzantine coinage traditions, often later fused with European influences.

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in excavations at Pilgrim's Castle and Acre. The *gros* in the Khirbet Shatta hoard reveal an extensive afterlife, as they were mounted as jewellery alongside Muslim coins.

63 Phillips, "*Gros tournois*", pp. 280–82.

64 Archibald, "The Mayfield (Sussex) 1968 hoard of English pence and French gros, *c.*1307", p.151; and Dolley, "The Dover hoard", pp. 154–55.

65 Cook, "Foreign coins", pp. 254–55.

66 Spufford, *Money,* p. 235. The groat would return triumphantly to England in 1351 when wages and prices had risen significantly from the levels seen in 1279. Many of the early groats that survive in modern collections avoided the melting pot by being converted into dress hooks, a fate shared by many continental *gros tournois* in England: see Kelleher, "The re-use of coins in medieval England and Wales *c.*1050–1550" for a survey of this phenomenon.

When the Normans arrived in Sicily and southern Italy in the 11th century they found three rival polities. The mainland was split between the Lombard territories and the Byzantine territories of Apulia and Calabria, while Sicily was ruled by the Muslim successors of the Kalbid governors. The adaptability of the Norman diaspora to the monetary systems they encountered through conquest, so visible in the coinage of England and the northern Crusader States of Edessa and Antioch, is writ large in Sicily and southern Italy. Under the Arabs, the gold *tarì* had been the mainstay of the Sicilian currency. This system was continued under the Normans.[67] The design of the coins was changed only incrementally, with Arabic script replaced by Christian motifs such as a tau cross or the rulers' Latin initial. The inscription remained essentially Muslim in its formulation, naming the ruler and being dated by the Hegira. By the reign of William I (1154–1166) the kingdom of Sicily had been formally recognized by the pope and enjoyed an extensive currency based on denominations in three metals (Figure 6.6a). When the Hohenstaufen Frederick II took possession of Sicily, he instituted a new gold *augustale* there in 1231, and at his mainland mints in 1240.[68]

The names of the gold coins that the Christian kingdoms in the Iberian Peninsula began to mint in the 12th century – the *mancus*, *maravedí*, and *dobla* – have the ring of the Islamic world and could easily have originated in Baghdad or Cairo. The gold bullion and tradition of using gold coins came to Atlantic Europe from North Africa, where an abundant gold currency existed under the Almoravids (1094–1147) and the Almohads (1130–1269). The gold itself was drawn northward via the trans-Saharan networks from Mali and the valley of the Niger, and from the western Sudan. Although some made it into southern Europe, the greater part was destined for the Middle East.[69] Letters of payment, wills, and other documents from the Christian states bordering al Andalus were denominated in Almoravid gold coins.[70] The Castilian king Alfonso VIII (1158–1214) began to strike a gold coin in imitation of the Almoravid *morabitino* or *maravedí* at Toledo, weighing around 3.85 g (Figure 6.6b). The monarch's Christian sensibilities were reflected in the addition of a cross and the initials ALF on the obverse, while the king's Muslim subjects were satisfied by the continued use of Arabic script, although the inscription was adapted to read "the emir of the Catholics Alfonso ben Sancho, May God support and aid

67 Grierson and Travaini, *Italy* (*III*), p. 87.
68 Ibid., p. 169.
69 Spufford *Money,* pp. 163–70; and Crusafont, Balaguer, and Grierson, *Iberian Peninsula*, p. 54.
70 Crusafont, Balaguer, and Grierson, *Iberian Peninsula*, p. 62.

FIGURE 6.6 a) Sicily, William I (1154–1166), gold *tarì*, Messina mint, 1154, diameter 11mm; b) Castile, Alfonso VIII (1158–1214), gold *maravedí alfonsí*, Toledo mint, 1191 diameter 28mm.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE.

him", and the reverse "the imam of the Church of the Messiah is the Roman Pope. In the name of the Father and the Son and the Holy Spirit. God is One. He that believeth in Him and is baptized shall be saved". These coins were struck in some quantity and became the gold coin of reference in the Christian states across the Iberian Peninsula.[71] In León, poorer-quality copies were minted, but these did not include any Arabic inscriptions. In Portugal, Sancho I did likewise, striking *morabitini* bearing the *quinas* (five shields), which represented the five Moorish kings supposed to have lost their lives at the battle of Ourique

71 Ibid., pp. 289 and 725.

in 1139; this motif would become the traditional arms of Portugal. In 1240 Arab types gave way to the double dinar, or *dobla*, in Castile, Portugal, and Aragon.

The states that emerged in the Levant following the First Crusade were superimposed on a region familiar with the use of coin in gold, silver, and copper. Fāṭimid dinars minted in Egypt provided the prototypes for the kings of Jerusalem and counts of Tripoli to mint their own gold bezants.[72] Copies of the dinars of al-Āmir (1101–1130) have been attributed to Jerusalem, and those of al-Mustanṣir (1036–1094) to Tripoli. The system appears to have worked well enough and provided the Crusader States with a high-value gold coinage. There is little evidence to suggest they circulated much beyond the borders of Crusader lands except in the Syrian hinterland as far as Aleppo and Maras, where no Muslim gold was available.[73] However, in 1250 the papal legate Eudes of Châteauroux arrived in Acre with the French king Louis IX. He was apparently outraged to find Christians using coins bearing "the name of Mahomet and the number of years from his nativity [*sic*]".[74] His correspondence with Pope Innocent IV survives in the papal reply and a change of design to a more acceptably Christian model followed. Crosses became prominent motifs, and the Arabic inscription now included proclamations of faith in the Trinity and dated the coins from the incarnation of the Messiah. The Latin initials B and T were inserted into the Tripolitan coins, perhaps to denote Bohémond and Tripoli.[75] The Crusader bezant ended with the collapse of the mainland Crusader States in 1291.

Always at the vanguard of monetary innovation, the Italian city states of Florence and Genoa began minting their own gold coins in 1252 (Figure 6.7).[76] Gold from North Africa and Sicily had been moving through the commercial cities for some time. Unlike other gold coins of the period, the new Florentine

72 Metcalf, *Coinage of the Crusades*, outlines the chronology of the types of the kingdom of Jerusalem and county of Tripoli based on a characteristic reduction in the fineness of the gold over time. In the kingdom of Jerusalem, this diminished from *c.*80 to *c.*66 per cent (pp. 43–51). Three issues have been identified for Tripoli: a rare type with 87–98 per cent gold; an interim issue of 71–90 per cent; and a third using a standard of 62 per cent (pp. 150–52).

73 Bates and Metcalf, "Crusader coinage with Arabic inscriptions", pp. 439–40; and Metcalf, *Coinage of the Crusades,* p. 43.

74 Metcalf, *Coinage of the Crusades,* p. 44.

75 Ibid., p. 151.

76 Lopez, "Back to gold, 1252", laid out the chronological arguments for the Genoese first striking gold in 1252. Day, Matzke, and Saccocci, *Italy* (*I*) (pp. 266–68) have shown that the first Genoese gold coin was the *quartarola*, based on the theoretical weight standard of the south Italian and Sicilian *tarì* and valued as a type of quarter-florin. The *genovino*, which was equivalent to the Florentine florin, did not appear until the early 1270s to late 1280s, and was inspired by its Florentine neighbour.

FIGURE 6.7 Gold florin of Florence, 1252.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE.

florins were based on the Tuscan money of account, equal to one lira or 20 *soldi*,[77] and were thus the first pounds to be coined anywhere in Europe.[78] The other Italian gold coin that would find international fame, the ducat, would not be issued by Venice for another 30 years. The florin took some time to gain popularity in Tuscany, but once it gained acceptance it spread rapidly, inspiring similar types in nearby states and then in northern and western Europe. By the 13th century florins were popular in the Levant. They have been found in hoards in Aleppo and the harbour at Acre,[79] but here they would have found competition from the well-established local dinars that were in use within and without the Latin settlements of the Levant.

It was against the background of emerging gold currencies that Henry III attempted to introduce an English gold penny in 1257. Gold coin was not a commonplace in England, although documentary references are known. Just seven 11th- and 12th-century gold coins were recorded in Marion Archibald's survey of Islamic and Islamic-inspired gold coin finds in Britain,[80] and of

77 Spufford, *Money*, p. 177.
78 Spufford, "The first century of the Florentine florin", pp. 422–23.
79 The Aleppo hoard is thought to have been loot from the destruction of the last Crusader city in the Levant. Six hundred of the 630 coins were gold florins, but this find is poorly recorded. A recent hoard dredged from the harbour at Acre consisted of 70 or 80 coins and shows that high-value money was required to supplement the Crusaders' own gold bezants as late as the 1270s: see Kool, "Florins from Acre".
80 Archibald, "Islamic and Christian gold coins from Spanish mints found in England, mid-eleventh to mid-thirteenth centuries", pp. 377–96.

these, four bore 12th-century dates. A recent find of an Almohad dinar of Abu Ya'qub Yusuf I (1163–1184) in Suffolk adds to two Almoravid dinars of Ali b. Yusuf (1106–1142) found near St Paul's before 1879, and a Murcian dinar of Muhammad b. Si'd (1147–1172) in Hertfordshire.[81] Philip Grierson suggested that documentary references to payments in Islamic gold coins would not have been expected to be reckoned in such coins, while Peter Spufford sees the use of foreign gold as limited to almsgiving and other special or ceremonial purposes.[82] Cook has challenged these positions in highlighting the many references to "bezants" (Byzantine *hyperpyra*, valued at around two shillings) in the Pipe Rolls.[83] Despite the abundance of documentary references, just one bezant is known from England. The Accounts of the King's Wardrobe in the Pipe Rolls and entries in the Fine Rolls give clear evidence for the amassing of two great gold treasures by Henry III: one in the 1240s for his proposed Crusade to the Holy Land and, when this had been spent on the Gascon expedition of 1253–1254; a second, later in the 1250s, which was intended for an expedition to Sicily to install his son Edmund at the expense of the Hohenstaufen rulers.[84] In any event, much of this gold was used for the unsuccessful issue of Henry's own gold coins. These weighed two pennyweights and were valued at 20 pence, matching the gold-to-silver exchange rate of the time.[85] The French *ecu d'or* of Louis IX met with similar failure.

Like the *grosso* before it, the florin had a significant impact in France. The Champagne fairs drew gold coins northward, and florins were noted at Beaune in Burgundy in documents by 1274. Peter Spufford sees the Popes at Avignon as a critical agent in increasing the circulation of gold coins in southern France.[86] Philip IV (1285–1314) introduced a gold coinage in 1290 at the same size, weight, and fineness as the florin but, as was the case with the *grosso*, the French found a larger, more valuable version of the Italian coin to be more popular. The florins and double florins were the principal high-value money in France until the *mouton* was introduced in 1311.[87] The florin standard of weight and fineness, if not the exact type, was imitated in other Italian cities by the end of the 13th century, while the coins had spread all around the Mediterranean and were being imitated in Achaia. The European impact can be seen in early-14th-century

81 Ibid., p. 396.
82 Grierson, "Oboli de Musc", pp. 76–77; and Spufford, *Money*, p. 183.
83 Cook, "The bezant in Angevin England".
84 Carpenter, "The gold treasure of King Henry III", pp. 61–62.
85 Carpenter, "Gold and gold coins in England in the mid-thirteenth century", p. 111.
86 Spufford, *Money*, p. 183.
87 Spufford, "Florentine florin", pp. 428–29.

commercial documents in which florins were valued against local silver currencies in London, the Low Countries, southern Germany, Lübeck, Prussia, and Hungary.[88] In Denmark, florins are found in small numbers after *c.*1300; indeed, the 1319 will of Erik VI stipulated that 18 florins be distributed to every Danish monastery.[89]

In addition to developments in the physical coinage, there were equally important changes in non-monetary forms of exchange in the extension of banking, both local and international, and the increasing role played by credit. Italians were at the forefront of extending the use of bills of exchange, which had evolved to reduce the risk of agents moving large amounts of precious metal from place to place.[90] The merchant banking network, which reflected the principal nodes and routes of north Italian trade, spread across Europe and massively increased the supply of money for international transactions.[91] The mechanisms of banking spread from the merchant communities to the papacy and nobility, increasing its efficacy and extent. Even with the stresses and monetary contractions of the period after the Black Death, banking was here to stay.[92] The other strand which developed was that of credit. There is some debate over the form(s) and function(s) of medieval credit. Pamela Nightingale suggests that credit expanded and contracted in line with changes in the money supply, while James Bolton says that was not necessarily true due to Nightingale's misinterpretation of her sources and the beginnings of negotiable credit instruments. Chris Briggs suggests that credit expanded and contracted in response to the money supply, but also in response to the character of legal institutions and debt recovery mechanisms.[93]

Money in Europe on the Eve of the Black Death

By necessity, this chapter has focussed on the impact that a resurgent silver supply had on the coinages of Europe.[94] This silver, in combination with the development of gold currencies, saw the emergence of new coin types that quickly

88 Ibid., p. 430.
89 Steen Jensen, "Danish money", p. 168.
90 Spufford, *Money*, pp. 254–55.
91 Spufford, *Power and Profit*, pp. 34–38.
92 Ibid., pp. 16–19.
93 See Briggs, "The availability of credit in the English countryside, 1400–1480", p. 2.
94 It was during the 1340s that the first signs of a silver bullion shortage were emerging.

gained an international reputation and were subject to large-scale imitation. Chief among these were the sterling, the *gros*, and the florin. The high value of gold coinage, which – north of the Alps – was still only minted in France, and to some extent the larger silver, meant that they were not universally practical. However, the flexibility of the multi-denominational system, backed up by petty coinages, allowed participation from a broad array of coin users and the extension of monetization beyond the traditional bounds of two centuries earlier. This system was not without its problems. The relative value of silver to gold fluctuated and led to complex shifts in the value of coinages against one another. By the 1350s the monetary landscape had palpably shifted. In France, a resurgent monarchy had, by the time of Louis IX, asserted royal control over the coinage and ended the age of the feudal denier. The strong English coinage had added fractional denominations and was on the verge of instituting large silver and gold. Germany was later than its neighbours in introducing any large silver or gold coins. The Low Countries saw possibly the greatest change over the period, a consequence of its burgeoning role as the commercial hub of northern Europe. In northern Italy, which had given Europe the prototype for high-value coins, the florin and the ducat emerged as the most important gold currencies. By the start of the 14th century areas with no major history of Islamic or Byzantine traditions had started minting gold coins, such as the imitative florins of the Rhone valley, the southern Netherlands, and the Rhineland. The coinage of the Spanish kingdoms was much improved in quality, although Portugal still lagged behind. In Denmark, circulation was dominated by the principal foreign coins of silver and a little gold. In the eastern Mediterranean, the *grossi* of Cyprus oiled the wheels of trade, as did the *gigliati* of Rhodes and Chios in Asia Minor.

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CHAPTER 7

From the Black Death to the New World (*c.*1350–1500)

Philipp Robinson Rössner

The history of objects is now a fashionable new subdiscipline within the academic discourse in history.[1] This resulted from the eminently trivial yet, in the age of the so-called Cultural Turn, probably overemphasized insight that written records never tell us the full story. *Stories* they certainly tell, but these may be biased either by omission or incorrect depictions of factual reality (with factual reality being a questionable epistemic proposition in itself). They may be ambiguous and sometimes plain wrong. A lot of human activity, experiences, agency, and feelings cannot and has not been covered in written sources. For these reasons, it is commonly accepted that objects represent a valuable, in many ways indispensable way of mining and corroborating information from the human past that would otherwise be left unknown, if the historian would limit her or himself to an examination of the written record only. But since objects "speak" a language and through channels different from written records, accordingly they require their own technique of decoding.

Rarely has this history been written or the call by the history-of-objects faction been heeded from the vantage point of money, more specifically coins, through the discipline of decoding them as historical media or transmitters of information, generally called *numismatics*. This is odd, since money and coins represent a very obvious starting point for writing such a history, perhaps even more obvious than other fashionable subjects of study which modern exponents of object-based history have been so fascinated about in recent

1 The history of objects was made popular by a blockbuster 2012 book: MacGregor, *A History of the World in 100 Objects*. A good example from economic and world history comes from Riello, *Cotton*. See also the long introduction in Appadurai, *The Social Life of Things*; Harvey, *History and Material Culture*, esp. the chapter by Giorgio Riello; Grassby, "Material culture and cultural history"; Kingery, *Learning from Things*; Attfield, *Wild Things*; Johnson, *An Archaeology of Capitalism*; Mehler, "The archaeology of mercantilism", which combines an archaeologist's viewpoint on tobacco pipes with the problem of 18th-century political economy in the German-speaking lands; Hoskins, "Introduction"; Findlen, *Early Modern Things*; Hamling and Richardson, *Material Culture and Its Meanings*; and Ago, *Gusto for Things*. On money specifically, from an anthropologist's viewpoint, see Hart, "Heads or tails?"

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years, such as Martin Luther's garments, early modern bedsheets, or cotton.[2] For nearly three millennia nearly all societies across Eurasia (and beyond: just consider China or India) have used some sort of money. And most of the time this money was in the shape of coins, ever since this invention or technique was adopted almost simultaneously in various areas of Europe and beyond, from the Aegean around 700 B.C. to China.[3]

Background

Not much would change in all the years after coined money can be first identified from the archaeological record. From the 8th century B.C. until the end of the 19th century most coins would contain at least some precious metal. For the best part of these *c.*2,600 years people would entertain the idea that not only should money express value, but this value should be reflected in the value of the materials embodied in coins. For monetary history, labels such as "antiquity", "medieval" (or early/late medieval), or "early modern" make even less sense than they do for general or mainstream history; there was no change of fundamental significance between 700 B.C. and A.D. 1900 in terms of either the physical appearance of money and coins or some of the basic ideas and theories entertained about them. But there were changes over time, if very gradual and piecemeal and much less pronounced than the grand political and social changes usually associated with landmark events such as the French Revolution, the Reformation, and the Black Death. As regional economies in Europe moved towards capitalism – northern Italian cities did so beginning in the 1200s, other regions much later – more and more commodities and human actions became subject to the market principle. Accordingly, this prompted an increased need for cash. Prices for foodstuffs were subject to fluctuations over time, expanding in the long term due to commercial affluence between the 11th and 14th centuries (halted partly by the Black Death, partly by the abnormal climatic conditions of the 1310s), then declining in the wake of the epidemic and the 15th-century integration crisis of the Renaissance, only to expand again thereafter, giving way to, from the 1530s and 1540s, the age of the great inflation or "Price Revolution." Once again, such cycles can be associated with changes in the overall demand for money and cash as a means of transaction, as during times of inflation the European population, and thus economic

2 See, e.g., Rublack, "Matter in the material Renaissance"; Handley, *Sleep in Early Modern England*; or Beckert, *Empire of Cotton*.
3 Von Reden, *Money in Classical Antiquity*.

activity as a whole, grew (contracting at times of low prices and depression). Thus the price level marks the "rhythms" of the European regional economies.

If we were to pinpoint the main markers of change, we could say that a wave of monetary innovation first came in the 13th century with the introduction of large silver coins (*solidi*, shillings) and even more valuable coins made of gold (*fiorini*, florins). Thereafter no major changes took place until long after the Black Death, when the age commonly called either the "late Middle Ages" or "Renaissance" would be associated with times of crisis in many market economies, and accordingly low prices. Such times saw an increase in the purchasing power of existing moneys, but also reflected, partly at least, a scarcity of silver as the main monetary metal.[4] Then the onset of the price inflation after the 1470s and the boom in the central European mining industry set the pace for a new run of silver mining and the minting of a new heavy silver coin equal in purchasing power, and up to the task formerly fulfilled exclusively by the gold florin. Thus the monetary history of the late Middle Ages is marked by oscillation between the two poles of crisis/high silver price, as well as inflation and the gradual need to refill the European monetary landscape with new types of coin, particularly the silver florin or *taler*.

Students wishing to consult the vast literature should be aware that there are divides between monetary history and numismatics as a technical discipline or historical-auxiliary science (*Hilfswissenschaften* in German), and between monetary and economic history and straight economics. Many economists have written on the history of money by applying modern concepts to the rich and varied European evidence. Among the works that cross the boundaries between history and numismatics, Peter Spufford's *Money and Its Use in Medieval Europe* is justly considered to be a classic. Students wishing to learn more about numismatics are referred to Philip Grierson's *Numismatics* or, for those possessing a basic level of German, to Niklot Klüßendorf's outstanding yet very concise and neatly framed *Münzkunde* (2009). John Day's classic article in *Past*

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4 About the nature, coverage and extent of such a "crisis" of the 15th century there has been much debate. See, e.g., Miskimin, "Monetary movements and market structure" and *The Economy of Later Renaissance Europe*; with Cipolla, "Economic depression of the Renaissance?" for a different viewpoint. For northern Germany, the study by North, *Geldumlauf und Wirtschaftskonjunktur*, has established some incontrovertible evidence of economic contraction. A numismatist's viewpoint that supports this notion is presented in the classic article by Day, "The great bullion famine of the fifteenth century" and "The question of monetary contraction in late medieval Europe". A recent quantitative overview and discussion is presented in Munro, "The monetary origins of the 'price revolution' ", as well as in Mayhew, "Prices in England". On the depression in the late medieval European mining economy, see Westermann, "Zur spätmittelalterlichen Depression der Montanwirtschaft".

& Present on the great medieval "bullion famines" sets out the framework for a monetary historian's framing of the Middle Ages with ample recourse to coins, money, and numismatic evidence, while Nicholas Mayhew's and Martin Allen's studies give an excellent introduction to late medieval money in England. For the continental moneys, apart from Spufford, the works by Michael North are excellent (but unfortunately only available in German).

Coins of this period were made from precious metal. The near-complete virtualization of money by bank giro (direct transfer), draft and deposit banking, the use of credit cards and IT technology, etc. came later, albeit elements of it were known after the "invention" of the bill of exchange as a means of cashless payment came in the wake of the northern Italian commercial revolution of the 12th and 13th centuries.[5] Often based upon coins and an existing system of money and payment of coins, instruments of cashless payment and credit were known since the earliest days but did not normally exist a priori or independent of one particular type of coin-shaped money. One controversial voice has even claimed that credit came before money.[6] Coins can tell us stories and give us answers which the written record never can or will, due to absence or omission among written sources or simply the different and very specific type of message that coins carry as a cultural messenger, container, and transmitter of information. The following account is limited to a brief survey of what money is and what it looked like in the Middle Ages before the age of discovery. This is followed by an examination of the stories that money can tell the historian, before a brief conclusion points out possible directions for further research.

What is Money?

To understand medieval money, perhaps the most important thing to do is to shed the modernist understanding of it, beginning with the first of the modern myths. It has been popular folklore among economists that money originated more or less spontaneously, whenever two or more individuals got together to seal a deal at market and exchanged something that one party wanted but could only produce for her- or himself at large opportunity cost, for another commodity that the other party could produce or procure with much greater

5 On commercial innovation in the Middle Ages, including marine insurance, deposit banking, etc., see Lopez, *The Commercial Revolution of the Middle Ages, 950–1350* and Spufford, *Power and Profit*. On the bill of exchange in particular, see the long introduction in Denzel, *Handbook of World Exchange Rates*.

6 Graeber, *Debt: The First 5,000 Years*.

ease and efficiency. So, if a shoemaker wanted to eat, he or she might ask the baker to give him some bread. But as one pair of shoes would easily pay for several loaves of bread, and the baker would have no use for just one shoe, nor the shoemaker for ten loaves at once (because the bread would go stale or mouldy before it could be eaten), the theory is that the baker and shoemaker would get together, invent money, and thereby solve all their coordination problems. In this way they would reduce what economists call transaction costs and facilitate exchange. Thus money arose out of the market process based on a market economy and, according to Adam Smith in his *Inquiry into the Nature and Causes of the Wealth of Nations* (1776), humanity's "natural inclination to truck, barter and exchange."[7] The modern economists' "coincidence of wants" argument goes back to W. Stanley Jevons' classical textbook on money,[8] but can in fact be found, in similar shape, in many earlier writings even before Adam Smith, including 17th-century German Cameralists and economists such as Johann Joachim Becher (1635–1682), or Veit Ludwig von Seckendorff (1626–1692).[9] It is at the same time both very compelling and profoundly wrong. Historians agree that money, in the shape of coins, was often created earlier than and sometimes quite independently from a pre-existing market economy. It was "invented" by states, rulers, and "governments" to raise taxes, and if the best way to do so was to establish a market – so be it. Therefore, more often than not, money came first, then the exchange-based or market economy,[10] not necessarily the other way round as the ideal world of the economists wants to have it.

Hence, in many ways, the modern concept of the definition, function, and purpose of money found in economics textbooks of today, usually based upon the classical introduction by Jevons, is counterintuitive. (We should, however, for reasons of fairness and completeness, remind ourselves that the basic ideas promulgated by – *inter alios* – Jevons, of money being mainly a means of exchange, storing and denoting value, and facilitating the economic process, go back in spirit to writings by Aristotle.) It tells us more about what money in the Middle Ages *was not*, and quite a lot about what modern economists *think* money is (and was). According to the modernist concept, money serves a general purpose as a means of exchange, a means of *expressing* value, as well as a means of *storing* value or conserving (transmitting) purchasing power over time (i.e., saving, investment). These are its core or economic "textbook"

7 Book 1, chapter 2.

8 *Money and the Mechanism of Exchange*, London, 1875.

9 Rössner, "Monetary theory and economic management in continental European economic reasoning, *c.*1500–1900".

10 Knapp, *Staatliche Theorie des Geldes*; Peacock, *Introducing Money*.

functions. To these may be added money's role as a means of political, economic, and cultural communication. Whenever a ruler strikes a coin with his image on it, the money communicates a political, as well as cultural message to its bearer (if only the ruler's portrait or image). The message says, "I am the ruler and this is my kingdom. On this coin you will find an image of mine." This pictorial message or image is usually accompanied by some sort of regal or royal insignia, a sword, or a cross. In a modern context, where money is usually territorial (or supra-territorial, in monetary coordination and integration schemes such as the euro), the modern reader would expect such a message to go on like this: "Please note that in my kingdom/realm, my money will be the only and exclusively accepted *legal* means of payment."

But such was not the case in early modern and medieval Europe. At this time, the notion of legal tender in the modern sense – meaning that there should be one legally exclusive currency for each territory – did not exist. Medieval rulers, such as the Saxon dukes and electors, were known to accept many non-Saxon currencies alongside "Saxon" coins in circulation. The result was a bewildering number of edicts and ordinances detailing and sometimes picturing each and every single coin type that was permitted or prohibited. Usually such legislation was meant to be *temporary*, often for a year (and often tied to market rhythms of the weekly urban markets, quarterly and annual regional fairs, and yearly markets). There was an element of temporality in pre-1850 understandings and models of currency and monetary policy that has vanished from the scene since the development of modern forms of marketing. Accordingly, a fiduciary monetary standard was adopted that decoupled money's extrinsic value or purchasing power from its intrinsic value or material content.

In consequence, until very recently (into the 19th century, in fact) most people in continental Europe used a bewildering variety of currencies and coin types of different sizes, denominations, and origins. Around 1500 in the Holy Roman Empire (Germany) alone, there were about 300 territorial "states" and state-like entities (duchies, counties, abbeys, etc.) whose rulers were entitled to mint their own money, and about 500 mints were known to exist.[11] Foreign and domestic coins circulated relatively freely and peacefully alongside one

11 Sprenger, *Das Geld der Deutschen*; Schremmer, "Über 'stabilies Geld' ". On German monetary history, see further North, *Das Geld und seine Geschichte*; North, *Kleine Geschichte des Geldes*; Rittmann, *Deutsche Geldgeschichte*; Suhle, *Deutsche Münz- und Geldgeschichte*; Gerhard, "Miszelle"; Gerhard,"Ein schöner Garten ohne Zaun"; Gerhard, "Ursachen und Folgen". Older numismatic works include Friedensburg, *Münzkunde und Geldgeschichte* and Luschin von Ebengreuth, *Allgemeine Münzkunde*, as well as von Schrötter, "Das Münzwesen des Deutschen Reichs".

another. Many rulers were quite happy to have foreign coins admitted as what we would call "legal tender." They (or rather their officials, mintmasters and mint wardens) simply put an official value (spot exchange rate) upon them that would tell people how much one specific foreign type of coin was supposed to be worth in "our money". This process was tariffing by valuation or *valvation*, as contemporaneous German legal terminology had it.

Far from being limited to denoting financial or economic value, coins since biblical times carried further hidden, deeper meaning. The most obvious reference point was, of course, the Judas treason, which in three of the Gospels (Matthew, Mark, and Luke) involved a specification of the actual means of payment (silver money or αργύριον). Matthew 26:14–16 even provides a quantification ("thirty pieces of silver" or τριάκοντα αργύρια). Interestingly, in the Gospel of Judas, a recently discovered apocryphal gospel, the Judas payment is made with "a handful of copper coins", which the Coptic, in which the gospel was written, renders as *hḳmnt*, i.e., the *terminus technicus* of the Coptic language for copper, rather than silver as we would expect from reading the canonical gospels. Copper, of course, represents small change – and nearly always has in the European context – which fits the overall story better than silver. According to the canonical gospels, only someone like Judas would venerate the money for what it was – a Chrematistic tool directed at enriching himself at the expense of others. Rhodian tetradrachms were venerated as pieces of the original Judas wage all over Europe in the 15th century.[12] In the Judas Gospel, Judas is seen by some scholars as the "good guy" who betrays Jesus not for the money, but for the sake of implementing, that is, setting in motion, God's ultimate plan of salvation.[13] This role Judas gets in the overall plan is an infinitely higher reward than any monetary sum would be, be it in silver, gold, or – in the case of small change – copper, which, in this case, is only used in the notional sense: a transaction has been completed, but its monetary value, expressed in copper, is negligible.

Money was (and often still is) also frequently charged with some notion of magic, mishaps, or evil spells as well as, more positively, proliferation and fecundity. This was money's fifth purpose or function: to carry or implement the means of doing magic. Since the earliest times coins were used as relics, cult objects, and objects of veneration; as cures and protection against ill-health, including epileptic spasms and dangerous childbirth.

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12 See chapter 8, this volume.

13 Ehrman, *The Lost Gospel of Judas Iscariot*; and Pagels and King, *Reading Judas*, for an introduction and translation. There are other interpretations by scholars who see Judas, as portrayed in that particular gospel, as a demon.

We also find practices involving the healing power of coins on Good Friday. From the days of King Edward II, and presumably also Edward I, the English kings placed a handful of coins before the Cross of Neith, which was said to have contained splinters of the original cross upon which Jesus had been crucified. Then the king would "buy" them back using ordinary money, in the order of five to 25 shillings, and have them re-smelted into "cramp rings" to be given away as amulets against epileptic strokes. This was no "dark" or black magic but, on the contrary, represented an intrinsic component of Christian practice in northern Europe at the time. Symbolic offerings resulted in the creation of metaphysical value. And the "healing touch" was a commonly accepted quality and proof of a king's superior station in the cosmos of nature as well as the polity or common weal.[14]

Johannes Rothe (1360–1434) related, around 1410, the legend of how coins had originated. Upon the Great Deluge people exchanged their possessions against gold and silver to store value. But upon realizing that the only reliable means of transforming precious metal into a store of silver would be to standardize it, King Ninus had it struck into similar pieces by his skilled smith Terrach, who imprinted the king's image upon them. Later medieval princes would strike coins "in the name of Christ", thus imbuing them with purchasing power according to the State Theory of Money. Of course, coins also feature prominently in northern European folklore and fairy tales, where they were usually related to the creation of wealth in return for a soul promised to the Devil. Coin hoards were often buried near graves or graveyards, which was an effective means of protection and concealment.[15] As was well known (or assumed), the Devil lurked behind every corner in the graveyard, particularly around midnight; who would be so blasphemous to dare to dig up bones or a treasure at such a foul and dangerous place?

If there is one thing we can be quite certain of, after recent research on the use of coins and particular types or classes of coins and moneys by particular social groups, actors, and classes,[16] it is that more often than not coined money *did not completely fulfil* the function of a means of expressing value, because coin value could be debated, negotiated and fought over quite frequently. It accordingly did not always fulfil the criteria of acting as a safe store of value, either. And coined money frequently gave away conflicting messages, more often than not resulting in social conflict, up to the point of social unrest. For

14 Bloch, *The Royal Touch*.

15 Bolte et al., *Handwörterbuch des Deutschen Märchens*, pp. 465–506; Opie and Tatem, *A Dictionary of Superstitions*, p. 259ff.; and Hiller, *Lexikon des Aberglaubens*, pp. 72 and 154.

16 Rössner, *Deflation–Devaluation–Rebellion*.

instance, in a number of late medieval German peasant uprisings – of which there were many between the 1450s and 1526 – negotiability of coin values and the ability of some actors to inflict "unjust" or unfair coin exchange rates upon the other party in a deal were highlighted as major causes for worry and unrest. Very often the bailiff, when it came to the payment of seigniorial dues, would simply refuse a small-change coin such as a penny (around 1400 worth 1/240th or 1/252nd of a florin), *heller* or half-penny (1/504th of a florin or gulden) or *albus* ("white penny," 1/24th of a florin) at nominal value because very often low-value coins contained much less silver than they were supposed to, thus being considered bad, "evil" or unworthy of purchasing as much as they should. Then their market or accepted value was discounted, their intrinsic value (*valor intrinsecus*) being lower than their imputed nominal value decreed by the government or ruler (*valor extrinsicus*, *valor impositus*).

During the Middle Ages coins represented the main share of monetary stock. They were usually made of some precious metal with the addition of some base metal.[17] Base metal had to be added, for two reasons. On the one hand, it was physically impossible to produce pure silver or gold coins. On the other hand, the varying ratio of precious to base metal within a particular coin determined its purchasing power in the market. But silver and gold were marketable commodities in their own right. There were competing claims on this resource, apart from the state, which issued the money, and the financial markets that traded in coins and precious metal. Silver- and goldsmiths were also important in the competition for silver, catering inter alia for conspicuous consumption. Adjustments to coins' physical composition had to be made frequently, as silver supply and silver prices varied considerably across time and space. The fine-tuning of monetary policy according to the needs of society and economy, as well as the fluctuations of the metal market, required very intricate techniques of metallurgy and minting.

Coins were struck in mints using quite primitive techniques. Silver and gold in the shape of old or foreign coins, raw gold and silver, bullion (ingots), jewellery, and ornaments delivered to the mint were smelted, then transformed into sausage-like pieces or bars. These were cut into thin round slices which were then imprinted with the coin's image, back and front, using a hammer and a die. There were as yet no machines or means of mechanizing parts of the process.[18] Making money, i.e., the striking of coins and running a mint as

17 Spufford, *Money and its Use*; Grierson, *Numismatics and History*; and Grierson, *Numismatics*. An excellent recent introduction which combines historical method with numismatics and some monetary history is Klüßendorf, *Münzkunde–Basiswissen*. See otherwise the works referred to in n. 10 above.

18 Sargent and Velde, *The Big Problem of Small Change*.

a capital-intensive, risky, but profitable big business, required hard physical work and prodigious outlets of fixed and working capital (for buildings, smelting ovens etc.). Mintmasters also had to possess considerable metallurgical and financial knowledge. Accordingly, they were usually recruited from the long-distance trading and merchant class, whose members had an intimate knowledge of the financial markets as well as the financial means to run such a high-profile business as a royal or princely mint.

In the early and high Middle Ages, small-change coins, usually pennies, were imprinted only on one side, because they were too thin and too small to bear a double imprint. In the German lands they went by the name of *Hohlpfennige* (literally "hollow pennies") or bracteates. These circulated in a relatively restricted area, usually tied to a particular town or city with a weekly market. Archaeological and circumstantial evidence suggests that often when they were used they were not meant to be counted (payment by tale) but rather weighed (payment by weight), particularly because there could be a considerable variance in this coin type's weight. They were meant to be carried around and handed over in transactions using small leather bags. These coins were frequently recalled and thus limited in terms of temporal validity, and were unknown in Britain, France, Spain, Italy, and the Low Countries.

In later periods, as techniques developed, the European economy grew, and the hunger for cash expanded, larger denominations were struck, from shillings and groats (*grossus*, pl. *grossi*) up to the florins (*fiorino*, *Genovino*, *Rheinische gulden*), whose design was more elaborate, often showing images of the ruler on one face and some other symbolic depiction of state power on the other. However, *hohlpfennige* or bracteates of the old type remained in circulation in Saxony and many parts of central Europe into the 16th century. They often gave cause for unrest and anger, as their value and according purchasing power fluctuated heavily and could not be established accurately. This gave rise to negotiation, cheating and disputes.[19] Depending upon the fineness of the material and the weight and shape of the coins, much more information could be impressed, especially when coins became larger. Muslim *denarii* or *dirhams* in the 8th and 9th centuries are said to have contained more than 200 letters or characters at times; early modern coins could be much more primitive and less complex as containers of information. This should caution us not to assume linearity in the technological process or progress of making coins: there were huge variations not only over time but also space, in terms of technique and quality of the circulating means of exchange. Accordingly, coins could convey

19 Rössner, *Deflation*, ch. 3.

significant amounts of verbal/literal and numerical information at times, at least those that were larger or full-bodied and of high value.

While it is obviously impossible (and largely speaking unfeasible) to determine the amount of money in circulation or the relation between coins (cash) and cashless means of payment (credit, velocity of money) in the overall monetary stock at any point in time or for any society or economy during the Middle Ages, coins represented the major part of the total money supply. Cashless payment methods such as the bill of exchange and credit transactions became increasingly important towards the later Middle Ages but remained restricted, in terms of use and usability, to an extremely small and very exclusive "club" of merchants who were part of the network of trust, commitment, acceptance, and mutual relationship.[20] If we define money as a general-purpose instrument or means of exchange, the bill of exchange certainly does not qualify. So the monetary stock was, during the Middle Ages, almost entirely represented by gold, silver, and copper embodied in coins; towards the later Middle Ages and during the 16th century both high-value or full-bodied money and small change tended to be dominated by silver. Gold florins fell more and more out of daily use but remained important for notation of obligations, payments, and dues, i.e., as a money of account (such as the German *reichsthaler* after 1500, which was never minted as an actual coin). The dawn of the modern period was also the dawn of the Silver Age. Gold and silver had competing uses for different purposes, such as jewellery, silverware, and other means of conspicuous consumption and saving. This did not exactly facilitate a stable or even secure supply of liquid means of circulation. In fact, it created numerous economic and social problems that were quite characteristic of the pre-modern age.

During the early Middle Ages the only coin that existed physically was the *penny* or *denarius* (d). Only in later years, by the 13th century, would larger coins or multiples of the penny be minted, i.e., struck as actual physical objects. In the wake of the 794 monetary reform of Charlemagne, it represented the 12th part of a shilling and 1/240th of a pound and initially also the florin, or (after the florin-groat ratio was increased from 1:20 to 1:21) the 252th part of a florin in the Germanic and Bohemian lands. Neither the pound nor the shilling, however, actually existed physically, i.e., as coins. They merely represented a standard or money of account: a means contemporaries used to reckon with ("ghost money"). The Middle Ages thus had a clear understanding or monetary concept of virtual money, which is something very modern. Just recall that today the amount of virtual or book money in circulation far surpasses the

20 Denzel, *Handbook*, introduction.

amount of US dollars physically available in coins and bank notes both in as well as outside the United States! Here the boundaries between money and credit became fluid.

In medieval times, at least in the urban commercial environment, people employed at least three different concepts of money.[21] One was the *moneta effectiva*, or the coins actually spent and handed over in transactions. These could be various, sometimes to a bewildering degree.[22] Another was *moneta numeraria*, or the specification of a certain currency for a certain transaction. The third or most general concept was the *monete di conto* or money of account, i.e., the general accounting system or conventions to which the social and economic system, the "nation" or country or community, subscribed and on the basis of which contracts were sealed and property rights and claims on economic resources framed. This money of account was usually the libra-solidus system at 20 *solidi* to the pound or 21 groats to the florin or gulden in the German lands towards the end of the Middle Ages (the groat being akin to the shilling in terms of its position on the nominal or monetary scale).

From the 13th century onwards, with the quickening of economic life after the commercial revolution, larger coins were minted to represent multiples of the denarius. These went by the name of groat (meaning simply "big"), *groot* in Dutch, and *groschen* in German, sometimes denoting multiples of 12 such as the shilling (Latin *solidus*, abbreviated in the sources as s. or sol.), but often a different amount, such as four or eight pennies in Scotland, England, or elsewhere. In France, the first *gros tournois* at 12 deniers containing 4.22 grams of silver were produced from 1266 on. In England, groats were minted beginning in 1279, and on a more sustained basis in 1351. In the German/central European lands the *Meißner Groschen* (groats from Meissen in Saxony) and the Prague groats (*Prager* or *Böhmische Groschen*) became commonplace after discoveries of rich silver deposits in the central European mining region around the Erz Mountains (*Erzgebirge*) in Saxony and Bohemia.[23] Shortly before that, in 1252, gold coins to the value of one pound or libra (at 20 solidi or shillings) had begun to be minted in Florence and Genoa. They contained 3.54 and 3.53 grams of gold respectively and attained the name of florin after the former, the

21 Lane and Mueller, *Money and Banking*. Körner's *Luzerner Staatsfinanzen*, about Swiss state finance towards the end of the Middle Ages, also contains an extremely lucid account of the variety of shapes that money could take.

22 Rössner, *Deflation*, chs. 3 and 4.

23 On the early Meissen and Bohemian groats, see, e.g., Castelin, *Grossus Pragensis*; Schwinkowski, *Das Geld- und Münzwesen Sachsens*; Krug, *Die meißnisch-sächsischen Groschen*; Haupt, *Sächsische Münzkunde*; Goerlitz, *Staat und Stände*.

place they had been invented. The Venetian *ducat*, at 3.545 grams of gold, corresponded to this standard and monetary segment; it remained in existence as a "European" currency standard by denomination until very recently.[24]

The purchasing power of a denarius or penny could be quite high. In the 7th or 8th century, it might have bought you as much as one sheep. But even in the later period, pennies could bear a high purchasing power, especially during times of deflation and economic depression in the urban market economies when the price level for consumables was low and unemployment high. Around 1350 the daily wage of a labourer in England could be as low as two denarii or pennies per day.[25] Around 1500 in the South German lands, maidservants earned as little as five florins or 1,260d per annum at the nominal exchange rate of 252d to the florin (and 12d to the shilling or groat, with the florin exchanging at 21 groats after the 1490s when the ratio had been increased from 20 to 21 groats to the florin).[26] At a supposed working year of 260 days this worked out to just under five pence per day. But the monetary payment of wages was topped up by non-monetary components, including housing, clothing, and food. This perhaps illustrates best the slightly different position and role money had in society then compared to nowadays.

Throughout the Middle Ages the shape, size, and form of the penny and its fractions such as the heller (German half-penny), *mite*, and *farthing* (one-quarter of a penny, England) varied from region to region and across countries, time, and space. As we have seen above, around 1500 the Holy Roman Empire alone had 500 open mints and only slightly fewer political authorities or states with the right to mint coins. This means that at any one point in time and space any individual would have in hand a plethora of different coins of diverse regional origin, age, and denomination. The varieties available could easily number several hundred. As coins often travelled long distances and frequently crossed political borders, the composition of the monetary stock was varied and inhomogeneous. Especially in the case of small change used in day-to-day transactions, coins circulated by weight, not tale, meaning that contemporaries often tried to check coins' purchasing power first before accepting them in transactions. (This power was derived from the amount of silver or gold the coins contained.) At least this is the impression which the rich documentation from the age of the post – 14th century peasant wars shows us: nearly every one

24 Stahl, "Making of a gold standard".

25 Sargent and Velde, *Big Problem*, p. 48, table 4.1.

26 Meticulously documented in the voluminous empirical survey Dirlmeier, *Untersuchungen zu Einkommensverhältnissen und Lebenshaltungskosten*.

of these uprisings was preceded by complaints about "evil" coins and authorities refusing to accept small-denomination coins at face value.[27]

Towards the end of the Middle Ages in the German lands, "native" coins, i.e., those struck by the local political authority, usually represented a minority of the total coin stock in circulation: around 20 to 30 per cent at best, according to the best numismatic evidence we have provided on the basis of coin hoards.[28] Encountering and using foreign coins hence represented a daily and very familiar experience for medieval people at all levels of coin use, from the small-change pennies to the medium-range groschen up to the full-bodied silver and gold thalers and florins. Moreover, old coins coexisted alongside new ones. This created many economic and social problems, particularly within the medium- and low-size value spectrum,[29] where the intermingling of old, new, foreign, and native coins created difficulties of valuation and comparison which led to conflicts over small-change coin use in day-to-day transactions. Full-bodied high-value coins tended to be more stable in terms of the silver or gold they contained; they were debased much less often than small-change coins, and contained relatively more precious metal relative to their extrinsic value or official purchasing power. Small-change coins had an inbuilt fiduciary component by being worth much less, intrinsically, than they should be, extrinsically.

In the Middle Ages rulers frequently "recalled" existing coins by ordering that all existing money be brought into the princely mint to be recoined into new money, with the new issue usually containing less precious metal than previous ones. Simultaneously the old coins were declared unlawful. This was a standard technique in the set of options available for the politics of minting. For a long time, it remained a generally accepted means of raising revenue for the ruler or state without having to obtain consent from the estates or magnates of the realm (parliament). European monetary history, when broken down into different coin types, seems to suggest that debasement was disproportionately more often an issue in the case of small- and medium-sized currencies; gold nobles and silver florins were coins which kings and their mintmasters did not usually touch when "playing around" with seigniorage, i.e., the

27 Rössner, *Deflation*, ch. 4.

28 See, e.g., North, *Geldumlauf und Wirtschaftskonjunktur*; Schüttenhelm, "Problems of quantifying the volume of money in early modern times"; Schüttenhelm, "Zur Münzprägung und Silberversorgung süddeutscher Münzstätten im frühen 16. jahrhundert". For an application of statistical techniques to numismatic method with the aim of estimating the composition of money supply on a regional basis, see Schüttenhelm, *Der Geldumlauf im südwestdeutschen Raum* and Eichhorn, *Der Strukturwandel*.

29 Rössner, *Deflation*.

option of raising what was effectively an inflation tax for funds needed in times of war, etc.[30]

What Stories Does Money Tell Us?

The stories that money can (or cannot) tell us depend in part on the epistemic vantage points of the analysis: What question do I want to solve? Which sources can I use to answer my question? What methodology? Any sound evaluation of money as an object of study, using it as a historical source, has to engage with the methodology of numismatics.[31] Ever since history began to evolve into an academic discipline in the 18th century, historians have been aware of the need to develop reliable techniques enabling them to establish the credibility and reliability of the primary sources they use in their analyses. For numismatics, this hinged upon the establishment of the metallurgical-chemical properties of the object (coin) under consideration, which could then be supplemented with contemporary corroborative evidence such as decrees, acts, and ordinances issued by the rulers and authorities behind the coins in question, in order to find out its possible "histories": how was a particular coin meant to be used? How did people use it? And so on.

If a coin is nothing more or less than a container of information, in order to retrieve or "read" this information numismatists can try to establish its weight, its precious metal content in relation to base metals or alloy, the fineness (usually in carats) of the precious metal, and subsequently its outer physical parameters (size, width). The next step is to study what is on the coin – a depiction of the ruler, or his head? Or some sort of regal insignia (sword, cross), or even a written message? It is very often the latter that most commonly enables numismatists to establish a coin's age, provenience, and authenticity. This information can only be retrieved by a simultaneous cross-check with information from the contemporary place from which the coin emerged, i.e., the mint. Usually, whenever a new type or series of coin types was minted the ruler would decree how much anyone bringing so-and-so-much silver (or gold) to his mint would get back in the shape of coins. Or the edict would say that "out of one mark of silver [a regionally varying measure, usually around 250 grams of silver of a certain fineness] strike so and so many thalers, so and so many florins, groschen, or something else." This was the mint ratio or mint price; it

30 Spufford, *Money*; Sargent and Velde, *Big Problem*; Sprenger, "Münzverschlechterung".

31 See works referred to in note 10 above.

set the basic economic and monetary parameters within which market-based exchange and commerce would usually unfold. Knowledge of the imagery on coins, the iconography and other elements of stylistic variation, is also important when it comes to determining how old a particular coin is, or whether it is forged, analogous to the way the papyrologist and the palaeographer help the historian determine whether a written act, deed, or other document is genuine or not.

Enter the monetary historian and economist. To establish how many coins circulated and how much money was available in medieval and early modern Europe is well-nigh impossible, although some suggestions have been made for medieval England.[32] The fact is that there is great variation between scholars' estimates of the composition of the monetary stock and the velocity of circulation of diverse types of coins that constituted it. This makes any quantification meaningless because the biggest factor in the equation goes by the name "guesswork". We know that no European ruler would ever have been able to effectively control the money supply in his kingdom or principality other than by regulating or limiting the issue of *new* coins, i.e., new mint runs, which sometimes meant that people needed to bring back all their old money to have it recoined. Not everyone always did so, however, as "old" money could be more valuable than new money if the latter was reduced in precious metal content, which was often the purpose of the recall. This may mean that at any one time an unknown number of old coins circulated that had not been brought back to the mint for coinage, along with an equally unknown amount of foreign but "legal tender", which made any quantitative control well-nigh impossible. Scholars have used proxies, for instance precious metal flows between world regions such as Asia and Europe or the Levant and southern Europe (Italy), to speculate about the likely development of monetary and coin supply. But obviously not all silver and gold that was shipped into and out of Europe was minted. People would use precious metal for making beakers and chalices, silver crosses for churches, jewellery, and many other things. Sometimes they would turn jewellery or other forms of plate into coins, sometimes vice versa. We know from Martin Luther's *Table Talk* that his wife Katharina of Bora would often have to sell some of the couple's domestic valuables when the household ran out of cash. Boundaries of uses between silver and gold as "money" and "luxury consumable" or commodity were fluid and constantly shifting. This is another reason why the quantification of the amount of money in circulation

32 See, e.g., Mayhew, "Numismatic evidence"; Mayhew, "Modelling medieval monetisation"; Mayhew, "Money supply"; Bolton, *Money in the Medieval English Economy*; and Allen, "Silver production".

at any one point in the late medieval and early modern European economy is, to an extent, meaningless.

Some scholars, the present one included, have tried to quantify, if in broad and very speculate dimensions, other variables of monetary mass, such as velocity. There is little agreement about the absolute size of this, but usually scholars agree that different types of coins or "segments" of the monetized component of market exchange circulated with different velocities. High-value full-bodied gold guldens and silver thalers circulated less rapidly than a badly debased penny, farthing, or groat. The small money of the common man typically had to work harder and was used more frequently in transactions and less often for saving or storing value throughout the year. More often, if these happened to be debased bad and "evil" coins (such as the black "Oppressor's Pennies" or *Schinderlinge* of the Inner Austrian hyperinflation of 1459–1460), people would try to get rid of them as quickly as possible because, as we have seen above, these coins failed to fulfil one of the crucial modern purposes, i.e., to act as a safe store of value.

Money could also be a tool of politics. As we have seen above, money in the early modern age was almost always made of metal and it nearly always contained at least some amount of precious metal.[33] At that time people defined their trust in money and its purchasing power in terms of what its content would actually buy. There was no such thing as a generally accepted level of trust in money's face value. People derived their trust from what was actually *in* these coins. That is, they tried, whenever they could, to get a better insight into each coin's intrinsic value (precious metal content) before using it in economic transaction. Low-value coins received less attention, while gold pieces were treated with considerable care, but as we have seen above, even in the context of low-level coins, disputes and conflicts arose, because coins were difficult to check but people would often know they contained much less silver than they ought to. The social conflicts and peasant uprisings of the period may thus be studied from a monetary viewpoint, yielding further important insights into the working mechanism of pre-industrial peasant and market society.[34]

In the early modern period coins' metal was usually silver and copper. And that was a big problem. High-value coins were made either from gold or silver with only a little addition of base metals. The value of the gold or silver contained in them came close to their face value or officially fixed coin exchange rate. The minor difference between their face value and the market value or

33 Rössner, *Deflation*, ch. 3 provides a detailed discussion on the problems and the available literature and theories.

34 Rössner, *Deflation*, ch. 4.

purchasing power of the precious metal they contained covered the costs of minting (*brassage*), including rents, profits, and the wages of mintmasters and their employees, as well as the regal monopoly of the state (*seigniorage*) to issue money.[35] Below them came the medium-sized coins, most commonly called groats or *batzen*, which by and large still had a fairly high content of silver so as to make them trustworthy enough for people to accept at face value. At the third level, the whole story becomes tricky. Small-denomination coins such as pennies and *hellers* were extremely costly to make relative to their value. And this led to the fact that they usually contained much less precious metal than they were worth, at least in terms of the official exchange rate. Here we have a modern or fiduciary theory/understanding of money that was inserted within a model – or the generally accepted consensus and understanding of the majority of the population – that derived the purchasing power of coined money from the value of the precious metal actually contained in it.

Minting or striking coins was physically demanding work. It was also costly, and as we have seen above, it was usually an activity carried out by professional entrepreneurs (mintmasters). Small, rounded pieces cut from large sausage-like chunks of solid metal had to be hammered out piece by piece. This was an operation to be repeated hundreds of thousands of times, especially if more small change was minted. In 1500 in southern Germany, 100 kilograms of silver would have provided the raw material for about 1.7 million hellers or 637,000 pennies containing between one and two grams of pure silver – but only 3,571 silver thalers (one thaler being equivalent to one rhinegulden or gold florin in value) containing about 27 grams of silver each, which were accordingly heavier. Clearly it was cheaper, that is, more cost-efficient, for the mintmaster, who was usually a merchant or other entrepreneur, to strike full-bodied coins. The same amount of precious metal could be processed with less input of work, hours of labour for the mintmaster and his workers, rent charges for mint and physical equipment, etc. The physical tasks and effort expended were the same regardless of whether a heller, florin, or thaler was struck. The absolute costs of striking a coin were – with only minor differences – the same for all. It is not difficult to guess where producers' preferences lay. Low-value coins were often debased more than they should have been in order to recoup the costs of minting them. Sometimes the mintmaster and his ruler would even form secret agreements to the effect that the former would give out coins that contained much less silver or gold than they should, according to official stipulation. The people who came to the mint, faithful to the official decree

35 Von Ebengreuth, *Allgemeine Münzkunde*.

that stipulated "you will get back so many shillings for so many kilos of silver" would effectively be cheated, and the ruler and his mintmaster could pocket the gain. It is quite obvious that this game could only be played while the public failed to realize the deceit. This could take as long as half a year or even more, until reliable knowledge emerged and word had spread as to the coins' true precious metal content and value had spread. The French kings used this technique as a means of financing their near-endless wars in the mid-14th century.[36] But we also know that these measures could be effective in the short run only, as people would find out after some time and adjust their expectations of the debased coins downwards. This triggered repeated and sometimes massive inflations in France around the 1350s.

However, full-bodied coins were of no use to the common man, who needed mostly pennies, groats, and hellers, if he or she entered the market. A thaler (from which the dollar got its name) such as the one minted by the Saxon dukes and electors after 1500 and in Bohemian Joachimsthal (today Jáchymov in the Czech Republic) in the 1520s had at that time a purchasing power roughly comparable to modern high-denomination currency, such as the rarely seen 500-euro banknote. Unless one is engaged in high-value trade with the aim of concealing sales and perhaps avoiding tax, a €500 note has no practical exchange or use value. No shop or petrol station will currently accept notes of a higher denomination than 200 euros (even though this refusal is not legal and cannot be sanctioned: €500 notes still represent legal tender, as does all euro currency). Thalers and Rhenish florins were used by people in larger transactions such as house sales: a good-sized farm in Saxony around 1500 could be had for 100 or 200 florins. The bulk of day-to-day transactions in the common man's market economy rested on the use of medium- and small-denomination coins. Small-denomination coins, however, were usually minted at a loss. At least this is what surviving mint documents from the period and calculation exercises would suggest.[37] This explains why so many rulers, princes, and kings were reluctant to strike small change such as pennies, hellers, and farthings. There was a lot of money to be made in making money when the mint was used as a profit-making enterprise (by the mintmaster) or to reap a windfall or inflation tax gain by raising seigniorage and brassage; there was, conversely, more of a loss in the making of small-change coins, which often did not bear out the costs of production.

36 Spufford, *Money*.
37 Munro, "Münzkosten"; Sprenger, "Münzverschlechterung", p. 132.

There were lots of people with a stakeholder interest in the business of making coins, as is demonstrated by the voluminous range of expert references, monetary ordinances, and other state documentation that was produced in preparation for, during, and in the wake of major currency reforms at territorial, imperial, and imperial circle (*Reichskreise*) levels. In fact, this type of inflationary legislation after *c.*A.D. 1400 pays lively testimony to the rise of the early modern bureaucratic state.[38] Very often monetary authorities such as princes, kings, dukes, and counts covered their loss by heavily debasing small coins, putting them into circulation far below their face value.[39] People who were offered underweight coins naturally viewed them very sceptically. They could never be sure if they would be able to use them at face value again in future transactions. This greatly reduced these coins' functionality as a means of storing wealth for investment or future transactions. And that is where all the problems began: as we have seen above, many a medieval German peasant uprising came about at least in part because the small-change coins were perceived to be bad and represented a problem, especially when it came to relations between peasants and lords, and dues paid by the former to the latter.

Conclusion and Areas of Further Research

Coins can thus tell us a variety of stories: about magic, superstition, economic and monetary relationships, and how, for instance, it is possible to explain inflation or deflation by knowing something about the quantity of coins that circulated. They also reveal something of the politics of "making money": of minting, running a mint, or charging seigniorage, of regalian rights which usually dictated that a prince, duke, or king was to be given a fixed share of everything that came from underneath "his" soil, or out of "his" mountain. Money could also give rise to disputes and contested claims, for instance due to the uncertainty and principal re-negotiability of coin exchange rates, which gave rise to considerable conflict and social unrest. Money in this way also reflected asymmetrical power relationships between lords and the men who had to pay their taxes and dues and whose possibly hard-earned monies would not be accepted at face value by the ruling authorities. Of course – but this hardly bears mentioning – money could also be the cause of massive economic inequality.

38 Volckart, *Eine Währung*; Rössner, *Deflation*, ch. 3 for provincial and territorial currency reforms in the 15th and 16th centuries.

39 Rössner, *Deflation*, passim, esp. ch. 4; and Sargent and Velde, *Big Problem*.

Thus money is much more – and less – than an instrument of exchange. It has been invested with cultural and moral meaning. It has always carried social meaning and been a great source of inequality, on different levels, as well as a bearer of messages which other more standard primary sources will never convey to the historian. They represent an invaluable addition to the rich range of sources for historians of objects who should, when evaluating new trends, give some effort to the rigorous methodological training associated with the discipline of numismatics. Together with some monetary and economic history, spiced with a pinch of cultural turn, with a heavy dose of straight-edge historical method as seasoning, this should make for a tasty and interesting meal.

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PART 3

Themes in the Study of Medieval Money and Coinage

CHAPTER 8

Money and Society

Rory Naismith

Introduction

In its most basic sense, money is a means of measuring and mediating value as understood by human society. It does not exist by nature, but by the imaginative impulse of those who need to engage in acts of exchange. For this reason diverse forms of money have taken shape throughout history across the globe (and continue to do so).[1] Money, it might be said, is the creation of society, and especially of more complex societies marked by diverse interactions. But the length of and variety in this relationship mean that it has often come full circle: money has profoundly affected society, and not always in the ways one might expect. The traditional interpretation of the influence of money in modern society – which has in turn affected readings of other areas and periods – goes back to foundational figures in history and the social sciences such as Karl Marx, Georg Simmel, and Marcel Mauss, and holds that the rise of monetization in and of itself would erode more affective human bonds.[2] But an important strand of recent scholarship developed by anthropologists and sociologists of the modern world has pruned back this narrative; instead, ways of incorporating money into social processes have come to the fore.[3] Calculation and quantification are just one part of the story, and by no means always the dominant one, be it in the modern United States, Africa, Indonesia, or the Pacific Islands. The impact of money on any particular community depends on many more variables than the presence of money alone.

The application of this approach to medieval Europe is the central goal of this chapter. How did medieval people actually view and use money, and what impact did it have on their society (and vice versa)? This is, of course, a vast topic. Coins, ingots, and other means of exchange only became money when they factored into valuation or exchange, in relation to abstracted units of account.

1 See, for example, Maurer, "The anthropology of money", and chapter 3 in this volume.

2 Marx, *Economic and Political Manuscripts of 1844*, pp. 165–69; Simmel, *The Philosophy of Money*; and Mauss, *The Gift*, pp. 65 and 76.

3 Zelizer, *The Social Meaning of Money*; and Keane, "Market, materiality and moral metalanguage".

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Money played a central role in articulating all kinds of relationships, and in that sense was at the heart of medieval society, to the extent that the monetary aspect of human interaction risks losing all analytical value if one does not keep an equally sharp focus on the form and context of that interaction. Why did *that particular* individual use *that particular* form of money for *that particular* payment? And how would all parties in such a transaction have understood its significance? Close scrutiny of specific features is therefore essential, and conceiving of medieval Europe as a single society for these purposes verges on the banal: meaningful conclusions can only emerge from closer chronological, geographic, and thematic focus. The first two of these are covered to a greater degree in the chronologically specific chapters elsewhere in this volume; here, the focus is on thematic issues of money in medieval societies. Two central themes structure this chapter, which can be roughly broken down into what one may call pragmatic and symbolic segments, though in practice it will become apparent that there are important areas of overlap between them. Of necessity these approaches are schematic and selective. Pragmatic considerations revolve around how people went about using money, and how the availability of different coins or other forms of money helped or hindered that process. This includes the various settings in which money was used, in many kinds and levels of commerce as well as other exchanges (gifts, rents, taxes, etc.). Symbolic aspects cover how thought about, as well as use of, money interfaced with structuring principles of society, above all religion. In this chapter the Christian religion will be the focal point, though parallels can be drawn with Islamic and Jewish beliefs and the crossovers among their respective traditions. Related to this is the issue of money and the law: who held authority over money, and how were they to uphold that power?

Both areas have a strong tradition of scholarship behind them, driven by debates in a range of related subjects. Philosophical treatises of the later Middle Ages have prompted sharp discussion of concepts of money and its regulation;[4] so too have studies on medieval Jewry.[5] The scale of the question of how money interfaced with medieval Christianity means that approaches have of necessity been quite targeted.[6] Much work on the actual use of money in medieval society revolves around the large-scale operation of the medieval

4 Wood, *Medieval Economic Thought*.

5 Johnson, “Textual sources for the study of Jewish currency crimes in thirteenth-century England”; Mundill, *The King’s Jews*, esp. pp. 21–42; Todeschini, “The incivility of Judas”; and Mell, *The Myth of the Medieval Jewish Moneylender*.

6 Some degree of overview can be obtained from Le Goff, *Money and the Middle Ages*; see also Todeschini, “Money and religion”.

economy. Money can be viewed as a facet of the economy in several ways: as a gauge for levels of demand and wealth, including the rise and fall of rents, wages, and prices for basic commodities;[7] and as a powerful factor in economic life in and of itself.[8] Nicholas Mayhew discusses this dimension of money elsewhere in this volume, for which reason more attention is devoted here to the trees than the wood, and particularly to how various groups in society (including those outside the aristocratic and commercial elite, among them the peasant majority) interacted with money. Dedicated treatments of this theme are few. An elegant and succinct survey of the role money played in later medieval society is Jacques Le Goff's *Money and the Middle Ages*, in which he develops a persuasive view of money belonging essentially to the moral rather than the economic sphere of life.[9] Peter Spufford's magisterial volume on *Money and its Use in Medieval Europe* remains the foundation of serious research. It is particularly outstanding for combining analysis of the different strata of money, from the highest levels of academic thought, regulation, productivity, price-setting, and bullion flow down to the experience of individuals of diverse status.[10] Much of its strength derives from a grasp of the voluminous later medieval documentary and literary material relating to money (complemented by Spufford's essential handbook of medieval exchange rates).[11]

Since Spufford's book was written, there has been a transformation in the scale and nature of material evidence for coin-use. Finds of coins have proliferated in subsequent decades, thanks in large part to metal-detectors becoming more widely used in both amateur and professional settings.[12] Laws regarding their use vary significantly between countries,[13] with the result that large-scale

7 For a classic example, see Phelps Brown and Hopkins, *A Perspective on Wages and Prices*; Farmer, "Prices and wages"; Clark, "The long march of history"; and Mayhew, "Modelling medieval monetisation".

8 Bolton, *Money in the Medieval English Economy 973–1489*.

9 Le Goff, *Money and the Middle Ages*, esp. pp. 142–50.

10 Spufford, *Money and Its Use in Medieval Europe*.

11 Spufford, *Handbook of Medieval Exchange*.

12 Dyer, "Peasants and coins"; Coupland, "Carolingian single finds and the economy of the early ninth century"; Coupland "The use of coin in the Carolingian Empire in the ninth century"; and Naismith, "The social significance of monetization in the early Middle Ages".

13 The systems which give most freedom to amateur searchers and have the largest recorded bodies of new find material are those of England and Wales (PAS) and the Netherlands (NUMIS). In Denmark, a national scheme keeps records of finds made by amateurs and encourages collaboration with archaeologists. Amateur use of metal-detectors is for the most part heavily restricted elsewhere, though detectors are now widely used by professional archaeologists.

comparisons of find material remain problematic. It is now possible, however, to examine in detail the material traces of coin-use at individual sites (towns, rural settlements, churches, and more) in order to make qualitative comparisons between regions across Europe.[14] Conclusions derived from these efforts can be placed alongside research based on documents and other texts, dovetailing effectively to show complex and integrated (if still highly variable) levels of use.[15] A whole new dimension of money in society has opened up.

The Pragmatics of Money in Society

A basic problem which confronted users of medieval money for over a millennium was how to cater for different levels of exchange in society. In modern times, it is taken for granted that everything from small change – pennies and cents so low in value that their loss is of little concern – up to quite high-value notes should be represented in plentiful and reliable form as coin or paper, with an extensive range of cheques, credit cards, and electronic transfers for handling even very large sums easily.[16] Such was simply not the case in the Middle Ages. On the one hand, medieval society was monetized to its very core, in that foodstuffs, land, houses, all other commodities, human lives and bodies, and in some contexts even religious virtues and vices were rated in monetary terms. On the other, the actual mechanisms available for carrying out these transactions were often both limited and limiting. To some extent, this was accepted by medieval men and women simply as the natural state of affairs, and they found ingenious ways to adapt and work around the options open to them. But the disjuncture between the breadth of money as a structuring concept for ideas of value and the forms of money as experienced in day-to-day life is a striking feature of medieval society.[17]

Generally the difficulty was that the prevailing units of currency were comparatively valuable, making smaller transactions impractical. Probably the most extreme development of this was in the immediate post-Roman period.

14 See, e.g., Kelleher and Leins, "Roman, medieval and later coins from the Vintry, City of London"; Colardelle and Verdel, *Les habitats du lac de Paladru* (*Isère*) *dans leur environment*, pp. 284–87; and Stoess, "Die Münzen". An important early example of this approach is Rigold, "Small change in the light of medieval site-finds".

15 The Carolingian polyptychs have been used effectively in this way: see Petry, "Das Geldzinse in Prümer Urbar von 893"; and Devroey, "Activité monétaire, marchés et politique à l'âge des empereurs carolingiens".

16 Cf. chapter 3 in this volume.

17 A classic summation of this is Bloch, *Feudal Society*, vol. 1, pp. 66–71.

Late Roman currency included a vast and complex base-metal coinage, which far outweighs that of the Middle Ages in quantity of modern finds. There is no doubt that it was the form of money most of the empire's populace used on a daily basis (though the volume and intensity of its circulation varied among regions, and between town and country).[18] Gold and, to some extent, silver coinage of significantly higher value was also issued. In A.D. 445 butchers supplied Rome with pork at a price of one gold *solidus* for 200 lbs (90.7kg).[19] It was this denomination, the solidus, and its divisions in gold which dominated state income and expenditure, and against which base-metal coins were tariffed. From the 4th century onwards the ratio of base metal to gold fluctuated widely, generally to the detriment of those in society who dealt mainly in base metal rather than gold: thus under Justinian I the value of the solidus rose from 7,200 bronze *nummi* in 539 to 12,000 by 565. A senator of the 380s took up the cause of money-changers who suffered from the "surging value of gold",[20] and the end result was decried by the anonymous author of the 5th-century tract *De rebus bellicis*, who lamented how "the private mansions of the powerful, filled from this flood of gold, were turned into more signal instruments for the oppression of the poor".[21]

The situation in the post-Roman western kingdoms of the 5th century and after was better in some respects and worse in others. After the end of effective Roman rule, only gold coinage survived on any scale, preserved because of its central place in state finance. Silver and base-metal currency quickly withered. Ostrogothic Italy and Vandal Africa maintained a more substantial range of denominations, as (on a more limited scale) did the East Roman or Byzantine territories of Italy and Africa. But elsewhere in the west, by the end of the 6th century fresh coins of silver and copper alloy had effectively vanished. There was no longer even an option of low-value coin. On the other hand, the volatility which had plagued previous generations using base-metal currency was no more. Peasants may well have had less cash extracted from them, and more incentive to engage with an increasingly stable market involving coined money on a more restricted level. This would have contributed to the relative golden age of lighter exploitation experienced by the peasantry in the post-Roman centuries,[22]

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18 De Ligt, "Demand, supply, distribution", esp. pp. 39–41.

19 *Codex Theodosianus: Novellae* XIII.4 (Valentinian III, 445), vol. 2, pp. 95–96. See also Jones, *The Later Roman Empire, 284–602*, pp. 702–3.

20 "Auri enormitas crescens". Symmachus, *Relationes*, 29, ed. Seeck, pp. 303–4.

21 "Ex hac auri copia privatae potentium repletae domus, in perniciem pauperum clariores effectae, tenuioribus videlicet violentia oppressis". *De rebus bellicis* 2.1, ed. Ireland, pp. 5 and 26.

22 Wickham, *Framing the Early Middle Ages*, pp. 12 and esp. 519–88.

though it must be kept in perspective: down to the 13th century (and in many areas much later), most extraction of peasant surplus had been in kind and/or labour rather than in cash.[23]

In the Frankish, Visigothic, and Anglo-Saxon kingdoms, coinage therefore meant gold. Currency had contracted to just the most valuable component of the late Roman system, inevitably imposing severe limits on the degree of coin-use, especially outside the elite. One concession to the high value of the coinage was that the lowest traditional denomination (the *tremissis*, one third of a solidus) became the preferred coin in production, even though the solidus retained primacy in terms of units of account. The quantity of gold in circulation from the late Roman period onwards also meant that its use was comparatively widespread. It could certainly be found in the hands of users well below the elite, such as Egyptian peasants of the 4th century, and some tenants in 6th-century Gaul who paid rents in gold.[24] The volume of modern finds of gold pieces from the 5th to 7th centuries also points to its comparatively vibrant and widespread use.

Gold was, nonetheless, prohibitively valuable for a high proportion of transactions, and the fact is that inconveniently high-value denominations (by modern standards) dominated much of medieval Europe. Even the silver penny or *denarius* – introduced in its earliest form in England, Francia, and Frisia in the later 7th century – had relatively substantial purchasing power. Tenth-century laws from England set the standard compensation value for an ox at 30d., a cow at 20d., a pig at 10d., and a sheep at 5d.,[25] and the maximum prices established by Charlemagne at Frankfurt in 794 stipulated that one silver denarius should buy between 12 and 25 two-pound loaves of bread, depending on whether they were made from wheat, rye, barley, or oats.[26] The early Middle Ages were particularly extreme, but throughout the period a single penny commonly had considerable buying power in terms of modern pounds, euros, or dollars, perhaps several tens in the 8th century. In England in 1473 bakers were ordered to sell three 5½-lb. loaves for one penny,[27] this at a time when the daily wage for an agricultural labourer was generally less than 4d.[28]

23 De Ligt, “Demand, supply, distribution”; and Erdkamp, *The Grain Market in the Roman Empire*, pp. 101–4.

24 Banaji, *Agrarian Change in Late Antiquity*, pp. 39–88; Banaji, “Precious metal coinages and monetary expansion in late antiquity”; and Naismith, “Gold coinage and its use in the post-Roman West”.

25 VI Æthelstan 6.2, in Liebermann, *Die Gesetze der Angelsachsen*, vol. 1, p. 176.

26 “Council of Frankfurt”, c. 4, p. 74.

27 For this and other examples, see Davis, *Medieval Market Morality*, pp. 231–41. But see also chapter 7 in this volume for inconveniently *low*-value coins.

28 Clark, “Long march”, pp. 99–100.

For several centuries the silver penny was the only denomination minted on any scale in western Europe. Its spread and adoption in northern and eastern lands, along with the system of account associated with it, was one manifestation of the extension of mainstream European cultural norms in the 11th to 13th centuries.[29] Manipulation of the penny – the cornerstone of monetary life – frequently proved profoundly disruptive. On 10 March 1223, memories of a monetary turning point formed the crux of a legal case heard in Umbria, in which a tenant of the monastery of Sassovivo questioned whether the annual render from a property leased some 70 years earlier had been stipulated in Pavian or Luccan coin (the latter being significantly less valuable). Witnesses described how the Luccan currency had gained prominence in the area only after the transaction, when Emperor Frederick Barbarossa (1155–1190) had "ruined" (*devastavit*) the Pavian coinage.[30] This change had left a very real and memorable impression, and problems arising from such situations exercised the minds of medieval jurists.[31] The exact outcome of currency manipulation was highly variable. Strengthening it (i.e. increasing its fineness) raised the real value of fixed payments such as rents and tolls, while debasement, as at Pavia under Frederick, had the opposite effect, and could serve, deliberately or otherwise, to reduce the value of individual coins and make the currency more versatile.[32] Some of these consequences could also emerge from inflation generated by other pressures, as happened in England in the decades around 1200 when a combination of forces led to a jump in prices despite a relatively pure currency.[33] In general, however, changes to the central monetary denomination affected prices, which in turn destabilized society as a whole.

For peasants, dealing with the monetary economy was by no means a common, welcome, or easy undertaking, but all segments of medieval society had to deal with fundamental practical problems posed by their currency. Not only were few low-value coins available, but between the end of widespread gold currency in the 7th and 8th centuries and the appearance of new large silver and gold denominations in the 13th and 14th,[34] there was also little cash available to facilitate high-value transactions. Members of the elite had

29 Bartlett, *The Making of Europe*, pp. 280–87.
30 *Le carte dell'Abbazia di S. Croce di Sassovivo*, vol. 6, pp. 34–38 (no. 21).
31 Ernst, "The legists' doctrines on money and the law from the eleventh to the fifteenth centuries".
32 Cipolla, "Currency depreciation in medieval Europe"; and Morrisson, "La devaluation de la monnaie byzantine au XIe siècle".
33 Harvey, "The English inflation of 1180–1220", pp. 16–24; Latimer, "The English inflation of 1180–1220 reconsidered"; and Bolton, *Money*, pp. 176–87. See also chapter 9 in this volume.
34 Watson, "Back to gold and silver".

several other options besides vast quantities of silver coin. Foreign gold pieces were sometimes pressed into use, such as the *mancosi* of 8th- and 9th-century Italy[35] or the bezants (Byzantine gold coins) and Muslim gold pieces of the 11th to 13th centuries.[36] Precious metal objects also served to store and convey large amounts, as when Otbert, bishop of Liège (1091–1119), had to raise the vast sum of at least 1300 silver marks (and three in gold) as a loan for the duchy of the departing crusader Godfrey of Bouillon. Doing so involved ransacking the gold and silver reserves of churches in the diocese.[37] Ingots were used from time to time, especially in the later 12th century and after.[38] Bills of exchange emerged as a mechanism for substantial sums to be transferred remotely, initially (in the later 12th century) among merchants but quickly coming to be used much more widely.[39] Reducing the need to move large quantities of gold or silver also served to encourage investment of cash instead of hoarding.[40]

Bills of exchange emerged and prospered in contexts where the existing money supply was especially rich and dynamic. The decision to engage in direct commodity exchange, or to use precious metal objects or goods instead of cash, was driven in some times and places by the sheer scarcity of coined money, not the lack of a large denomination. The medieval money supply had to work much harder than that of many modern economies, in that coins changed hands significantly more often.[41] Hence it sometimes happened that money simply was not available when it was needed. Even a 15th-century East Anglian gentleman had to wait overnight in Norwich in the hope of receiving payment in cash from a debtor who in turn awaited payment.[42] Small change in particular was often in short supply, if it existed at all. It cost as much time and labour to produce a halfpenny or farthing as a higher-value coin such as a

35 The origin of these has recently been the subject of renewed debate: Prigent, "Le mythe du mancus et les origines de l'économie européenne"; Delogu, "Il mancus è ancora un mito?"; and Cosentino, "Ricchezza e investimento della Chiesa di Ravenna tra la tarde antichità e l'alto medioevo", pp. 431–39.

36 E.g. Cook, "The bezant in Angevin England"; and Carpenter, "Gold and gold coins in England in the mid-thirteenth century".

37 The several sources discussing Otbert's fundraising are listed and discussed in Murray, "Money and logistics in the forces of the First Crusade", pp. 239–40. Some, but not all of this amount was probably minted into coin.

38 Spufford, *Money*, pp. 209–24. For the much more extensive use of bullion in monetary contexts among the Vikings, see chapter 5.

39 Spufford, *Money*, pp. 254–59; and Spufford, *Power and Profit*, pp. 34–38.

40 Spufford, *Money*, pp. 259–62.

41 Mayhew, "Modelling", pp. 68–71.

42 Mayhew, "The monetary background to the Yorkist Recoinage of 1464–1471", pp. 69–72. Cf. *Paston Letters and Papers of the Fifteenth Century*, vol. 1, p. 593.

penny, and so making small coins was unpopular among those charged with responsibility for minting.[43] Flooding the market with low-value coins could create quite different problems, leading to inflation of good silver and gold and even refusal of low-value pieces, as happened in Scotland around 1480.[44] Yet small change was popular and desirable, and served a distinct purpose. One female buried in the East Smithfield plague cemetery in London, which contained victims of the Black Death in the mid-14th century, had a purse of low-value coin at her belt for easy access and a concealed cache of higher-value pieces in her armpit.[45] "Black money", referring to the lowest-value coins of highly debased silver in later medieval Europe, was the backbone of monetary exchange for poorer members of society.[46] In the early Middle Ages, halfpennies were made on a limited scale. An anecdote in the 9th-century miracles of St Philibert revolved around the rarity of *oboli* or halfpennies.[47] In 10th- to 13th-century England, halfpennies and farthings made by cutting full coins into halves or quarters occur with considerable frequency on some archaeological sites, suggesting that these makeshift low-value pieces enjoyed considerable popularity.[48] After the first appearance of a limited range of (relatively) small change in the late 13th century, the English parliament was beset many times with complaints that smaller denominations were too scarce and the currency in general too dear.[49]

A simple way of managing the limitations of the monetary system was to vary a commodity's quantity (by weight or volume) in relation to a standard monetary value, rather than expect users to find variable and unwieldy sums to buy a fixed quantity. Charles the Good, count of Flanders (1119–1127), was said to have decreed in a time of famine that the regular penny-sized loaves should be halved so that people with only an obol to offer would still have the means to buy food.[50] In times of both need and plenty, there was much regulation of the weight of a loaf of bread worth a given small sum. Other techniques for dealing with a high-value currency might have included bulk purchases or extensive use of personal credit or lower-value commodities. Some of these mechanisms are discussed in detail elsewhere in this volume in the

43 Sargent and Velde, *The Big Problem of Small Change*.
44 Gemmill and Mayhew, *Changing Values in Medieval Scotland*, pp. 125–28.
45 Sloane, *The Black Death in London*, pp. 98–99.
46 Munro, "Deflation and the petty coinage problem in the late-medieval economy"; and Spufford, *Money*, pp. 329–31.
47 See discussion below.
48 Kelleher and Leins, "Roman", p. 180.
49 Desan, *Making Money*, pp. 104–7.
50 Walter of Thérouanne, *Vita Caroli comitis Flandriae*, p. 38.

chapters by Bill Maurer and Gaspar Feliu. However, for much of the population the problem would have been tempered by their only having to use money infrequently – well below 50 per cent of all transactions would have involved coin before the 13th century, and been heavily concentrated in the most highly urbanized and monetized areas of Italy and northern Europe.[51]

Agricultural or pastoral production occupied the bulk of the population throughout medieval Europe, and those who lived on the land would have been able to produce at least some of their own food and help make up any shortfall by bargaining with friends and family. Nonetheless, it is unlikely that many (if any) peasants were entirely self-sufficient, and a cocktail of money rent, sale of surplus, cash crops, and wage labour all served to foster use of money in the countryside. The balance and effect of these processes depended heavily on local conditions. Areas with a dispersed and less integrated population tended to see less cash filter into society. Directions of bullion flow were also a factor, along with the presence of wealthier landowners who provided a powerful centripetal force, especially in more marginal cases.[52] These challenges were already being faced very early in the Middle Ages: Carolingian peasants taking crops to market and returning with a few coins (often to pay rent) was a common topos of 9th-century miracle stories,[53] and the bawdy 11th-century fable *Unibos* is replete with money-grubbing peasants wheeling and dealing in cash.[54] Monetization of the countryside was thus by no means a new phenomenon in the later 12th and 13th centuries, although the availability and impact of money (not least through quickening inflation) stepped up markedly.

The encroachment of cash brought mixed blessings for the rural population. For those engaged in agricultural toil, dealing in money offered a higher degree of flexibility in use of resources – above all the option of more and better food and less time working, but also consumer goods or even land purchases – as well as the capacity to do business with a wider range of partners.[55] Money also created new uncertainties. Fixed money rents were prone to lose real value as a result of inflation; as a result landlords sometimes had to find alternative forms of income and tenants on the whole stood to benefit, although there was as much variation in the experience of peasants as in their level of material wealth.[56] In late 12th- and 13th-century Picardy, for example, rising availability

51 Cf. the figures cited in Naismith, *Money and Power*, pp. 285–86.

52 Wickham, "Rethinking the structure of the early medieval economy"; and Naismith, "Social significance", pp. 30–37.

53 Naismith, *Money and Power*, pp. 280–82; and Coupland, "Use of coin", pp. 257–59.

54 *Versus de Uniboue*.

55 Hatcher, "Unreal wages", p. 21.

56 Spufford, *Money*, pp. 243–44.

of money led to monetization of rents on peasant holdings.[57] Richer peasants with substantial produce benefited, as their income significantly exceeded the rent demanded from them, whereas their poorer counterparts who could not sell enough of their own produce to raise the rent had to undertake additional paid labour (which came in irregular fits and starts in pre-modern agrarian societies).[58] Whatever they did sell was food which they did not have to eat, and tended to come onto the market at times of plenty when prices were low.

Increased use of money thus conspired in several ways to leave poorer peasants in a precarious situation. Wealthier members of society were capable of manipulating the rhythms of the agricultural economy to their advantage when crops were placed on the market. Large-scale landowners, such as aristocratic households or monasteries, represented significant consumers as well as producers, and would be able to force low prices onto numerous small producers at harvest, as well as charge exorbitant sums for their surpluses in times of need. This practice was directly challenged at the council of Paris in 829.[59] Lords could also adjust the form of their income to strengthen their own ability to profit from growing urban markets. In both England and Tuscany, the 13th and 14th centuries saw a relative resurgence in labour services and renders in kind. This has been interpreted as an attempt to generate more produce for sale to urban buyers – and to detract from tenants' capacity to sell directly to those same buyers.[60] Money hence made the rural economy more malleable, but opened up new avenues to subtle exploitation.

Thinking about the Symbolism of Money: Law and Religion

As noted above, money was everywhere in medieval society even if coins came and went. Law-codes promulgated in the post-Roman kingdoms of western Europe rated legions of infractions in monetary terms, including damage to body parts down to individual toenails and fingernails.[61] Payments in *res valentes* – "goods to the equivalent value" – were still thought of in terms of standardized denominations in gold and silver.[62] The most prevalent system was that of

57 Fossier, *La terre et les hommes en Picardie jusqu'à la fin du XIIIe siècle*.

58 Hatcher, "Unreal wages", pp. 8–10.

59 "Council of Paris", pp. 645–46.

60 Spufford, *Money*, pp. 243–45; Wickham, *The Mountains and the City*, p. 229; and Kotel'nikova, "Rendita in natura e rendita in denaro nell'Italia medievale (secoli IX–XV)".

61 Miller, *Eye for an Eye*; and Oliver, *The Body Legal in Barbarian Law*.

62 See chapter 2 in this volume.

pounds, shillings, and pence, which originated in early medieval Francia and survived in one form or another until the 1970s. Many other methods of rating value were also tied notionally to quantities of precious metal, some of which were represented by coins. Others looked to different standards of value: early medieval Irish laws used slaves and cattle rated by age and gender,[63] while standardized lengths of fabric fulfilled this role in later medieval Iceland.[64] In all areas, the relationships of different coins, metals, commodities, and units of account could be positively mind-boggling. The advent of gold and more diverse silver denominations in the 13th century enabled coined money to play a larger role, though the variety and instability of currency still posed an ongoing challenge.[65] The central point is that thought in terms of money was ubiquitous, and had been since before the beginning of the Middle Ages.

As a fundamental principle in society, money factored into larger concepts of organization in a range of ways. It was closely associated with notions of structure and order. Each individual had his or her own monetary price, varied by class and gender, to be paid as compensation to the family by the killer in case of death.[66] Cassiodorus (d. *c.*585) drew a comparison between the number of denarii in a solidus and the number of years in the age of the world.[67] In his laws and other writings from late Anglo-Saxon England, Archbishop Wulfstan (d. 1023) associated proper regulation of coinage with morality and stability in a God-fearing kingdom.[68] More pragmatically, large-scale reorganization of money often went hand in hand with adjustments to systems of weights and measures, as in Charlemagne's strictures laid down at the council of Frankfurt in 794.[69] The treatment of money in legal texts from across the Middle Ages underscored its integral role in society, and the interest rulers had in its regulation. Although some texts were focused solely on money, they commonly treated it alongside urban and trading customs, giving an important clue to what associations money had. Numerous charters of the Ottonian and Salian

63 Breatnach, "Forms of payment in the early Irish law tracts", shows how these did not always correspond to actual slaves or cattle–and in some cases could even be applied to gold or silver.

64 Byock, *Medieval Iceland*, pp. 79–80.

65 A point well formulated in Bloch, "Économie-nature ou économie-argent", p. 14.

66 See n. 61.

67 Cassiodorus, *Cassiodori senatoris Variae* I.10, p. 19.

68 V Æthelred, c. 26.1, VI Æthelred, c. 31 and 32.1–2, and II Cnut, c. 8, in Liebermann, *Gesetze*, vol. 1, pp. 242–43, 254–55 and 314–15.

69 "Council of Frankfurt", cc. 4–5, p. 74. See more broadly Ernst, "Mensura et mensuratum".

eras granted local rulers in the Reich rights over markets, tolls, and minting in a given location.[70]

A central concern raised in these charters and other documents was who should profit from the coinage and by how much. A detailed set of agreements from mid-11th-century Barcelona records the payment (in grain) and other conditions expected from successive mintmasters to whom the count farmed out coining operations.[71] These texts carefully spelt out that the moneyers were to maintain the standards of the coinage as established by customary usage. In the 12th century, a new form of legal stipulation emerged in parts of what is now France and northern Spain, in which rulers pledged to maintain the coinage at its traditional standard in return for a levy on other goods to offset the profit he or she would have made by debasing it. In one early example from Catalonia issued in 1118, the stability of the coinage was just one element of a more general peace which the payment was raised to secure; later, the tax was tied more specifically to the coinage.[72] But probably the most abiding concern related to the monetary system that emerged in legal discourse was that of standards and their preservation. Any infringement of the integrity of the coinage – including clipping and similar crimes as well as forgery – was tantamount to undermining the ruler's own authority, and carried appropriately heavy penalties. In 10th-century England, King Æthelstan (924/925–939) stipulated that a moneyer caught issuing defective coin would lose a hand and it would be erected over the mint building.[73] Key English legal compilations of the 12th and 13th centuries (including Glanvill and Bracton) built on the Anglo-Saxon foundations to include forgery among crimes of *lèse-majesté* which incurred capital or similarly severe punishments.[74] How often these commands were actually enacted is unclear, but in 1125 Henry I (1100–35) had a large number of moneyers mutilated for (allegedly) producing debased coin.[75]

This bond between money and legal authority held fast across the Middle Ages: rule of law underpinned the use of money, especially as the reach of the

70 Kluge, *Deutsche Münzgeschichte von der späten Karolingerzeit bis zum Ende der Salier* (*ca. 900 bis 1125*), pp. 101–4.

71 Botet y Sisó (ed.), *Les monedes catalanes*, vol. 1, pp. 200–2. Cf. *Els pergamins de l'Arxiu Comtal de Barcelona de Ramon Borrell a Ramon Berenguer I*, vol. 3, nos. 468, 520, and 678.

72 This phenomenon is studied in detail in Bisson, *Conservation of Coinage*. For the 1118 text, see Balaguer, *Història*, pp. 342–43 and docs. 72–3.

73 II Æthelstan c. 14.1, in Liebermann, *Gesetze*, vol. 1, pp. 158–59.

74 Desan, *Making Money*, pp. 87–89.

75 The purge (which involved loss of testicles as well as hands) was widely reported in contemporary annals and histories: see Allen, *Mints and Money in Medieval England*, pp. 27–29.

latter extended and the range of denominations and instruments expanded.[76] Enforcing payments and respect for currency in a time of fast-paced change was a challenge both to users and legislators, with the interests of the two sometimes clashing sharply. England in the late 13th century was faced with a dangerous monetary situation, in which imitations of native money (the so-called "crockards" and "pollards" issued in the Low Countries) circulated extensively and threatened to drive the better-quality English pennies out of use. The king, Edward I (1272–1307), and his agents responded around 1300 by fixing prices for basic commodities with the assizes of bread, ale, and wine, at the same time decreeing that the foreign imitations would be accepted at half the value of equivalent sterling pennies. In principle, this policy should have been beneficial to holders of foreign coin, as their intrinsic value was greater than a halfpenny, so having them reminted would have both injected silver into the domestic currency and provided a profit for individual owners. Many people, however, resisted the revaluation, believing that crockards and pollards would soon be demonetized altogether and not wanting to be lumbered with unspendable coin. Hence, the king's courts filled up with tradesmen who had rejected foreign coin or hiked their prices when faced with them. Others came to court over another royal provision – that debts incurred before the adjustment in value of crockards and pollards had to be paid at the face value of current money, which served to antagonize creditors who received imitations in settlement (albeit at appropriate value) and also debtors who sometimes found the same amount of money coming out at a lower value because of its imitative content.[77] During this challenging period, administrative decisions aimed at restoring the stability and status of the English currency, implemented through legal enactments, conflicted with the wariness of society as a whole. The basic aims of law and the needs of society were not always identical, and money (integral to both) was a potential flashpoint.

There was also a law beyond the law which governed the role of money in medieval society. Christian religion exerted a powerful influence on how money was conceived of and used, not least through influencing the outlook of lawmakers, as mentioned above. But the effects of religious thought on money ran much deeper. From the later years of the Roman Empire onwards, Christian iconography became commonplace on coinage, and was ubiquitous in the Middle Ages.[78] Placement of a cross, saint, religious invocation, or similar on

76 See also chapter 1, this volume.

77 Desan, *Making Money*, pp. 141–49. See also Mate, "Monetary policies in England, 1272–1307"; and Prestwich, "Edward I's monetary policies and their consequences".

78 For a case study, see chapter 12, this volume.

coined money invoked a universal element of social identity, and might carry strong local resonance; it also made crimes against the currency into crimes against God as well as the secular authorities.[79]

The use of money interfaced with medieval Christianity in a number of ways. Coinage was recognized as a foundational mechanism in the running of society, including on the part of the Church. Tithes and other dues were commonly expected in cash, as were pious gifts and a host of other ecclesiastical payments. One tranche of largely English silver coins was found in the Roman Forum, with a pair of fasteners identifying the hoard as a gift for Pope Marinus II (942–946).[80] No stigma was attached to expressions of devotion in money, at least on the part of laymen: fears of simony (i.e., exchanging the cure of souls for money), especially during and after the papal reform movement of the 11th century, introduced more caution about the influence of money on clergy.[81] Miracle collections include numerous stories of how those who stole money from a church or withheld a promised donation suffered divine retribution.[82] A dramatic story in the *Miracula sancti Benedicti* of the 11th century illustrates very effectively how money was incorporated into divinely governed society. A servile peasant named Stabilis fled from his master, the monastery of St Benedict at Fleury, and stopped paying the *census* due to the church. Later, a monk from Fleury happened to spot Stabilis at the new home where he had set himself up in Burgundy. The monk tried to reclaim St Benedict's rightful property, but Stabilis resisted, and the dispute was eventually put to a trial by combat. Stabilis had not expected the case to proceed so far, and at the beginning of the fight he took a halfpenny (*obolum*) out of his sleeve and threw it on the ground as a "proof of his servitude" (*servilis testimonii*). Miraculously, the coin instantly grew to be as big as a shield, defending Benedict's property, signalling the saint's victory in the case and forcing the unfortunate Stabilis back to his lowly roots.[83] Religion and money could thus work hand in hand to reinforce the integrity of society. Correspondingly, rejection of money sometimes meant the rejection of other social norms, including property and mainstream Christianity itself. Orthodox commentators on 11th-century heretics noted how the latter rejected conventional norms of money and property.[84]

79 Naismith, *Money and Power*, pp. 47–86.
80 Naismith and Tinti, *The Forum Hoard of Anglo-Saxon Coins*; also Naismith, "The Forum hoard and beyond".
81 Reuter, "Gifts and simony".
82 Naismith, "Turpe lucrum?", p. 31.
83 Andrew of Fleury et al., *Miracula sancti Benedicti*, VI.2, pp. 218–21.
84 Naismith, "Turpe lucrum?", p. 36.

Money was also used to target the Jews. Christians as well as Jews were accused of numerous currency crimes in 13th-century England – but although the former were more numerous, Jews were ten times more likely to the suffer the death penalty, and much less often able to get away with a fine.[85]

Perhaps the most eloquent instance of the integration of money into Christian belief and society came with the legend of the 30 pieces of silver: a series of texts which recounted how the batch of coins paid to Judas to betray Christ had passed from one biblical figure to another for centuries, featuring in many of the most prominent monetary gifts or payments of the Old Testament.[86] The earliest incarnation of the legend, in the *Pantheon* of Godfrey of Viterbo (d. *c.*1196), claimed to be based on an (apocryphal) account by St Bartholomew which may have had an Armenian provenance.[87] According to Godfrey's version of events, the coins began life as the gold furnished to Ninus, Assyrian founder of Nineveh, by Terah, father of Abraham. They were subsequently used by Abraham to buy Sarah's burial plot and for the purchase of Joseph as a slave, and ended up in the temple of Solomon before being looted by Nebuchadnezzar. He in turn gave the gold to three wise men who brought it to the new-born Christ as one of their three gifts. After a sojourn in Armenia, the gold was placed in the temple before finally being given to Judas. In this way, the to and fro of monetary exchange itself became the stuff of miraculous legend. Godfrey was aware of the rather dubious historical leaps of faith this tale required, not least from gold to silver, and sought to circumvent the apparent discrepancy by claiming that ancient usage interchanged the names for gold and silver freely. The appearance and popularization of this legend in later medieval Europe doubtless owes much to the increasing monetization of the period. Indeed, ancient coins were sometimes identified as relics of the 30 pieces of silver handed over to Judas, and enshrined as such; one, now in the Hunt Museum, Limerick, is a Syracusan dekadrachm of *c.*400 B.C. contained within an early 14th-century mount inscribed QVIA PRECIVM SANGVINIS EST ("since it is the price of blood").[88] Others, some surviving, some known only from illustrations, included Celtic coins and, most commonly, silver pieces from ancient Rhodes, which featured a vaguely Christ-like bust.[89]

85 Rokeah, "Money and the hangman in late-13th-century England".
86 Studies of the legend include Hill, "The thirty pieces of silver"; Hook, "The legend of the thirty pieces of silver"; Cherchi, "A legend from St Bartholomew's gospel in the twelfth century"; and Cherchi, "Juan Manuel's *Libro de los estados* (2:6–32) and Godfrey of Viterbo's *Pantheon* (books 13–14)".
87 Godfrey of Viterbo, *Pantheon sive Universitatis Libri, qui Chronici appelantur, XX*, vol. 14, col. 406–7.
88 Cherry and Johnston, "The Hunt dekadrachm".
89 Hill, "Thirty", pp. 245–54.

Not only was money deeply integrated into medieval Christian belief, but Christianity was embedded into monetary forms of exchange. Rooted in the highly commercialized and monetized world of 1st-century Judea, Christianity had always been heavily permeated by the language of the marketplace.[90] The result was that aspects of economic life were governed, at least in principle, by the moral and social ideals advocated in the Bible. A great many miracle stories revolve around money and its proper use and provide vivid incidental insight into how writers saw money functioning around them. One 9th-century text from western France reported how a poor man (one of the *plebeia multitudo* who gathered at the shrine of St Philibert) went to a nearby tavern to buy some wine. He wanted an obol's (halfpenny) worth, but had only a full denarius (penny) with which to pay. The barman gave him an obol in change, but inadvertently also a full penny's worth of wine. When the customer came back and brought his coin to the barman for another round, he was met with the words, "You must be having a laugh, mate: what you've got there is mine, not yours, as you took away both my wine and my money".[91] According to the story, the customer angrily denied the charge and swore (falsely) on St Philibert that he would vomit up the wine he had just drunk if the accusation were true. The saint did not take kindly to this, and inflicted prompt and messy vengeance. The drinker then sheepishly handed over the coin and slunk away.[92] This memorable anecdote, suggestive of how peasants and shopkeepers used coined money on a daily basis and dealt with concomitant problems of making small change, also served to reinforce the importance of swearing truthfully and not swindling one's fellows. A similarly exemplary miracle story included in a letter of Peter Damian (d. 1072/1073) told of how a couple on pilgrimage to Rome lost a purse of money in Lake Bolsena. They persevered despite this hardship. On the way home, they stopped at the same lake for a meal. Importantly, when the husband asked to buy a fish from a fisherman, he calmly agreed to pay the higher price of 15 pence instead of the 12 he first offered. The couple then found their missing purse in the stomach of the fish, God having recognized their frugal and fair conduct and seen fit to repay them in kind.[93] Money, as a tool of exploitation, needed to be handled with care, and was supposedly under the ever-watchful eye of God.

90 Naismith, "Forum hoard", pp. 49–51; Brown, *The Ransom of the Soul*, pp. 20–33; and Brown, "From *patriae amator* to *amator pauperum* and back again".

91 "Bene … tibi jocaris, amice; non enim tuum sed meum affers. Tulisti quippe meum et vinum et pretium".

92 Ermentarius, *De translationibus et miraculis sancti Filiberti*, I.71, in *Monuments de l'histoire des abbayes de Saint-Philibert*, pp. 49–50.

93 Peter Damian, *Epistolae* 57, vol. 2, pp. 177–78.

Conclusion

If there is a single message to emerge from the role of money in medieval society, it is one of adaptability and integration in the face of practical obstacles. Money can be studied as an isolated phenomenon, but it gains immeasurably in analytical strength when viewed as part of a larger whole, with near limitless perspectives on offer to the scholar. It responded to, but also influenced other developments, particularly those associated in the broadest sense with economic life, from the hard choices of individual peasants up to the policy decisions of kings and princes.

Although the tendency is to assign to money what amounts to a sort of agency, the reality is that whatever effect money has is generated by innumerable individual human acts. As a collective these serve to distance money from its actual interpersonal role, just as Marx famously realized when he highlighted its alienating quality in relation to labour. But within these countless individual acts is a strong thread of flexibility dependent on cultural conditions. Necessary for integration into different spheres of life, money had to be versatile and capable of being transferred between people and situations. The terms on which it did so were, at least in the context of western Europe since Roman times, arguably at their most straitened and marginal in the Middle Ages. Much of the interest in studying money at this time lies in how, despite its often small and in some respects marginal economic role, it continued to occupy a central place in many aspects of thought and society.

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NUMIS: Numismatic Information System (https://nnc.dnb.nl/dnb-nnc-ontsluiting-frontend/#/numis/).
PAS: Portable Antiquities Scheme (http://www.finds.org.uk).

CHAPTER 9

Money and the Economy

Nick Mayhew

Historians have often underestimated the role of money in the medieval economy. There have been a number of different reasons for this. In the first place, the recognition of coin as money has long been overshadowed by an awareness of its role within a network of socio-political relationships, at least partially expressed by the giving and receiving of gifts. Although such gifts were by no means restricted to offerings in coin, some scholars have felt that early medieval coins of the 6th to 8th centuries were more typically used as gifts rather than as an economic means of exchange. [1] From the 9th to the 13th centuries, the role of coin as money also seemed for some to be overshadowed by payments in kind and labour rents, which loomed large in the documentary evidence. The manuscript sources that mention coin are often somewhat ambiguous, speaking of silver or gold, but even explicit mention of specific sums of £-s-d is sometimes explained away as really meaning goods to that value, rather than actual coins.[2]

However, many scholars have been ready to accept references to the use of coin as money at face value. M.M. Postan, writing as early as 1944, championed an interpretation of coins as money, dismissing the notion that coins mentioned in the documents might not be real.[3] It should be recognized that England, the principal focus of this chapter, is unusually rich in medieval documentation. Yet those arguing for the reality of coin use there before the Norman conquest of 1066 have still encountered much resistance. For example, M.K. Lawson has argued that the chronicled levels of taxation under Æthelred II and Cnut are entirely plausible, but he has drawn heavy fire from sceptical

1 Grierson, "Commerce in the dark ages" was highly influential, though see now Naismith, *Money and Power in Anglo-Saxon England*, which provides a finely balanced assessment of the various uses of coin and fully recognizes its dominant monetary purpose without discounting its other social and political roles. Naismith's comments may be applied broadly, *mutatis mutandis*, before and after his specified period.

2 Le Goff, *Money and the Middle Ages*, while recognizing the widespread use of money in this period, retained the suspicion that coin in the documents might really only be "money of account". See, for example, pp. 29–30, 79, and 149.

3 Postan, "The rise of a money economy", pp. 31–32.

critics.[4] Reginald Lennard's detailed analysis of Domesday Book found money payments far more frequently than he – or many other historians of his time – had expected.[5] Nevertheless, the apparent rarity of coins in the documentary sources and in archaeological excavations encouraged the belief that coin use was restricted to an elite. Consequently, the discovery that early medieval coins were actually struck in millions came as something of a shock.

In the 1960s practical experimentation established that dies made by ancient and medieval methods were capable of striking thousands of coins before they broke or wore out.[6] Meticulous die-study around the same time established that the rare surviving examples of medieval coins had been struck from a large number of different dies.[7] Statisticians then calculated the total number of dies which might originally have been made for a particular issue.[8] Debate continues about how many coins each die might actually have struck, but these approaches in concert provided the basis for estimates of the numbers of coins originally struck in the early Middle Ages. Even with wide margins of error, the order of magnitude for total coin production appeared far larger than anyone had previously imagined. The historical and archaeological establishment has taken some decades to come to terms with the size of the estimated early medieval currency and its implications for the wider economy, and the whole approach is still energetically criticized, particularly on the grounds that some dies may have been produced but scarcely used.[9]

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4 Lawson, "The collection of danegeld and heregeld in the reigns of Aethelred II and Cnut"; Lawson, " 'Those stories look true' "; Lawson, "Danegeld and heregeld once more"; Gillingham, "The most precious jewel in the English crown"; and Gillingham, "Chronicles and coins as evidence for levels of tribute and taxation in late tenth- and early eleventh-century England".

5 Lennard, *Rural England, 1086–1135*, pp. 115, 120, and 176–80.

6 Sellwood, "Medieval minting techniques", pp. 57–65.

7 Metcalf, "How large was the Anglo-Saxon currency?", pp. 475–82.

8 Statisticians have devised increasingly sophisticated methods over recent years, but at its simplest the method recognizes that the more die-duplication which is observed in a particular issue, the closer the surviving sample comes to representing the total number of dies originally used. Conversely, the absence of die-duplication suggests the original number of dies was likely to have been much greater. All these methods offer a range of upper and lower limits within which the original number of dies used is likely to lie. See Esty, "Estimation of the size of a coinage", pp. 185–215; and Esty, "How to estimate the original number of dies and coverage of a sample", pp. 359–64.

9 Resistance to the idea of estimating original coin output from die-study is particularly strong among some ancient historians, while conversely documentary evidence from the later Middle Ages providing specific information about dies used and totals of coin

From the 1980s, however, the use of metal-detectors in those countries where they are permitted has yielded a huge number of medieval finds, running into thousands every year, which provides powerful evidence that coins were indeed struck in millions and scattered widely over town and country and argues for their use as money on a very extensive basis. This important new source of quantitative historical information has been carefully recorded in some countries, providing important insights.[10] However, the situation has fluctuated over time, and though it is probably true in the broadest sense that money played a greater role in the later Middle Ages than in the early Anglo-Saxon period, it is not safe to assume that monetary development was steady or unbroken. The blossoming of a large and vigorous currency of silver *sceattas* in 8th-century England and the Low Countries marked a high-water mark of monetary exchange which was not to be reached again for several centuries, despite the presumption of rising population and the growth of towns. It seems likely that the availability of precious metal influenced the supply, use, and accidental loss of coins as much or more than other factors.

For example, changes in metal supply may have driven the shift from gold *thrymsas* towards silver *sceattas* in the course of the second half of the 7th century. As gold became scarcer, it was gradually debased with increasing quantities of silver, creating "pale gold thrymsas" which were subsequently completely replaced by silver sceattas. It may be that this transition to lower-value sceattas promoted a greater degree of monetization, permitting transactions involving smaller sums.[11] But the interpretation of single-finds is as yet a young science: As well as demographic change and developing patterns of coin use, the value, or the actual physical size of coins, could have influenced

produced confirms that very large numbers of coins were struck per die. However, documented output per die did vary widely: mints remote from die-cutting centres continued to use dies for longer, and we may assume that strikers of small issues were more likely to underuse dies than large ones. See M. Allen, "Medieval English die-output", pp. 39–49.

10 Stray finds are being collected in the Netherlands on the Numis database: http://www.dnb.nl/over-dnb/nationale-numismatische-collectie/numis/index.jsp. For England, see the Portable Antiquities Scheme (PAS) data online, http://finds.org.uk, together with the Corpus of Early Medieval Coin Finds, http://www.fitzmuseum.cam.ac.uk/dept/coins/emc. The collection of evidence of single-finds requires legal tolerance of the use of metal-detectors, albeit within prescribed limits. In countries where metal-detecting is totally prohibited, sites such as eBay suggest that single-finds continue to be recovered unrecorded.

11 However, D.M. Metcalf draws attention to the widespread dispersal of numerous "thrymsa/shilling" finds, which closely resemble the distribution patterns of sceatta finds. Metcalf, "Thrymsas and sceattas and the balance of payments". For pale gold thrymsas, see Metcalf, *Thrymsas and Sceattas*, vol. 1, pp. 42–47.

the process of loss. Can we equate the loss of one thrymsa with that of, say, 12 sceattas, or should one chance loss equal another chance loss with no correction for value?[12] Finding answers to questions of this sort will be necessary to establish an agreed methodology for the comparison of finds of different types of coins over time.

Quantity Theory of Money

Despite problems of interpretation, the sheer scale of medieval coin production argues strongly for their economic function, and an appreciation of quantities also opens the door to the potential of numismatic evidence for economic analysis. Whether in Irving Fisher's original version (MV = PT) or Alfred Marshall and John Maynard Keynes's Cambridge formulation (M = kY), the Quantity Theory of Money provides an important quantitative analytical tool.[13] The application of Quantity Theory, especially in the form of a simple and direct relationship between the supply of money and the level of prices, has been much disputed. Nevertheless, it is worth recalling that Postan, who was far more interested in the effect of population on prices, nevertheless accepted what he called the "elementary algebra" of Quantity Theory.[14] Nor should it be forgotten that the Quantity Theory of Money does incorporate the effects of population change, since demography plays a crucial role in the level of transactions (the Fisher version) and in GDP (the Cambridge version).

Quantity Theory also provides other important insights. The Velocity of circulation, sometimes termed "Income Velocity", relates to the rate at which the entire money stock needs to turn over each year in order to service the year's Transactions. It can be expressed according to Quantity Theory as V = Y/M. It is connected with, but not the same as the frequency with which money is used in society. Income Velocity provides useful clues to the extent of monetization in the economy, in that higher V numbers indicate a shortage of currency

12 This question might also affect the interpretation of later medieval finds, including varied metals and denominations.

13 Where M is the money stock, V is income velocity, P is the price level, T is the level of transactions, k is the demand for money to hold, and Y represents GDP. Fisher, *The Purchasing Power of Money*; Skidelsky, *John Maynard Keynes*, pp. 419–21; Flynn, "Use and misuse of the quantity theory of money in early modern historiography", pp. 382–418. The theory is thus about more than just money and prices, but embraces the whole economy and the nature of monetary circulation.

14 Postan, "Note", p. 78.

relative to the needs of the economy.[15] Domesday Book provides the raw data which permit an approximation of the size of the late 11th-century economy (Y),[16] while numismatists have made estimates of the likely size of the currency (M) at this time. Estimates of Velocity (V=Y/M) may then be suggested, yielding notably high numbers (8) compared, for example, with estimated V in 1300 (5.5).These abstract numbers may be interpreted to suggest that the business of the economy c.1086 could only have been accomplished with the assistance of various non-monetary expedients such as payments in kind, or labour or service rents, in addition to cash payments. This would support the notion that early medieval England was less thoroughly monetized than in the later Middle Ages. Over the long term it can be seen that English V falls fairly consistently from early medieval through to early modern times.[17] This perhaps surprising observation reflects the fact that it is rising money supply (or stock) which fuels increasing monetization, rather than a higher turnover of the money supply.[18] However, the higher 16th-century V numbers correspond with the deflationary pressures of that time first identified by J.R. Wordie.[19]

The Cambridge version of the Quantity Theory developed two variations on the Fisher Identity. It replaced the unquantified level of transactions (T) with GDP as a measure of the amount of work which the money supply needed to perform to serve the economy as a whole.[20] While it must be granted that even modern estimates of GDP are not precise, and that historical estimates of GDP can only be approximations, economic historians have applied themselves to the task of estimating GDP with skill and energy. England and Wales (and, after 1700, Britain) have now been supplied with an unbroken run of carefully researched GDP estimates beginning in 1270.[21] It may be reasonably pointed out that few countries are as well supplied with economic data as England, but a technique has been advanced which permits the estimation of GDP on

15 Mayhew. "Modelling medieval monetisation", pp. 68–71.

16 Snooks, "The dynamic role of the market in the Anglo-Norman economy and beyond, 1086–1300"; Mayhew, "Modelling medieval monetisation"; Dyer, "A note on the calculation of GDP for 1086 and 1300"; Walker, "National income in domesday England"; and Harvey, *Domesday*, pp. 162–65.

17 Mayhew, "Population, money supply and the velocity of circulation in England, 1300–1700", pp. 244 and 252–55.

18 Note that Income Velocity records the number of times the whole money stock would need to turn over, not the frequency of money payments in the economy.

19 Wordie, "Deflationary factors in the Tudor price rise", pp. 32–70.

20 GDP is conventionally expressed by the symbol Y. For the second variation, the replacement of V by the symbol k, representing "demand for money to hold", see below, p.225, note 68.

21 Broadberry et al., *British Economic Growth*.

the basis of population levels and basic average wage data.[22] In principle, this approach could generate GDP estimates from regions or countries less well provided with data than Britain.

Money and Prices

Alongside Britain's remarkable GDP data, medieval England also provides the best information on commodity prices.[23] Of course, perhaps the principal use of Quantity Theory is as an explanation for the behaviour of prices. Put simply, it is argued that prices rise and fall with the available, effective money stock. This argument has a long history, and has been fiercely contested. In recent times this "monetarist" argument has been associated in particular with the Milton Friedman school, but it should also be recognized that Keynes accepted the basic tenets of this theory. The argument between right- and left-wing economists today hinges on the wisdom or otherwise of deficit financing to increase money supply or austerity to restrict monetary growth, not on the principle that more money tends to raise prices while money shortage tends to restrict it. Perhaps the most obvious contemporary demonstration of the importance of money on the behaviour of prices is provided by the case of "Quantitative Easing". After the banking crisis of 2007–2008 crippled the national and international banking sector, governments – the US and UK first, but subsequently also the wary European Central Bank – deliberately created money in order to avoid an international liquidity crisis.[24]

However, economists on the left and right accept the power of money to influence prices and the role of low-level inflation in the promotion of economic growth. Nowadays the government instructs the Bank of England's

22 Bairoch, "Estimations du revenue national dans les sociétés occidentales pre-industrielles et au XIXe siècle".

23 Rogers, *A History of Agriculture and Prices in England, 1259–1793*; Farmer, "Prices and Wages [1042–1350]"; Farmer, "Prices and Wages, 1350–1500"; Phelps Brown and Hopkins, "Seven centuries of the prices of consumables"; R. Allen, https://www.nuffield.ox.ac.uk/people/sites/allen-research-pages/; G. Clark, IISH List of Datafiles of Historical Prices and Wages, http://www.iisg.nl/hpw.

24 The initial reluctance of the European Central Bank to employ Quantitative Easing, in contrast to the US and the UK, created an interesting real-life experiment. It became clear that growth returned to those economies which did employ QE. Eventually the European Central Bank followed suit and growth returned there too. Of course the real-life experiment could not exclude other possible extraneous factors. Nor is it certain that the financial technique chosen to deliver QE was necessarily ideal.

Monetary Policy Committee, which sets interest rates, to target an inflation rate of 2 per cent per annum. Scarcity of money is associated with recession or even economic depression, while excess monetary growth generates damaging levels of inflation. In the context of medieval Europe, it is generally the case that money was always relatively scarce, though this scarcity was occasionally alleviated by bursts of increased mining and minting activity. The first such burst in the Middle Ages is marked by the astonishing numbers of sceatta finds from England and the Low Countries dated to the late 7th through mid-8th centuries, though it has not been possible to associate this explosion of minting with any specific mining activity. Perhaps it was fuelled at least in part by the conversion of late antique non-monetary silver to coin. Subsequently important mines at Melle in France and Rammelsburg and the Harz in Germany certainly fed periods of increased minting, while the Viking invasions brought silver from central Asian mines into Europe. It is, however, noteworthy that the English stray-find evidence suggests that 8th-century levels of coin loss were not equalled till the late 12th- and 13th-century monetary boom triggered by mining in Saxony and then Bohemia.[25] This boom may be associated with a marked and prolonged rise in prices, and with a commercial revolution which brought profound changes to the European economy.[26]

Factors Influencing the Supply of Bullion

While the supply of bullion was governed by the discovery and exploitation of mines, the allocation of the resulting monetary metals to any particular national or regional economy depended on the balance of payments. In the case of England, which never had any really prolific silver or gold mines, the supply of monetary metals depended on the balance of trade. P.H. Sawyer first drew attention to the wealth of 11th-century England founded on wool exports,[27] while D.M. Metcalf has argued convincingly that the presence in England of very large numbers of sceattas from the Low Countries suggests that by the late 7th century England already enjoyed a healthy positive balance of

25 For the coin find data compared over centuries see PAS database; for silver mining see Spufford, *Money and Its Use in Medieval Europe*, pp. 109–31.

26 For the commercial revolution, see Britnell and Campbell, *A Commercialising Economy*; for increasing monetization, see Mayhew, "Modelling medieval monetisation".

27 Sawyer, "Wealth of England"; and Sawyer, *The Wealth of Anglo-Saxon England*.

trade, probably based on substantial wool exports.[28] The dominance of wool in English trade was to be a permanent feature throughout the Middle Ages, though the imposition of export tax on wool boosted English cloth exports at the expense of raw wool in the second half of the 14th and the 15th centuries.[29]

Countries with a less favourable balance of trade had either to accommodate themselves to a more restricted money supply or to strike more coin from each pound of metal, which necessarily involved a reduction in the weight or fineness of each coin. Fixing the appropriate intrinsic content for the coinage of any particular country was not easy. If it was too high, the resulting currency would be "strong", and prices stable and relatively low, but the scarcity of money in the economy would inhibit trade. Yet if the coinage was too "weak", with a low intrinsic content, prices would rise. Deciding the strength or weakness of the coinage effectively set the price in new coin at which the mint could buy silver or gold bullion. Governments would also need to be aware of the strength or weakness of the coinage of neighbouring competing mints. This would determine international exchange rates and influence the levels of imports and exports. Consequently, fixing the strength of the coinage was one of the most difficult decisions governments had to make, yet it had profound implications for the whole economy. Determining the appropriate intrinsic content was thus analogous with the fixing of interest rates today. Adjustments in both cases influence the availability of money, which in turn affects the level of domestic prices, the exchange rate, and the growth or contraction of the whole economy.

Estimating the Supply of Money

If money was indeed playing a significant role in economy and society at this time, it is important to establish some idea of how much of it was in use. Fortunately numismatic and monetary evidence is particularly amenable to the quantitative analysis which is so important for the study of the economy. From the 13th century England possessed an unrivalled run of mint accounts providing documentary evidence for mint output in an almost unbroken run until the present day.[30] This material makes England an ideal case-study.

28 Metcalf, "Thrymsas and sceattas"; Metcalf, *Thrymsas and Sceattas*, vol. 2, for continental *sceattas*; Op den Velde and Metcalf, *Sceattas of Series D*; and Metcalf and Op den Velde, *Sceattas of Series E*.

29 Lloyd, *The English Wool Trade in the Middle Ages*; and Lloyd, "Overseas trade and the English money supply in the fourteenth century".

30 Allen, *Mints and Money in Medieval England*, appendix C, pp. 404–24; and Challis, *A New History of the Royal Mint*, appendix 1, pp. 673–98. Though the English mint data is

However, although mint output data is an invaluable aid for the estimation of money supply, it has to be distinguished from estimates of the stock of money available at any particular time and place. This is because coin, once issued by the mint, does not necessarily remain permanently as part of the currency. It may be carried abroad in war or trade or removed from circulation, whether temporarily or permanently in hoards or accidentally through wear or casual losses. The loss of bullion through wear in use or deliberate clipping is not necessarily apparent until the worn coin is recoined. Mints often recalled all or part of the coin in circulation, in order to melt, recoin and re-issue it. These periods of recoinage are especially useful insofar as they brought a large proportion of the total currency into the mint. However, recording totals of mint output can be only the first step in attempts to estimate the size of the available currency. Coin hoards and single-finds provide information about specific coins in use, which can be combined with the mint output data to provide an estimate of national or regional money stock at some particular moment.

For medieval England, this process of estimating the size of the currency began in 1974 and has been subject to a number of improvements since. Martin Allen has pointed out that Mayhew's early estimates omitted groats, halfpennies, farthings, and output from provincial mints, and failed to allow for the role of Scots and Irish coin in England.[31] Accordingly, Allen's estimates for 1319 and 1332 rise significantly above the numbers suggested by Mayhew for the first quarter of the 14th century. However, until 1367 when the Scottish currency began to diverge from the English, an effective "Sterling area" operated across England, Wales, Scotland, and Ireland, and the currency attributed to England effectively supplied the whole Sterling area. The share of this common currency specifically in use within England (and Wales) *c.*1300 has been estimated at about 83 per cent of the total, so Allen's most recent estimates of what he terms the "English currency" might be reduced by 17 per cent to derive a total

probably the best, much is also available for western Europe. For the Low Countries, see especially the extensive bibliography of John Munro in Armstrong, Elbl, and Elbl, *Money, Markets and Trade*, pp. 11–40. For France, see Bompaire and Dumas, *Numismatique Médiévale*; Miskimin, *Money, Prices and Foreign Exchange in Fourteenth-Century France*; Miskimin, *Money and Power in Fifteenth-Century France*; Sussman, "Missing bullion or missing documents"; Miskimin, "Missing bullion or missing documents: a rejoinder"; and Day, "The great bullion famine of the fifteenth century" for a later medieval European overview. Note that Sussman is sceptical about bullion famine.

31 Mayhew, "Numismatic evidence"; Allen, *Mints and Money*, pp. 317–45. Allen's most recently revised estimates appear in "Sterling area".

TABLE 9.1 Estimated total value of coins in circulation in the British Isles

Date	Ag Min	Ag Max	Au Min	Au Max	less 17% Ag Min	less 17% Ag Max
1290	1.064	1.4185			0.8831	1.1773
1299	0.852	1.067			0.7071	0.8856
1310	1.47	1.8425			1.2201	1.5292
1319	1.867	2.414			1.5496	2.0036
1332	1.5625	2.051			1.2968	1.7023
1351	0.521	0.563	0.1	0.15	0.4672	0.5324

SOURCE: M. ALLEN, "STERLING AREA" (LESS-17% DATA ADDED BY AUTHOR) (IN £ MILLIONS)

for England alone in the early 14th century.[32] As this very "rule of thumb" adjustment makes plain, it should never be forgotten that these estimates are just that – estimates – despite the appearance of accuracy suggested by specific figures offered to several decimal places derived from the process of calculation.

A fundamental consideration affecting estimates of the currency concerns the appropriate allowance for the rate at which coins were withdrawn or lost from circulation. This factor, known as wastage, probably eroded the total original output at variable rates of between about 1 and 4 per cent per annum. Allen also improves on Mayhew's earlier estimates by prudently offering maximum and minimum estimates of total currency, though Mayhew's single-point estimates generally fall within or close to Allen's parameters. Both authors agree that silver coinage peaked in the first quarter of the 14th century but fell precipitously between 1330 and 1350.

From the mid-14th century English recoinages no longer demonetized earlier issues, which makes it more difficult to estimate the money stock. The recoinage output provides a useful indication, but the amount of earlier coin remaining in the currency is uncertain. Calculations are also complicated by the introduction of a wider range of denominations in gold and silver, making it more difficult to determine how far hoards and stray finds are providing us with a representative sample of the currency as a whole.

Table 9.2 prompts a number of observations. The dominance of gold and the decline of silver are notable in 1377 and 1422. The 1422 and 1470 estimates

32 Allen, "Sterling area". Thus Allen's peak year of 1319 would see his "English" estimate £1.867m to £2.414m reduced to about £1.6m to £2m for England alone.

TABLE 9.2 Available stocks of gold and silver

Date	Ag Min	Ag Max	Au Min	Au Max	Total Min	Total Max
1377	0.22	0.74	1.20	1.65	1.42	2.39
1422	0.10	0.15	1.12	1.20	1.22	1.35
1470	0.35	0.45	0.40	0.50	0.75	0.95
1544					1.00	1.50

SOURCE: M. ALLEN, "STERLING AREA"

are both informed by recent recoinages, though the estimate for 1377, when the range between possible maximum and minimum estimates is particularly wide, is complicated by the survival of old coins from before the 1351 recoinage, and by uncertainties about the likely levels of wastage. Allen and Gary Oddie have shown that the latter was liable to vary uncertainly over time.[33] Nevertheless, actually varying wastage rates can yield a hypothetical average over a number of years. Allen uses such averages in his calculation of the 1377 figures,[34] and Mayhew has calculated with possible average levels of wastage between the relatively firmly based benchmarks indicated by recoinages.[35] Nuno Palma also adopts this approach.[36] Averages, by definition, are unlikely to be precisely accurate in any one year, but may nevertheless present a picture which is broadly true over a number of years.

This is not the place to argue over different estimates of the money stock in England, but Allen has shown how critical examination of existing estimates can improve our knowledge, and the process will continue as new find evidence and new analytical techniques emerge. The surviving English documentary evidence for mint production, together with the information from coin hoards and single-finds, is unusually strong, but much continental data does

33 M. Allen and Oddie, "Revised estimates of the English silver currency, 1282–1351", pp. 245–52.
34 Allen, *Mints and Money*, pp. 332–36.
35 Mayhew, "Quantity theory in historical perspective", pp. 62–96. Mayhew's annual money stock estimates after the Black Death generally fall within or close to Allen's numbers, though his figures here for before the event look too low. See also Mayhew, "Prices in England".
36 Palma, "Reconstruction of annual money supply over the long run".

exist, and stray finds are increasingly recognized as important in several countries on the European mainland.[37]

As well as the size of the total money stock, some consideration should also be given to its composition. In the course of the 7th century gold coinages in northern and western Europe gave way entirely to silver pennies. From the 8th to the 13th centuries the money of Europe was overwhelmingly silver of sometimes variable fineness, while Middle Eastern coinages consisted almost exclusively of gold and copper.[38] However, in the course of the 13th century, European mints began to introduce gold coinages alongside their established silver coins. Florence in 1252 and Venice in 1284 both launched highly successful gold coins which were to dominate the monetary history of later medieval Europe. In northern Europe, the advantages of larger denominations were quickly recognized, but attempts to introduce larger silver *grossi*/*groschen*/ groats alongside new high-value gold coins needed time to take root. Henry III in England and Louis IX in France each launched short-lived gold coins; Edward I's groat was equally unsuccessful. The French *gros tournois*, however, did find acceptance, perhaps because French pennies (*deniers tournois*) were too much debased to continue to function as a convenient vehicle for larger transactions. The English sterling penny, on the other hand, enjoyed wide acceptance in international trade across northwestern Europe, so the English groat in the late 13th century seemed less necessary.

However, the trend towards larger silver coins and high-value gold coins gathered momentum, and these coinages came to dominate the currency of western Europe from the 14th century onwards.[39] This development was not entirely trouble-free. The additional sophistication of the monetary systems brought difficulties of its own. Managing the exchange rates of different silver coinages, though complicated by the variable weights and finenesses involved, did at least require the comparison of silver with silver. Managing the relative values of gold and silver created a whole new layer of complexity. While it may initially have been hoped that gold coin would serve the needs of high-value international trade, leaving silver at home to be used in day-to-day transactions, the reality proved very different. International comparison of different gold – silver ratios meant that any country was liable to see one metal carried away, attracted by a higher price elsewhere, while the other tended to flow

37 For mint output, see note 30 above.

38 Watson, "Back to gold–and silver", pp. 1–34.

39 Mate, "The role of gold coinage in the English economy", argues for the profound significance of the introduction of gold coins in England. For further consideration of the implications of England's bias towards gold coinage, see below, pp. 224–5.

inwards, as it was more highly valued locally. England, for example, tended to undervalue silver, so foreign merchants preferred to settle debts in England with gold. The contrast is visible in the English mint output records, which for most of the later Middle Ages show that gold coin was being struck much more plentifully than silver.[40] Parliament petitioned repeatedly for more half-pennies and farthings to be struck, but the sources show that pennies too were in scant supply, while total silver mint output, including groats and half-groats, was paltry compared with the totals of gold struck.[41] If different denominations and different monetary metals circulated differently, as is suggested by the varying degrees of wear exhibited on the coins, it may be that we need to take account of the composition of the money stock as well as its total size. From the 14th century onwards Europe operated a bi- or even tri-metallic monetary system. Moreover, although credit transactions eventually needed to be settled in coin of some description, the fundamental importance of credit for both international and local trade reminds us that medieval money was not always metallic.

Credit

For the Middle Ages, it is not unreasonable to regard money and coinage as synonymous, but any consideration of money in the economy must take account of the role of credit in its various forms.[42] Whether cash was advanced from lender to borrower, or goods sold in advance of the actual cash payment (or some part of it), or money transferred or lent by bills of exchange or bonds or recognizances, there can be no doubt that credit in its various forms was essential for the transaction of medieval business. International merchants relied on it, as the failure of the bullion laws of the 1420s and 1430s demonstrated. The

40 Challis, *Royal Mint*, appendix 1. The 1420s reveal a noteworthy exception, when London and the English mint in Calais struck very large amounts of silver which came to the English mints in flight from the runaway debasements afflicting the Flemish, French, and Burgundian mints.

41 For Parliamentary petitions, see Allen, *Mints and Money*, pp. 360–64. For the shortage of pence or money generally, see, for example, Kirby, *The Plumpton Letters and Papers*,. pp. 34–35 (no. 11): "*Impedit omne forum carentia denariorum*". For similar references in the Paston Letters, *s*ee also Mayhew, "The monetary background to the Yorkist recoinage of 1464–71", pp. 71–72.

42 Postan, *Medieval Trade and Finance*, ch. 1 and 2, remain invaluable introductions. See also Gaspar Feliu, this volume, for credit in Catalonia.

wool and cloth trades depended on credit from before the clip to the export of raw wool or the sale of domestic cloth at home. Italian banking houses specialized in it, and the English Exchequer operated an advanced system of tallies, which economized on the use of coin.[43] Edward I required his sheriffs and the court of Chancery to assist in the recovery of debts over 40 shillings, while manorial courts were busily engaged in the pursuit of those owing lesser sums. The records of the Borromei are full of credit, and small country merchants spent much time and energy extending credit or chasing repayment. Those in regular contact with one another allowed mutual debts to accrue over years before settling up at an occasional reckoning.[44]

Although all historians agree on the importance of credit, there remains a fundamental disagreement over whether lending grew to compensate for monetary shortage or contracted as money became scarce. Many have argued that the ubiquity of medieval credit made fluctuations in the money stock economically insignificant, while others assert that credit shrinks when money becomes scarce, so a shortage of coin would have a severe impact on business.

Methods of economizing on the use of coin may well have become more important when money was scarce, and these strategies would all have raised the Velocity of the circulation. Velocity has been shown to fall over the long run, as rising M permits a greater volume of business to be transacted, but high V numbers suggest periods of monetary distress, when scarcity of money stimulates means of managing without coin. Nevertheless, despite the use of such expedients, the growth of business was fundamentally restrained by the money supply. Credit sales or cash advances were limited by the availability of coin, as demonstrated by Pamela Nightingale's study of Chancery certificates of debt.[45] Although this argument has been energetically contested by Jim Bolton, Chris Briggs has found no evidence in manorial courts of lending increasing in periods of coin shortage, while recent work by Matthew Stevens

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43 The use of tallies was a regular feature of the Exchequer's accounting system with the sheriffs: see *Dialogus*, xliv; Jenkinson, "Exchequer tallies"; and Jenkinson, "Medieval tallies, public and private". But they were unpopular with those who were paid with them: see Mayhew, "Yorkist recoinage", p. 70, citing *Piers Plowman*; and Maddicott, "The English peasantry and the demands of the crown", p. 12.

44 Dyer, *A Country Merchant*, p. 98. For the Borromei, see Bolton, *Money in the Medieval English Economy*, pp. 246, 285–87, and 290–93.

45 Nightingale, "Monetary contraction and mercantile credit in later medieval England"; Nightingale, "Knights and merchants"; Nightingale, "The English parochial clergy as investors and creditors in the first half of the fourteenth century"; and Nightingale, "Gold, credit and mortality".

on the Court of Common Pleas offers strong support for Nightingale's interpretation.[46]

Population in Quantity Theory

It is sometimes imagined that the Quantity Theory of Money fails to take account of perhaps the most powerful of economic factors – demographic change. The simple relationships between land and labour, and between mouths to feed and hands to work, rightly dominate our understanding of preindustrial societies. Compared with these fundamental realities, monetary factors can only seem secondary. Indeed, compared with the inescapable realities of birth and death, money and prices look like superficial considerations. They are, however, powerful economic factors. Moreover, the Quantity Theory does take account of demographic change, which is included in the Transactions element of the Fisher version, or in the Y or GDP in the Cambridge version, since any attempt to estimate medieval GDP depends above all on a prior estimate of population.

However, the introduction of population into Quantity Theory analysis has surprising results. It was Wordie who first pointed out that rising population, by increasing Transactions (or GDP), would tend to deflate prices rather than inflate them.[47] A larger population creates more transactions, (a larger GDP), which makes greater demands on the available money stock. Moreover, recent work on English economic growth has established that output grows as much as or more than population, while John Langdon and James Masschaele saw entrepreneurial activity driving population growth.[48] If these insights are sound, "supply" in the form of increased economic output exceeded "demand" generated by growing population. In short, rising population increases production more than it increases demand. The simple assumption that rising population raises prices by increasing demand more than supply turns out to be mistaken. Instead, it could be argued that rising M inflates prices, while moderate inflation promotes economic growth,[49] which in turn permits demographic

46 Bolton, "Was there a 'crisis of credit' in fifteenth-century England?"; Bolton, "Reply to Pamela Nightingale's 'A Crisis of Credit' "; Briggs, *Credit and Village Society in Fourteenth-Century England;* Stevens, "London creditors and the fifteenth-century depression".

47 Wordie, "Deflationary factors", p. 66; cited by Mayhew, "Prices in England", p. 23.

48 Both cited by Mayhew, "Prices in England", pp. 22–25.

49 Munro, "Profit inflation".

growth.[50] Thus money, and prices expressed in money, though intrinsically far less significant than the vital driving forces of life and death, do nevertheless directly influence the great demographic and social realities.

Economists must perhaps share some of the blame for the misconception that monetary effects are not "real". They often go to great lengths attempting to strip out monetary effects, in order to reveal the "real" underlying factors. Thus nominal prices – the sums in which prices and debts were actually recorded and paid – are sometimes set aside in favour of "real" prices. Such conversions are perfectly legitimate in order to compare prices between different countries or periods, if the nominal prices are deflated or inflated by the appropriate cost of living index. However, the widespread practice of converting nominal prices in line with coins' intrinsic silver content is fundamentally flawed.[51] In the first place, converting to silver weight assumes that silver provides a reliable, constant yardstick. In fact, the value of silver varies over time and from place to place. Secondly, such conversions are generally based on the legal weight of freshly minted coins, although actual transactions usually involved coins of variable weight, which could fall significantly below the legal weight of newly minted coins.[52] Converting sums of money to their silver weight equivalent is thus historically mistaken.[53]

Modern scholars' emphasis on the intrinsic content of coinage is also misleading in that it fails to recognize the role of medieval governments in setting the value of currency.[54] Governments – the king or prince, often in agreement with Parliament and with the advice of merchants, goldsmiths, and mint staff – first established the quantity of coin to be struck from a pound or mark weight of pure bullion (the gross mint price). Thus a monetary pound (£) of 240 pence was to be struck from a pound weight (lb) of silver. On each pound the crown

50 Note, however, that rising population may restrain wages, despite rising prices. Such hardship imposed on the labouring class may eventually bear down on aggregate effective demand.

51 For example, Robert Allen's otherwise invaluable databases of international prices and wages succumb to the temptation to offer simplistic conversions of values according to theoretical silver weight. Allen, Consumer Price Indexes; Allen, "The great divergence in European wages and prices from the Middle Ages to the First World War"; and Allen, "The high wage economy and the Industrial Revolution", esp. pp. 9–10.

52 Although gold coins in payment may have been weighed, silver coins generally passed at their nominal value unweighed unless they were visibly clipped.

53 Mayhew, "Money in England from the middle ages to the nineteenth century".

54 Desan, *Making Money*, demonstrates clearly the extent to which money is the product of government action. For the continental perspective, see Fox and Ernst, *Money in the Western Legal Tradition*.

took a profit (seigniorage). The cost of actually making the coins (mintage) was also deducted, leaving the rest (the net mint price) to be returned to the supplier of the bullion. However, the gross mint price depended fundamentally on the weight and fineness (purity) of the coins. If government decided to strike slightly lighter coins, more than 240 pence could be made from each pound weight. In the same way, if the coins were struck of slightly less pure silver, then a pound weight of pure metal would yield more than 240 pence.

The government determined the weight and purity of the coins, but it also decreed their nominal face value. Over the course of the later Middle Ages the English government halved the weight of the penny from about 22 grains of sterling silver to just under 11 grains,[55] but the nominal face value of each issue remained unchanged at a penny, 240 of them still making a monetary pound sterling (£). Since prices, rents, and debts were all denominated in nominal pounds (£), shillings (s), and pence (d, from *denarius*),[56] these successive weight reductions meant sellers, landlords, and creditors had to accept less silver weight in their transactions than they had received before the coinage alterations.

There are various reasons why they did so. First, the strength of the English monarchy and its long-standing regalian right to control the coinage stretched back over centuries. Foreign coin was effectively excluded, and any short-lived feudal mints had been brought back under central royal control. Parliament attempted to exert some measure of influence, occasionally extracting an undertaking from the crown not to alter the money again without parliamentary agreement, but the royal prerogative remained paramount. The law consistently supported the crown's ruling on the coinage and enforced it in the courts. Second, these occasional reductions in the weight of the currency responded to a recognized shortage of coin in the country at large. Weight reductions permitted the production of more coin from the same amount of bullion. Third, the value of silver throughout Europe was rising over the course of the later Middle Ages as silver production from the mines went into decline. The weight reductions effected by the English mint did no more than recognize the rising value of the metal.[57] Moreover, these weight reductions were so moderate and so gradual that much old coin had already become worn in decades of use,

55 The penny of about 22 grains was reduced to 18 grains in 1351, 15 grains in 1412, 12 grains in 1464, and under 11 grains in 1526. See Challis, *Royal Mint*; Allen, *Mints and Money*; and, for a tabular presentation of the detail of the process, Hotson, *Respectable Banking*.

56 The mark of 13s 4d (=160 pence) was also commonly used.

57 Indeed, it could be argued that the English mint responded too little and too late to the rising price of metal. See Mayhew, "Monetary policy".

so that the newly decreed weights were often close to those of many of the old coins already in use. Finally, the acceptance of coin at face value without weighing each transaction was established practice, and extremely convenient. No doubt sellers scrutinized the coin they were offered carefully, and visibly clipped money could certainly be rejected. Also, gold coin was more likely to be individually weighed, since its high value would justify the time and trouble taken. But for the most part, by well-established custom, silver was accepted by tale, that is, at face value.

Yet perhaps the most telling evidence that the English weight reductions were widely accepted is provided by the behaviour of prices. As a rather puzzled Thorold Rogers observed, the reductions in the weight of the English currency did not prompt any discernible rise in prices.[58] Even though sellers were required by law to accept the new money at face value, they could easily and silently have enhanced their prices to restore their silver receipts to their former weight. No such price response is apparent.

In this respect, the English experience differed somewhat from that elsewhere in much of Europe. Continental (and Scottish) debasements reduced not only the weight of the coinage, but also the purity of the coinage metal.[59] They also occurred more frequently. It is arguable that while English kings met the costs of government and war from the proceeds of taxation, continental rulers resorted to fiscal debasements. This did far more than simply recognize the rising market price of coinage metals. More extreme debasements generated greater resistance, and the palpable injustice of settling strong money debts in weak money was recognized in continental courts.

Heavier debasements in Scotland and on the continent did inflate prices, though this effect is often difficult to distinguish from other factors bearing on prices, most obviously the annual harvest. The effects of debasement also took time to develop: John Munro has suggested a two-year time lag.[60] Consequently any price changes were unlikely to be fully in proportion to the debasement. By contrast, exchange rates do respond quickly to debasement.

58 Rogers, *Six Centuries of Work and Wages*, pp. 341–42. Rogers notes that Adam Smith saw no significant rise in prices after these weight reductions in the coinage.

59 A third method of debasement also sometimes employed was to enhance the nominal value of existing coins.

60 Munro, "Technology and economics of coinage debasements", pp. 23 and 25 and table 1.2. Information about debasement took time to filter through, while new coins also had to spread through the currency. If debasement merely reflected the rising price of bullion it might not result in price change at all. Most obviously variable harvests make discerning price changes attributable to debasement highly complex.

News of published mint prices spread quickly abroad, and merchants adjusted international exchange rates accordingly. [61] Such debasement acted exactly like a modern devaluation, making exports cheaper but imports dearer.

For all these reasons, government decisions about the mint price offered for coinage metals could have a profound, though not always proportional, impact on the economy as a whole. Sometimes the consequences of government decisions were not fully appreciated. Altering mint prices could disrupt the relative valuation of gold and silver, prompting a flow of one metal into the country and a loss of the other metal to neighbouring mints, which valued it more highly. For example, it is noteworthy that the English mints often attracted one metal at the expense of very low production rates for the other.[62] In the later Middle Ages England usually attracted gold at the expense of silver, resulting in a marked imbalance in the currency as a whole.

The relatively plentiful provision of gold has prompted the observation that England's total money supply in the later Middle Ages seems to have been fully adequate for the needs of the much-reduced post-plague population.[63] This in turn would throw doubt on the argument that the low prices characteristic of England's later medieval recession were driven by monetary shortage. However, it may be that the extreme shortage of *silver* coinage could have depressed prices, despite the availability of gold. Only 24.4 per cent by value of the total documented English mint output of the period 1344 to 1509 was in silver, while the remaining 75.6 per cent was in gold.[64] Although gold fractions were struck, even the quarter noble had a face value of 1s 8d., five times the typical post-plague daily wage of 4d. From the 1470s the angel replaced the noble as the gold coin worth 6s 8d., but the half angel, worth 3s 4d, was then the smallest gold denomination. Moreover, the supply of gold fractions was probably much more limited, since the terms of the mintmasters' remuneration favoured the production of higher-value pieces. This bias in favour of striking higher value coins also affected the silver issues, in that groats and half groats were more

61 See Spufford, "Debasement of the coinage", pp. 63–86. The falling exchange rate would raise the cost of imported goods. Spufford found that both the exchange rate and consumer prices responded to the net mint price for bullion offered to merchants, rather than to the gross mint price, which would have revealed the actual fineness and weight of the new issues.

62 See the mint output figures, note 30 above.

63 Allen, "Sterling area".

64 In comparison, silver made up 43.4 per cent of the total currency in the period 1509–1542 and 64.1 percent in 1559–1649. Mayhew, "Prices in England", p. 28, table 4. See also Martin Allen's assessment of the dwindling share of silver in the fourteenth-century currency in "Transformation of the English coinage", table 9.1.

readily struck than pence or halfpennies. The farthing disappeared altogether as successive weight reductions in the coinage made them too small to be conveniently handled.

Unlike most of the rest of Europe, in the Middle Ages England did not strike coin in billon (i.e., heavily debased silver) or copper. Indeed scholars on the continent have argued that an adequate provision of smaller denominations was essential for the deeper monetization of the economy.[65] Although English historians would probably argue that later medieval England was in fact thoroughly monetized, the structure of English denominations was certainly not favourable to the conduct of most day-to-day transactions.

In this connection, it is helpful to recall that Maynard Keynes preferred a version of Quantity Theory which replaced estimated Velocity with its inverse, "demand for money to hold", or k. This drew attention to the effect of money withdrawn from the active money stock through savings, hoarding, or simply holding it ready for opportunistic purchases. In periods of economic or political crisis the amount of such "withdrawn" money will have increased, reducing liquidity for the rest of the economy. It may also be observed that some types of money are more likely to be withdrawn than others, and that in particular gold coins may have circulated less actively than silver.[66] In terms of the oft-cited functions of money, gold serves well as a store of value, while silver has historically provided a better means of exchange. Indeed, some recent research on the early modern period suggests that silver supplies drive prices, rather than gold.[67] This may help to explain the prolonged periods of sluggish prices which are notable particularly in the 15th and 18th centuries, when gold dominated the money supply almost to the exclusion of silver.

Gold coins did not circulate as much as silver coins. Surviving examples typically exhibit significantly less wear than silver. The historical evidence is thus consistent with Maynard Keynes's ideas about "money to hold" as distinct from that which was spent. The Cambridge version of the Quantity Theory

65 Lucassen, "Deep monetization and the payment of wages in Eurasia ca. 1000–1950", defines it as requiring "a substantial (per capita equal to between five and ten times the prevailing hourly wage) stock of currencies in circulation, consisting of denominations equalling the value of one hour or less of waged work".

66 Medieval silver coins are typically much more worn in circulation than gold coins, suggesting they had a more active role in the currency. Mayhew, "Quantity theory of money". It is generally true that lower-denomination coins and notes become more worn in use than higher denominations. Even today dollar bills and five-pound notes become much more worn than higher-value notes.

67 Hotson and Mills, "London's market for bullion and specie in the eighteenth century"; and Casson and Casson, "Modelling the medieval economy".

introduced the concept of k, demand for money to hold, as the reciprocal of V in the Fisher version.[68] Money withdrawn from circulation was not available to service transactions, so the effective money stock was less than the total money stock. Hoard evidence indicates clearly that larger denominations wherever available were preferred for saving, and gold coins were larger denominations par excellence. Historical evidence suggests that Henry VII, for example, accumulated a huge quantity of gold coin effectively withdrawn from the circulating currency.[69]

The greater importance of silver as a circulating medium may explain why it appears to have exercised a greater influence on the behaviour of prices than gold. This could also throw light on the causes of the late medieval recession. The failure of prices and the birth rate to recover for some 150 years after the outbreak of the Black Death poses one of the great puzzles of the later medieval English economy. Since real wages for the great mass of the population were at a historically high level, it has been difficult to explain why this apparent prosperity did not translate into rising population levels. John Hatcher recognized this problem, and suggested that high real wages would only raise living standards and birth rates if work was in fact plentifully available, which he doubted.[70] Yet Christopher Dyer remains convinced that 15th-century living standards were in fact high, in which case the failure of population and the economy to grow still requires explanation.[71]

However, if prices were depressed by the shortage of silver, this could explain the reluctance of landowners to extend themselves. Moderately rising prices are needed to encourage entrepreneurial activity, which generates growth. In this way prices do not merely reflect the state of the economy: they actually help to drive it. Money, in turn, actively influenced prices. Annual price variation was, of course, above all the result of harvest variation, but monetary factors could and did trigger longer-term price shifts, which can be discerned over decades. Regression analyses comparing wheat prices and yields have shown that similar yields over the 13th to 15th centuries could have resulted in significantly different prices reflecting, at least in part, the availability of, especially, silver coin.[72]

68 See above, p. 209 note 20.

69 In her Oxford Master's dissertation, Katherine Ball contrasted the very large sums believed to have been held in the royal Treasury with our current estimates of the total English money stock. She points out that Tudor specialists are increasingly confident that Henry held over £1 million in hand in the early years of the 16th century.

70 Hatcher, "Unreal wages".

71 Dyer, "A golden age rediscovered".

72 Mayhew, "Money and prices"; and Mayhew, "The circulation of money and the behaviour of prices in medieval and early modern England".

Historians have long appreciated the importance of prices for economic history, but some have been strangely reluctant to recognize how money has influenced prices. Writing in 1986, John Day observed that even French historians who venerate Marc Bloch were curiously blind to his work on monetary history.[73] Nor is such blindness exclusively French, for the study of money has remained a rather specialist topic among historians more widely. Perhaps the technicalities of the subject obscure the extent to which money has influenced the lives and livelihoods of men, women, and families of all classes throughout Europe. The hardship and dignity of centuries of labour has the power to move historians; the passion which still warms the pages of R.H. Tawney's *Agrarian Problem in the Sixteenth Century* can inspire the dream of social justice;[74] the vision and humanity of Fernand Braudel's picture of ordinary life can evoke sympathy and understanding for our forebears.[75] But weight standards and gold – silver ratios, die-studies and mint output figures do not quicken the pulse in quite the same way. Nevertheless, this chapter has tried to show that the dry technicalities of medieval money did bear directly upon the life chances of millions, and that a better understanding of that still has the power to change lives today.

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73 Day, "L'histoire de la monnaie dans les écrits de Marc Bloch", pp. 271–72.

74 Tawney, *The Agrarian Problem in the Sixteenth Century*.

75 Braudel, *Civilisation and Capitalism*.

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Portable Antiquities Scheme finds database available at https://finds.org.uk/.

CHAPTER 10

Money, Coins, and Archaeology

Nanouschka Myrberg Burström

Money, Coins, and Archaeology: Trends in Scholarship

The title of this chapter could refer to several different things: for example, the use of economic theory in archaeological research or the different grounds and sources for financing archaeology in different times and political settings, both interesting and valid topics for study. However, following the intention of the series *Decoding Medieval Sources* – to evaluate and exemplify how sources can be understood and put to use for medieval studies – the chapter will focus on the following three themes: conceptions of "money" and "coins" within archaeology, coins as archaeological material, and coins as part of archaeological research history. The focus will be on the medieval period but outlooks will be made to other times and areas where there are illustrative examples and to general issues of theory and method.

The connection between archaeology and coins, money and numismatics, has been repeatedly debated over recent decades. It was the focus of several publications, some of which should be mentioned at the start of this chapter in order to introduce the field. Importantly, Lloyd R. Laing's *Coins and Archaeology* (1969) addressed both "the archaeologist … who wishes to learn more about the nature of numismatics and its application in archaeology" and "the numismatist who is unfamiliar with the work of the archaeologist, and who understands only imperfectly how he can help his colleagues in this field",[1] clearly with the ambition to create a better understanding not only for the numismatic material itself but also between the two disciplines or groups of expertise. In 1973, John Casey and Richard Reece brought together a group of scholars to discuss the relationship among numismatics, coins, and archaeology, resulting in the volume *Coins and the Archaeologist*,[2] which they later revised for a second edition.[3] A similar initiative was undertaken in the 1980s and materialized as the proceedings volume *Coins and Archaeology*.[4] A thematic journal issue

1 Laing, *Coins and Archaeology*, Introduction.
2 Casey and Reece, *Coins and the Archaeologist* (1974).
3 Casey and Reece, *Coins and the Archaeologist* (1988).
4 Clarke and Schia, *Coins and Archaeology*.

of *Archäologie der Schweiz*[5] and one of *META*[6] brought up similar questions, which were also in focus for the 2007 colloquium *Coins in Context*.[7] A 1975 issue of *World Archaeology*[8] centred on the theme *Currency* rather than on coins or money, but includes several aspects of what is discussed in the abovementioned volumes. Most recent and with a slightly different direction, but equally important, is the conference proceedings volume *The Archaeology of Money*,[9] and the edited collection *Divina Moneta*[10] puts many of the ideas to work for a discussion of materiality and ritual pertaining to coins. It is perhaps telling that most of these efforts came about as conferences, aiming to discuss and investigate ways forward. The publications include many different cases demonstrating a variety of aspects, practices, and debates; curiosity and eagerness to develop the results clearly stand out. Efforts, albeit as single papers, to sum up and develop the coin-archaeology discourse were made in the 2010s by Fleur Kemmers and Nanouschka Myrberg[11] and Colin Haselgrove and Stefan Krmnicek,[12] and 2011 saw the birth of an entirely new journal dedicated to coins and archaeology, the *Journal of Archæological Numismatics* (published by the European Centre for Numismatic Studies, Brussels).

It is an impossible task to summarize all of the publications that have helped us to understand how to work with archaeological theory and method in relation to coins, since they are many and contributed in very different ways. A few examples will illustrate the diversity. In the 1960s, Philip Grierson made two presidential addresses to the (British) Royal Numismatic Society[13] which, in a comprehensive way, dealt with different types of coin finds and how and for what they may be used in historical research. Although archaeology is hardly mentioned explicitly, it is clear that his argument takes the contribution from archaeology for granted and it emphasizes that coins cannot really be studied apart from their historical and archaeological contexts.[14] Two Swiss publications centre in a concrete and instructive way around coin finds from churches and graves, respectively.[15] The work on coin finds in churches is continued

5 "Archäologie und Numismatik", *Archäologie der Schweiz* 15:3 (1992).
6 Myrberg, "Numismatik mellan historia och arkeologi".
7 Published as von Kaenel and Kemmers, *Coins in Context 1*.
8 Cunliffe, "Currency".
9 Haselgrove and Krmnicek, *The Archaeology of Money*.
10 Burström and Ingvardson, *Divina Moneta*.
11 Kemmers and Myrberg, "Re-thinking numismatics".
12 Haselgrove and Krmnicek, "The archaeology of money".
13 Grierson, "The interpretation of coin finds" (I, 1965; II, 1966).
14 Grierson, "The interpretation of coin finds II", pp. ii, xii.
15 Dubuis and Frey-Kupper, *Trouvailles monétaires d'églises*; Dubuis, Frey-Kupper, and Perret, *Trouvailles monétaires de tombes*.

and developed in the Scandinavian project *Religion and Money in the Middle Ages*,[16] which provides several in-depth studies where archaeological theory and method are put to use to further the research on this specific category of finds. John Creighton's book about British Iron Age coinage provides a stimulating model for how coins may be given complex interpretations by the use of historical, archaeological, and art historical sources, theory, and methods in combination.[17]

These are just a few examples of central works and of the diversity of inspiring and instructive works to turn to, which the reader may use as a starting point to get a quick introduction to the field. The aim of this chapter is to provide some further reflections on the nature of coins and money from an archaeological perspective, to point out how integrated coins are with the growth of archaeological theory and method, and to illustrate with a few examples how archaeology may further the study of coins – and vice versa.

"Money" and "Coins" in Archaeological Thinking and Practice

In the archaeological discipline, the difference between "money" and "coins" goes much further and deeper than to indicate different types of currencies or means of exchange. Naturally, such distinctions are made when deemed appropriate. But there is a more profound ambivalence in relation to "money" and "coins" which, I suggest, derives from within the discipline itself. Archaeology is an interdisciplinary field in its character, and even leaving its natural-scientific auxiliary branches out of the discussion, fundamentally it oscillates between history, with which it shares humanistic theory and method as well as diachronic scope, and anthropology, that shares with archaeology a focus on humans and their environment. Where on the scale between history and anthropology the archaeological scholar is situated depends largely on individual research objectives and, importantly, on the time period and empirical material treated.

When it comes to the issue of money, archaeologists have been much inspired by social and cultural anthropology,[18] increasingly so since the 1980s.

16 Gullbekk et al., *The Use of Money in Religious and Devotional Contexts*.
17 Creighton, *Coins and Power in Late Iron Age Britain*.
18 See, e.g., influential works by Appadurai, *The Social Life of Things*; Dalton, *Studies in Economic Anthropology*; Mauss, "Essai sur le don"; Strathern, *The Gender of the Gift*; Parry and Bloch, *Money and the Morality of Exchange*; Weiner, *Inalienable Possessions*; Hoskins, *Biographical Objects*; Graeber, *Toward an Anthropological Theory of Value*; and a summary

This seems to be particularly true for pre- or proto-historical archaeologists, that is, those working on the time periods and places for which we have no historical (written) sources or only very particular ones (e.g., external sources such as traveller's accounts, or special-purpose and formulaic epigraphy). In pre- and proto-historical archaeology, ethnographic analogies and anthropological examples of the great diversity in cultural perceptions and organization have been valuable models for how to interpret the "mute" remains with more confidence. When discussing economy and money, pre- and proto-historical archaeologists are therefore rather likely to refer to emic ideas of gifts, cycles, exchange, barter, prestige, commodification, or "tournaments of value"[19] than to commerce, trade, profit, remuneration, or monetization processes. The former concepts seem simply to hold a higher explanatory value for the investigated societies than do the latter, or are employed to avoid simplistic analogies between the past and the market mechanisms of the last few hundred years which may be inherent in an etic approach. The world of the social *homo anthropologicus* is presented as an alternative to the selfish and calculating world of *homo economicus*.[20]

With "money" may be included many types of valuables, such as African iron bars (*kissipennies*), medieval Russian silver bars (*grivnas*), beads (e.g., *kauri* shells or *aggries* of mineral or glass), neck rings and other ornaments, stones (like the famous ones of Yap), and many other things for which one can easily find analogies in the archaeological record. As an example, certain Viking-Age beads look very similar to *aggry* beads, and match tantalisingly in time with a passage where Ahmad Ibn Fadlan talks about the high value of certain beads esteemed and desired by eastern Vikings (Figure 10.1).[21]

Some of these monies have a known trading or currency function, while others are for special purposes only, like bride exchange. It has no doubt been fruitful for pre- and proto-historical archaeologists to work (more or less explicitly) with the understanding of these non-numismatic monies in order to find alternative perspectives for a past that cannot really be fitted into a present-day framework. Neither does, as pointed out by Walter Neale, the use of money necessarily imply a "commercialized" society, nor do commercial activities necessarily mean that all fields of an economy are

of arguments within this field included in Papadopoulos and Urton, *The Construction of Value in the Ancient World*, pp. 12–21.

19 Appadurai, *Social Life of Things*, p. 21.

20 Papadopoulos and Urton, *Construction of Value*, p. 20.

21 Ibn Fadlan, Kitāb ilá malik al-ṣaqālibah; and Callmer, *Trade Beads and Bead Trade in Scandinavia*, esp. ch. 6 and 9.

FIGURE 10.1 Scandinavian Viking-Age beads from Birka, Sweden. From graves 550 (top) and 1067 (below). Inventory Nos Shm 34000Bj550 (Top) And Shm 34000Bj1067 (Below).[22]
SOURCE: SWEDISH HISTORY MUSEUM.

22 SHM + number = inventory number in the Swedish History Museum, Stockholm.

market-dependent.[23] The dictum “money does not only have economic functions” has therefore been strongly felt by archaeologists for several decades. It is still useful to remind oneself of these thoughts, perhaps especially when it comes to coins in archaeology, but the perspective has also been criticized for downplaying the economic dimensions too much and for leaning more on ethnographic accounts than on archaeological data.[24] Still, it does not result that archaeologists in this way try to eliminate economy from the past, just attempt to find better-informed ways to identify and discuss it.

Coins presuppose the existence of a state or strong ruler, organized production, and a multi-purpose objective, components that cannot always be ascertained for pre- or proto-historical societies. Therefore, many archaeologists seem to prefer a broader study of “money” or “currency” rather than one of coins. They use coins mainly for purposes of dating different archaeological contexts, treated on an overall level or simply left aside to specialists (numismatists). Although there are examples of pre- and proto-historical coinage (such as that of the Celts), coins were most often produced in literate societies and often in themselves – through their inscriptions – are evidence of the existence of written culture. In, e.g., Japan and Northern Europe, the advent of coinage took place in the medieval period or its chronological equivalent, but in, e.g., China and Southern Europe, it started many centuries earlier. In effect, coins belong not to one specific chronological period but rather to a certain type of society. Proper coins thus belong mainly within the archaeological subdiscipline of Historical Archaeology, which studies both written and material sources and therefore primarily classic, medieval, and modern societies.

As we enter into the Middle Ages, however, the presence of written sources seems to be of some consequence even for archaeological research. Humans and societies appear more directly comprehensible and the content of texts is often given more weight or explanatory value than the sometimes-contradictory material evidence. As a result, someone working with, for example, pre-Roman Britain or medieval Scandinavia (which is this author’s home camp) may experience how the past, in scholarship, undergoes a rapid process of transformation. Within a time-frame of perhaps 150 years (in the Scandinavian case, *c.*A.D. 1000 to 1150), the past changes from a fairly mystical place, investigated through archaeology, anthropology, history of religion, and ethnographical analogies, into a putatively illuminated and rational society. The latter may be examined using a rapidly increasing body of foreign and domestic

23 Neale, “Monetization, commercialization, market orientation, and market dependence”, pp. 25 and 27–28.
24 Haselgrove and Krmnicek, *Archaeology of Money*, pp. 2–3.

written sources (among which we may include coins) as well as a wealth of archaeological and art-historical sources (among which we also may include coins!) whose shapes seem more familiar and whose meanings seem more directly comprehensible to us today. This has profound consequences also for the study of money and coins: the pre-historic means of exchange "must" always be "money" or "currency", even if the object in question is a coin. The historically situated coin, instead, is regarded primarily as a monetary instrument, even when we find it hoarded, affected by secondary treatment (such as folded, or pierced for wearing) or used in ritual ways (such as offered into a saint's grave), as the historical society is considered to have been rational. The underlying assumption seems to be that once enlightened about the economic possibilities of coinage, a society and its individuals could not turn back from "rational" economic behaviour.

This, presumably, goes back to the "historical" dimension of coins, which has been a prominent feature of their study ever since the Renaissance, and to which many of the established numismatic research issues are tied. Indeed, coins, through their portraits and inscriptions (among other features) name rulers, indicate titles and years, help to establish successions of monarchs, indicate that individuals or states held minting rights, and help us find out many other facts that contribute to our understanding of past societies.[25] These are very "historical" research issues, and different from archaeological ones. Increasingly, however, the archaeological perspective, to which I will return in a moment, has gained ground within coin studies. This probably has to do with several factors, two of which immediately spring to mind. The first has, again, to do with archaeological scholarship itself and with the development of the branch or discourse of Historical Archaeology since the 1950s.[26]

"Historical Archaeology" encompasses scholarship and archaeological practice that deals with material remains and text sources together, or with material remains from a society which produced and used domestic text. It thus includes cultures from ancient Mesopotamia via pre-Columbian Mesoamerica and the European Middle Ages to colonial societies like 19th-century Australia, and is in this sense a much broader term than, e.g., "Medieval Archaeology". What it comes down to is not the precise place, time, and issuer, but the nature of the investigated society and of the available sources – objects and texts. This perspective and methodological stance offers theoretical and methodological

25 Cf. chapters 1, 8, and 13 in this volume.

26 Andersson, Scholkmann, and Christensen, "Medieval archaeology at the outset of the third millennium"; Andrén, *Between Artifacts and Texts*; Little, *Historical Archaeology*; Orser, "Introduction".

openings to approaching coins from angles of relevance for archaeological issues and to treat them as a category integrated with a whole range of items of material culture.[27] Thus, research questions deriving from archaeological contexts have gained prominences over several decades: for example, how, why, where, and by whom coins were used in early churches[28] or in other ritual contexts.[29] Research objectives derived from general and current archaeological debate, such as studies of "materiality", "agency", "object biography", or "entanglement" have recently also been explicitly applied to numismatic material.[30] It seems that archaeologists, while acknowledging the expertise of numismatists, are now discovering aspects of the coin material that may be considered from an archaeological perspective.

The second factor for why the archaeological perspective has strengthened within coin studies is, I suggest, that historians and numismatists have a need for and interest in contextual dating of coins, in particular when it comes to groups of coins where the issuer is anonymous or the inscription is unreliable (e.g., imitative coinages). Although there are numismatic methods that may help solving such difficulties – in particular technical studies of weight, metal content, or dies, and considerations of the iconography – it is usually vital that additional indications can help to provide some fixed points, in particular as absolute dating is concerned. As archaeological method has become more multifaceted and increasingly finely calibrated, its investigations have become of more use and interest to historians and numismatists, while traditionally it was often the other way round (numismatists providing datings for archaeological contexts). Although there are issues to solve, including differences between scientific and numismatic dating methods,[31] the interest today is mutual and the need to understand each other's methods and issues apparent to all involved.

It results that archaeologists now seem to better understand the value of coins for other purposes than dating, and feel freer to work with them out from

27 Cf. Andrén, *Between Artifacts and Texts*, pp. 179–83.

28 E.g., Dubuis and Frey-Kupper, *Trouvailles monétaires d'églises*; and Gullbekk et al., *Use of Money*.

29 E.g., Burström and Ingvardson, *Divina Moneta*; and Haselgrove and Wigg-Wolf, *Iron Age Coinage and Ritual Practices*.

30 Audy, *Suspended Value*; Carr, "Coins, crests and kings"; Ciric, "A secondary use of Roman coins?"; Codine-Trécourt, *Les monnaies mérovingiennes*; Corcoran-Tadd, " 'Is this the gold that you eat?' "; Herva, Nurmi, and Symonds, "Engaging with money"; Kemmers and Myrberg, "Re-thinking numismatics"; Krmnicek, "Das Konzept der Objektbiographie"; Myrberg,"The colour of money"; Myrberg, "The hoarded dead".

31 E.g., Archibald et al., "Numismatics and the chronological models".

methodology, theory and research objectives derived from general archaeology. Old school numismatists and historians may find some of these studies peculiar or beside the point, but largely accept them as valid. All in all, my perception is that in the last few decades these two factors have greatly increased the general understanding of the multifaceted functions of coins and money: not only medieval ones, but more widely.

The Seminal Role of Numismatics and Coins within Archaeological Method and Thinking

Coins have in several distinct ways been particularly useful to archaeological and historical scholars and in a few circumstances had a decisive impact on the history of archaeology. To start with, it was recognized at an early stage that coins were of particular value for inquiry into the past. Not only are they less destructible and altered by time than many other types of ancient remains, but they are also found in a multitude of places, they are numerous and varied, and they are not as easily falsified and adulterated as are texts.[32] For these reasons, and because coins fire the imagination and are easily collected, they were one of the most cherished components of early collectors and antiquaries in the building of the archetypical private museum, the *Wunderkammer* or cabinet of curiosities. Alain Schnapp illustrates a section on the transition from antiquarianism to archaeology proper with several engravings of early antiquaries and numismatists; most include coins and medals, underlining coinage's and coin collectors' fundamental roles in the process described (Figure 10.2).[33]

Importantly, these cabinets of curiosities were not only a pastime; the early collectors also contributed fundamentally to the building of knowledge around the collected objects.

In the 1810s, Danish antiquarian Christian Jürgensen Thomsen (1788–1865) was the first to work out and apply an archaeological three-period system (Stone, Bronze, and Iron Ages, the broad scheme that is still operated with today) within a museum collection and its exhibitions which opened in Copenhagen in 1819. The "three age model" was itself of ancient origins but was now put into practice. In so doing, Thomsen revolutionized the general understanding of chronology, demonstrated how the study of prehistory could be set on a scientific basis, and created a modern museum based in comparative

32 Jacob Spon (1673) and Ezechiel Spanheim (1664), both quoted in Schnapp, *The Discovery of the Past*, 184–85.

33 Schnapp, *Discovery of the Past*, pp. 182–95.

FIGURE 10.2 French antiquarian and collector Charles Patin, seated in front of his medal cabinet with a coin in his hand, a medal around his neck, and other art and naturalia items surrounding him. Engraving by Theodor Roos in *Thesaurus Numismatum* (Patin 1672).
SOURCE: BIBLIOTHÉQUE NATIONALE DE FRANCE, PARIS.

archaeology and a genuine understanding of the more precise relations between objects rather than the amassed variation of a cabinet of curiosities.[34] This he made out from his understanding of how to work comparatively with the content of finds, but this understanding was firmly rooted in his sense for details and the skills for typology and seriation which he had acquired through working with coins, the collecting of which had become a favourite pastime for gentlemen.[35] His findings and method were only published in 1836,[36] but were by then already well known among antiquarians and museum visitors.

John Evans (1823–1908), a collector and amateur archaeologist, successfully put his numismatic knowledge to use within other areas of archaeology as well. From coins and numismatic practices of study and publication he drew the methods and terminology for a comparative approach, which he applied to Palaeolithic artefacts.[37] In his numismatic work, Evans showed keen interest in the latest discussions and advances and was open to new methods and modes of inquiry, such as using contextual data to situate coins chronologically, and recording find-spots in order to make indexes and maps of finds.[38] Evans catalogued flint tools by noting differences and resemblances in material, form, or production technique, just as he would have done with his collected coins,[39] and thus managed to transfer his methodology and understandings into a whole new field, which he in practice created.[40] Nathan Schlanger asserts that the contribution of numismatics and coins consisted not only of the methodology, but also importantly a language (such as the terms "striking" and "wrought") and a system of analytical and uniform description.[41] Evans was also inspired by the accurate, detailed descriptions and depictions of coins, a technique he subsequently applied also to stone and bronze implements. His numismatic experience influenced his modes of interpretation and his method for authenticating artefacts from, e.g., "patina, weight, workmanship, and

34 Eskildsen, "The language of objects"; Schnapp, *Discovery of the Past*, pp. 299–301; and Trigger, *A History of Archaeological Thought*, p. 127.

35 Klindt-Jensen, *A History of Scandinavian Archaeology*, pp. 49–52 and 55–57; and Trigger, *History of Archaeological Thought*, pp. 122–27.

36 Thomsen, *Ledetraad til Nordisk Oldkyndighet*.

37 King, "Evans and the Roman coinage"; MacGregor, "Sir John Evans, model Victorian, polymath and collector"; Schlanger, "Coins to flint"; and Schlanger, "Series in progress".

38 Jersey, "Evans and ancient British coins", pp. 162–66; and King, "Evans and the Roman coinage", pp. 180–81.

39 Evans, "On the occurrence of flint implements in undisturbed beds of gravel, sand and clay"; cf. e.g., Evans, "On the date of British coins".

40 Schlanger, "Coins to flint", p. 466.

41 Ibid., p. 467.

the manner in which it came into my possession".[42] Evans's numismatic work on the development of coins was explicitly picked up by A.H. Lane-Fox Pitt Rivers, who applied it to the development of New Ireland paddles.[43] Similar ideas of serial or typological development were soon firmly established within the archaeological community.[44]

The Palaeolithic assemblages that Evans worked with were to have profound impact on the general understanding of the time-depths of the Earth. His studies were thus part of a process of revolutionary re-evaluation of the history of mankind, which arguably was much longer than allowed for by biblical history. In this process, early archaeologists cooperated with geologists, zoologists, and palaeontologists, as understanding the formation of Palaeolithic sites out from a natural-scientific perspective was important for their archaeological apprehension. But the true driving forces behind the development of methods and of a chronology of artefacts and humans, and thus the establishment of high human antiquity, were antiquarianism, art, and numismatics.[45] The work of Thomsen and Evans, two 19th-century researchers and numismatists, fundamentally changed archaeological methodology and the organization of collections, but also contributed to a total reconsideration of human history when the time-depth of humans and the globe was understood. In these processes, coins played a pivotal role.

The Use of Coins within Archaeology

As noted above, in the medieval period "money" mainly implies "coins" (as in "metal-based units of account"), although currencies such as butter and cloth are known to have been used in some cases.[46] The following section therefore focuses on coins, but some examples will be drawn from time periods other than the medieval, when relevant for theoretical and methodological issues. This section will review some of the fundamental conditions for archaeological use of coins, and end by considering a few examples of coin studies chosen

42 Evans, "Errors respecting the coinage of the ancient Celtic kings of Britain", p. 164; Schlanger, "Coins to flint", pp. 468–69; and Schlanger, "Series in progress", pp. 351–52.
43 Schlanger, "Series in progress", pp. 358–59.
44 E.g., Montelius, "Typologien eller utvecklingsläran tillämpad på det menskliga arbetet".
45 Trigger, *History of Archaeological Thought*, pp. 135 and 138; Schlanger, "Coins to flint", pp. 475–76; and Schlanger, "Series in progress", p. 343.
46 Gullbekk, "Natural and money economy in medieval Norway".

from an archaeological point of view, as well as of studies that successfully integrated archaeology and numismatics.

Coin Finds and Archaeological Method

Federico Barello points at the vast numbers of coins found on almost every archaeological site in the Mediterranean area as a fundamental reason for why archaeologists need to acquire at least some basic understanding of the material and the ways it may yield information.[47] This applies in particular to scholars studying the ancient period, when base-metal coinage was made and used on a large scale. Although the former Greek and Roman areas are perhaps better furnished with coin finds than most, the proposition holds true everywhere that coins may be expected to turn up. But from an archaeological point of view, coins differ from each other not only in what they *are* but perhaps even more in how they are *found*. The type of find, and the way it was retrieved, is decisive for what can be said about the coins and what they can be used to discuss. Archaeologically speaking, there are three basic categories to consider: coins which are stray and un-stratified, those which were individually accumulated over time but are incorporated into a larger context (like finds from a market square, a ritual site, or an offering well) and those which are part of a well-defined event such as a hoard or a grave (although the contents of either of these may well have been collected over a longer period of time before being deposited). These categories of finds may be used for different types of investigations and are often retrieved with very different methods and degrees of accuracy. Grierson, for the same reason, distinguished between stray finds, "location finds" (a gravefield, Roman villa, etc.) and "area finds" (a larger tract of land), and between single-finds, accumulated finds, and hoards;[48] although departing from a historian's point of view they mainly coincide with the categories noted above.

The stray- or single-find, or "casual loss",[49] is usually considered to hold the least scientific value, as it cannot really be related to other features. Yet it can be significant purely because of its presence: for example, by indicating coin use or even degrees of monetization, in particular if it is possible to use or compare significant numbers. Jens Christian Moesgaard used un-stratified detector finds from Danish rural areas to locate medieval settlements and, further, to demonstrate that rural use of coin was much more commonplace in the Middle Ages than previously thought when drawing mainly on data from

47 Barello, *Archeologia della Moneta*, p. 133.
48 Grierson, "The interpretation of coin finds (I)".
49 Cf. Haselgrove and Krmnicek, "Archaeology of money".

churches and documents.[50] There may be several reasons for a coin to turn up as a single-find, and the category likely lumps together coins which derive from many different uses, scattered deposits, or crumbled structures.[51] Old, foreign, or otherwise odd stray coins could derive from amuletic use, like the many examples of stray pierced and unpierced coins from U.S. archaeological sites associated with enslaved African Americans, who attached them to clothes or carried them in their shoes as charms.[52] In the U.K., a large number of stray-found medieval Byzantine coins were probably brought to the island by British travellers as souvenirs over the last two centuries.[53] Such secondary or prolonged uses of an un-contextualized coin cannot be proven through archaeology, but the area where they are found might sustain some reasonable interpretation, and the examples illustrate that there are many possibilities to evaluate before casting the single-find aside as un-informative.

The particular value of an accumulated find (or a "series of single finds"[54]) is its diachronic scope combined with a spatial dimension. An accumulated find may tell of use-patterns on a site and also of changes over time in the practices or of the character of the used material. Ideally, in order to truly understand their use, all accumulated coins should be clearly associated with layers and/or features on the site. For example, Haselgrove considers stratified coin sequences to be the best, perhaps the only way to understand the chronological development of Iron Age coinage in Gaul and its interplay with Roman coins, and refers the new possibilities for dating to "large-scale archaeological excavations at Iron Age settlements and especially religious sites, and widespread use of metal detectors".[55] But even when coins are not stratified it may still be possible to, for example, assess them more generally to identify clusters and patterns on different scales, or discuss the composition of the regional coin stock.[56] Concentrations of coins may indicate the previous position of features, such as removed altars in a church, and the dating possibilities of coins may provide approximate start or end dates for the use of a site as well as information on fluctuations in coin use, production, or influx from other areas. The quality and degree of accuracy in a survey, excavation, and documentation are, obviously, key factors for what can be done.

50 Moesgaard, "Bønders møntbrug i middelalderen. Hvad detektorfundne mønter fortæller".
51 Cf. Krmnicek, "Coins in odd context".
52 Fennell, "Conjuring boundaries", pp. 286–87; and Russell, "Material culture and African-American spirituality at the Hermitage", p. 7.
53 Naismith, *Medieval European Coinage*, p. 36.
54 Heijne, *Särpräglat*, pp. 44–45.
55 Haselgrove, "The development of Iron Age coinage in Belgic Gaul", p. 111.
56 E.g., Hodder, "Distributions of Iron Age material".

Churches represent a well-defined ritual context that appeared during the medieval period and many of them have been in use for more than a millennium. Through accumulated church finds, it is possible to study a long-term and continuous use of coins by a whole population, not only or mainly the nobility, merchants, and burghers who come through in written sources. Scandinavian and Swiss churches contained an unusually large number of coins – valuable from a statistical point of view – due to their use of wooden floors. Studies relating to this type of find have included processes of monetization, how the use of money spread geographically, and also the relationship between coins used in towns and in the countryside.[57] As churches in many cases are still in use today, few coins were left in their original positions. But even if the layers were disturbed, it is still possible to recover information through careful registration of the coin's position in x-y-z axes (three-dimensionally horizontal and vertical), through sieving the fill and vacuum-cleaning spaces such as chambers in the belfry towers.

Many settlements and towns were occupied long before the Middle Ages, but their accumulated finds are of particular interest for the same reason as those in the churches: we can observe continuous use by the whole population, which may contrast with what meets us through written evidence. Whereas medieval towns may offer fabulously thick cultural layers which preserve archaeological data very well, the rural settlements normally offer less of that. Excavation is still important for our understanding of those sites, but extensive methods such as geophysical analyses, phosphate mapping, and metal-detecting may be of greater initial use in pinning down the extent and character of sites.

For more narrowly defined contexts, like a building, a posthole, or a grave, coins may provide a dating, but this is far from straightforward. The coins in a grave were often clearly selected for the purpose and usually do not represent the normal coin stock in use unless they were truly kept together to be used for everyday purposes. As much as the grave represents a single deposition event (albeit one that may have been protracted) rather than an accumulation over time, the time-span of its contents may be considerable and must be taken into account. For example, it makes a great difference if a coin found in a grave was in a purse with other coins (more likely to be fairly contemporary with the burial), strung on a necklace (more likely to be considerably older than the burial), or part of a small hoard deposited near the feet. Roman coins found in considerably later Anglo-Saxon graves as pendants were interpreted as part

57 E.g., Klackenberg, *Moneta Nostra*.

of an important aspect of the costume for young and adult females, due to the antiquity of the objects that connected them with a distant past. When they were without means of suspension but included in purses it was with other items of a ritual, rather than monetary, character. Still, in some graves the Roman coins were found with scales and weights, suggesting that they, too, were used as weights.[58] In yet other Anglo-Saxon graves, Roman coins were found in positions that indicate that they were placed there by mourners, rather than being part of the costume or of the life-equipment of the deceased.[59] These cases exemplify how the close context and the precise relation between finds is essential for the interpretation of the single artefact, and how important detailed recording and documentation is, since it will forever provide the framework for interpretational possibilities.

Similarly, a coin found under the threshold of a building may be assumed to predate it and – particularly where the rather common habit of making "construction offerings" is known to have been practised – it may even date the very time of construction (although one would like corroborating data from, e.g., a dendrochronological sample to argue this with more certainty). But coins from the bottom of postholes may either have been put there at the time of construction or be later infill. To give an example, in the Norwegian stave church of Høre, one coin from a posthole may with certainty be regarded as a building's offering, since it was found under the bottom stone.[60] On the contrary, in the Swedish church of Arby, the coins found in the postholes of an underlying early wooden church dated not from the construction of that church but from the period when it was dismantled. In the latter case, the coins derived from use in the new nave (built around the early church), and ended up in the early postholes only when the posts were pulled from the ground.[61] It is not unusual that the earliest coins to appear in medieval churches are considerably older than the presumed building date, in which case it must be evaluated whether they derive from, e.g., underlying graves. The earliest coins may also be foreign or pierced to be used as spangles. In those cases, amuletic uses such as those suggested for "odd" coins in African American contexts as described above come to mind, rather than their being particularly useful for purposes of dating.

The most spectacular type of coin find is usually the hoard or deposit, where numbers of coins, and often other artefacts, are found positioned in a way that

58 Eckardt and Williams, "Objects without a past?", pp. 149–53.
59 King, "Grave-goods as gifts in early Saxon burials", pp. 230–31.
60 Risvaag, "Echoes of the mother church in a remote valley".
61 Andersson and Svennebring, *Arby kyrka*.

makes it clear that they were deposited together. The material may be more or less homogenous: it is not unusual to find thousands of coins of more or less the same type in a hoard, but there are also very small deposits consisting of just a few specimens, and others include objects from very different areas or coins with a very long chronological scope. Hoards represent a single deposition event although the content may be diachronic, and were generally intentionally collected from a certain pool of objects and with a certain purpose (for economic purposes in, e.g., a lost purse, or intended for long-term deposition with savings or ritual objectives). There has been long-standing debate about the reasons for depositing coins and other objects in this way and a basic distinction is often made between economic (savings) hoards and ritual hoards. The latter is as much a numismatic as an archaeological issue to be determined from the composition of the find; the archaeologist can contribute with contextual data, such as the understanding that some hoards are structured in a way that echoes the content of contemporary graves.[62]

Archaeological methodology is, however, of particular use when it comes to careful excavation of hoard contents, as has been done in a few cases.[63] In early discoveries, little attention was paid to the context of the finds, and often the coins were taken out immediately without expert supervision. But even today different circumstances may cause the retrieval of hoards without archaeological surveillance; it is a great pity when this happens. Through studies like those mentioned above, it has resulted that there is a great deal more to understand from hoards than only which coins and objects are included. The results demonstrate in some cases sorting of coins after origin, or that coins were laid down as physical parcels (not only in the numismatic "cluster" sense of the word). In some cases, seeds and other organic material were included (Figure 10.3), or coin layers of a hoard separated with intact jewellery.

The methodology is expensive but should be further developed in order to understand better the exact circumstances of the hoarding process – e.g., if it was all deposited at one time (perhaps hidden in haste, or meant to stay permanently where it was offered) or if it was added to over the years (the owner intending to use all or part of it from time to time, or to "reactivate" it as an offering). In such cases, archaeology may contribute also to the understanding of mechanisms, practices, and ideas behind the deposition. The

62 Kilger, "Kombinationer av föremål"; Myrberg, "The hoarded dead"; Myrberg, "The social identity of coin hoards"; and Thunmark-Nylén, *Die Wikingerzeit Gotlands*, pp. 456–58.

63 E.g., Brisholm and Rispling, "The Häffinds IV hoard"; Carlsson and Karn, "Att gräva ut en silverdepå …"; Herrmann, *Ralswiek auf Rügen*; and Kaenel et al., *Der Münzhort aus dem Gutshof in Neftenbach*.

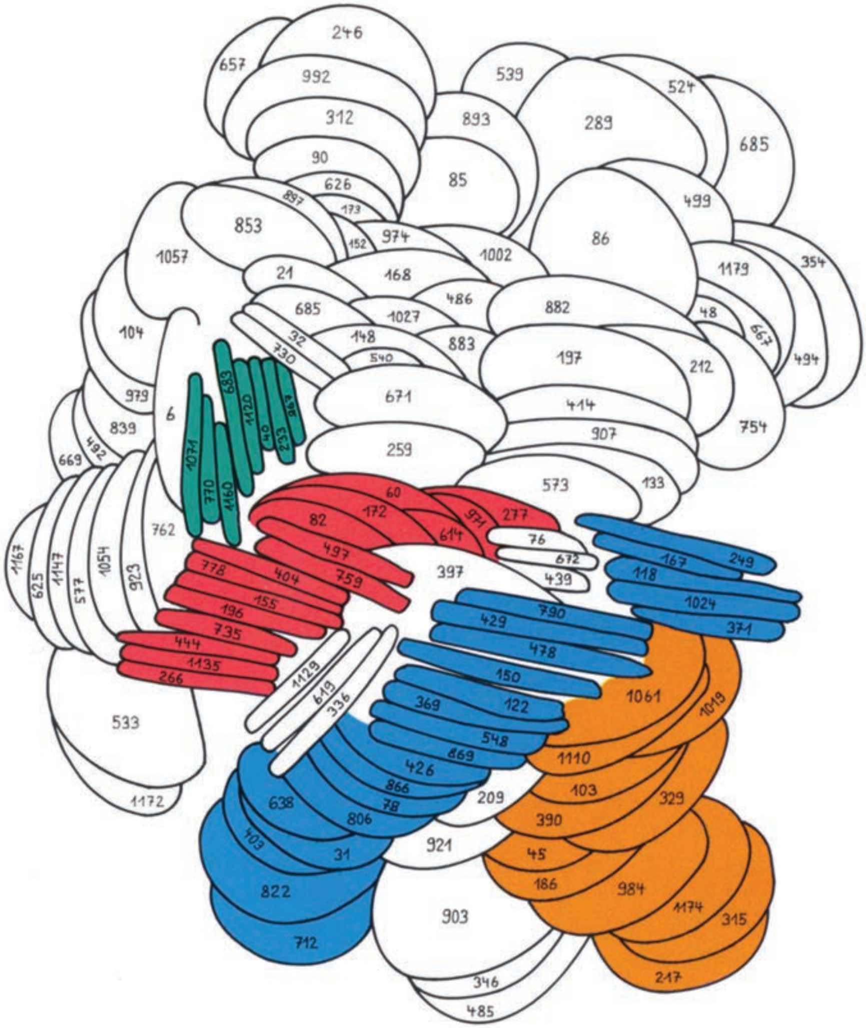

FIGURE 10.3 Reconstruction and documentation of a hoard from Neftenbach, Switzerland. The coins were deposited in a bronze jug, some singly and some wrapped into rolls, covered by cloth and hidden below the floorboards of a building. Mixed with and on top of the coins was foxtail millet.
AFTER KAENEL ET AL., DER MÜNZHORT AUS DEM GUTSHOF IN NEFTENBACH, FIGS. 45 AND 51.

archaeological interest for social-anthropological monies discussed earlier in this chapter has also fuelled the debate on a theoretical level, pointing towards alternative concepts of wealth and economy which may shed light on the hoarding phenomenon.

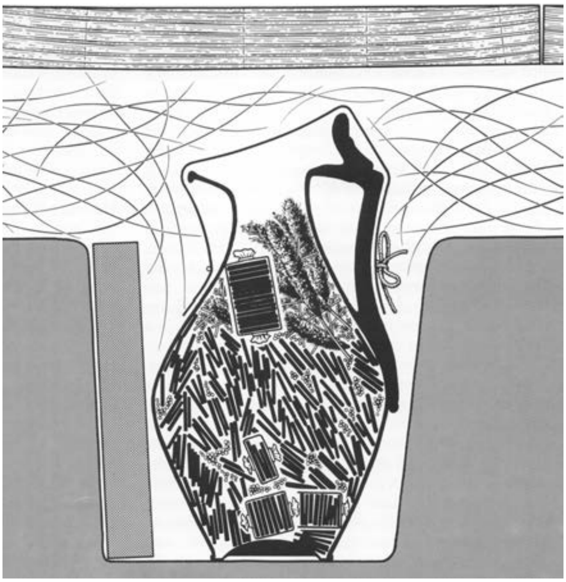

FIGURE 10.3

Examples of the Fruitful Interplay between Archaeology and Numismatics

There are certainly examples of coin types being known from written records that cannot with certainty be identified in the material record, or where coin volumes stated in writing are hard to match with the finds.[64] There are thus limitations to the archaeological approach to coins. But coin finds may also provide evidence where written sources remain silent, by, for example, telling us about rulers we did not otherwise know or demonstrating contacts between areas. Some of the coins found in Scandinavian hoards are virtually unknown in their areas of origin (Figure 10.4).[65]

Through archaeology, new finds may also show a more complex material reality than that derived from the evidence of written sources, even contradicting it. For example, many instances show how coins had parallel use as non-coins (as ritual payment, amulets, etc.). Martin Allen recounts how around 100 coins were found when Archbishop Scrope's tomb in the York Minster was excavated in 1844, probably devotional offerings in and on the archbishop's grave.[66] Claudia Perassi reports from archaeological investigations into five

64 See, e.g., Gullbekk, *Pengevesendets fremvekst og fall*, English summary pp. 306–17.
65 See, e.g., Rispling, "Spännande mynt i Spillingsskatten".
66 Allen, "Coins and the church in medieval England".

different sites from the 5th, 6th, and 7th centuries that coins were evidently used in connection with the baptismal fonts, perhaps at baptisms, despite the explicit ban on such practises by church officials.[67] Lucia Travaini,[68] Mark Hall,[69] and Richard Kelleher,[70] among others, cite examples of medieval coins being inserted into graves and foundations or sewn into clothes as offerings or amulets.[71] The medieval coins found in Scandinavian and Swiss churches were in all likelihood offered either on altars or in offering boxes and ended up in the fill of medieval burials and later burial chambers after falling onto the floor and disappearing under it.[72]

In short, numerous archaeologically retrieved coins point out clearly how coins were used for purposes other than the intended economic ones, which are most prominent in written sources and contemporary documents. Christoph Kilger connects the high number of coins in the northern part of a Gotlandic church not to monetization but to an impressive fresco on the northern wall of the nave, where money may have been offered as part of the ritual practices performed in front of it. He also connects the higher degree of fragmentation of the coins found in this area to movement, kneeling, and trampling during the rituals rather than to a need for smaller denominations (and thus a higher degree of monetization, as would often be the interpretation when mainly statistics and numbers are considered, rather than an examination of the physical objects). Archaeological considerations of taphonomy (processes of wear and decomposition) were here vital for the discussion.[73]

A number of studies have also investigated coin use in a monetary sense and benefitted from archaeological data. Studies of monetization and coin output have long interested (economic) historians but are difficult to conduct conclusively from written sources alone, meaning that coins and coin finds have important roles to play. We must consider the use of coin in medieval Europe to be extensive,[74] although its intensity varied between areas and periods. The impressive numbers of coins, tributes, and revenues quoted by Grierson, Jacques Le Goff, and Peter Spufford for central European

67 Perassi, "Coins and baptism in late antiquity".
68 Travaini, "Saints and sinners"; and Travaini, "Saints, sinners and … a cow".
69 Hall, "Money isn't everything"; and Hall, " 'Pennies from heaven' ".
70 Kelleher, "Pilgrims, pennies and the ploughzone".
71 Hall, "Money isn't everything". Compare to Thordeman, "Myntfynden i Korsbetningens massgravar".
72 Cf. Gullbekk et al., *Use of Money*.
73 Kilger, "Moving money, ritual money".
74 See Grierson, *Coins of Medieval Europe*; Grierson, "Commerce in the Dark Ages", pp. 77–79; Le Goff, *Money and the Middle Ages*, pp. 36–47; and Spufford, *Money and its Use*, ch. 4.

FIGURE 10.4 A Khazar coin inscribed “Musa rasul Allah” (Moses is God’s messenger), found 1999 in a hoard from Spillings, Gotland, Sweden. The coin (dated *c.*837) is unique and the only physical proof of the Khazars’ conversion to Judaism before A.D. 800.
SEE RISPLING, “SPÄNNANDE MYNT I SPILLINGSSKATTEN”.
PHOTOGRAPH: KENNETH JONSSON. SCALE 3:1.

areas such as France, Germany, or Italy were not to be matched by many other parts of the continent and its adjacent areas for a long time. One of archaeology's particular assets is the ability to provide more detailed and differentiated data for different regions, including those where the written evidence is scant. For example, Henrik Klackenberg's seminal study of monetization in Sweden,[75] based on accumulated finds in churches, indicated that despite domestic coinage being introduced more than two centuries before, coins were used to a significant extent only after *c.* A.D. 1250 (although it should be noted that this was even at that point in a very particular setting, closely tied to the ideas and needs of the central Church). From the major part of contemporary settlement layers and towns, the evidence of coin use is even scantier.

Moesgaard has used metal-detector finds to demonstrate a change in the use of money in the Danish countryside and that use of coins was more common in medieval rural settlements than previously thought, as referred to above.[76] In a subsequent study,[77] he investigated how data related to the "coin profiles" (composition) of church finds deriving from investigations with modern metal-detectors on abandoned, unexcavated church grounds. Old metal-detectors were not very effective at finding small, thin coins like medieval bracteates, and the results from such early surveys were therefore too random to be entirely comparable. Modern detectors are able to pick up signals from very small and fragile coins, which opens new possibilities for metal-detecting on sites such as abandoned churches with less need to excavate (although comparisons show that sieving soil still increases the numbers found). Combining the two studies, one important conclusion is that the typical small medieval bracteates, often thought to represent the breakthrough of a monetary "market" use of coins, are surprisingly more common in churches than in settlements. Since these coins, as demonstrated in the second study, *can* be found with detectors, there is no reason to believe that this overrepresentation is due to detector issues, and Moesgaard's studies thus point towards some selective process for either the settlement or the church context. It could, in consequence, be suggested that church finds are more useful for discussing the start of coin use and the numbers used rather than payments in society outside of churches.

In the far more text-based Middle East, archaeology may make important contributions to the study of everyday economy and coin use, which is not

75 Klackenberg, *Moneta Nostra*.
76 Moesgaard, "Bønders møntbrug".
77 Moesgaard, "The redundant churches".

in any way fully documented. In the medieval colonial Kingdom of Jerusalem (1099–1291), official coinages were supplemented by undocumented and unofficial lead token money.[78] Several hundred such tokens have been found at about 30 locations within the territory, many in archaeological excavations. These secure contexts yield detailed information on how and where coins were used. Apart from one large hoard, the material consists mainly of stray and accumulated finds and some small hoards containing just a few coins. The finds were made in very different contexts: towns, fortresses, domestic areas, defensive structures, religious complexes, bath houses, mills, stables, and workshop areas, and in the capital as well as in smaller towns and in rural castles, manors, and farms. The use of these low-value lead tokens was accordingly not limited to any particular group of the community or special-purpose situation, but fulfilled an important role in daily economy by supplementing the official, high-value coinage.[79] The lead tokens were locally produced, even for single estates, as demonstrated by several finds of moulds (Figure 10.5),[80] and the designs were inspired by local coinages although many also derived from contemporary European coins and lead tokens.

Altogether, the evidence clearly shows, first, that the use of token money was brought to the Middle East with the European settlers and, second, that the colonial economy depended on unofficial solutions in addition to the official ones. The low-value lead tokens, on which the official and written narratives remain silent, are thus an important part of the archaeological evidence of the colonial project and the daily economy in the kingdom. Importantly, they also pinpoint a social class who depended on small transactions for their daily maintenance, and who rarely appear in the documents.[81]

Benjamin Luley has analysed the use of money on the archaeologically investigated Celtic site of Lattara with archaeology, and was able to distinguish the difference in practises before and after the Roman conquest.[82] Pre-Roman layers yielded coins mainly from domestic contexts, along with a few even earlier hoards and building offerings. Numerous Greek (non-domestic) coins from floor layers and rubble indicate a use for everyday purposes, but not in the monetized way seen after the Roman conquest, when coins also started to appear in shop and workshop contexts. Luley suggests that the pre-conquest phase represents not a coin economy as such, but the use of Greek colonial coins as

78 Kool, "Lead token money in the Kingdom of Jerusalem".
79 Ibid., pp. 295–302.
80 Ibid.; Syon, "A crusader token mould from Akko".
81 Kool, "Lead token money", pp. 312–13.
82 Luley, "Coinage at Lattara".

FIGURE 10.5 Lead token mould found in Akko, Israel (IAA 2002–294).
SOURCE: ROBERT KOOL.

tokens to represent values in interactions between the Celtic population and Greek merchants: that is, as a kind of special-purpose money. One of the arguments for this is a clear preference for (yellowish) bronze or potin coins rather than "more valuable" silver ones, a preference that may be connected with early Celtic use of gold. Through considerations of both archaeological contexts and the character of numismatic material, Luley is able to trace a complex development from a first phase where a few foreign coins are used for votive offerings to a token period when they are used for barter and trade in domestic contexts, succeeded by an early monetary period when coins are found in more public contexts such as shops, and finally the advent of domestic coinage.

The great mass graves at Korsbetningen outside Visby on Gotland yielded not only the unique examples of medieval armour for which they are famous, but also quite a few coin finds.[83] Through the excavations of, in particular, one

83 Thordeman. *Korsbetningen*; and Thordeman, "Myntfynden".

mass grave on the 1361 battlefield, where particularly well-preserved clothes and attire made it possible to connect coins to individuals, Bengt Thordeman was able to considerably further the chronology of Scandinavian medieval coinage. From the size, position, and relative richness of this grave (compared to other, adjacent, graves), he argued that it was the last one dug, when corpses were in such a state that undressing them and searching for valuables such as coins and weapons was omitted. He was further able to conclude that in the haste, both Gotlanders and the attacking Danes were buried together, judging from the different coins in purses or stitched into clothes which were not in themselves nationally distinct. The presence of coins, and their numismatic qualities, was vital for the understanding of this historically very significant battle, and the archaeological methodology contributed vitally to the increased understanding of coin chronology.

A post-medieval example of a productive interplay between archaeology and numismatics is the case of the obsolete copper coinage that was used by the Virginia Company in Fort James, Virginia, at the beginning of the 17th century.[84] These coins are now rare or non-existent in their original context (e.g., Ireland) but were found on the other side of the Atlantic where they were brought to be used as token money when they became obsolete in the area of origin. The use of token money in the colony was not known through written sources but was discovered during excavations in Jamestown. It was established that most of the tokens circulated before 1610, then declined quickly and had almost entirely disappeared by 1620. From the following period, some specimens have appeared in settlements outside of Fort James and in Native American graves, indicating a third-phase use of the obsolete coins and tokens.[85] Several types of coins and token money were used, including Dutch tokens, English "Touch pieces" and lead tokens, and Irish coins/tokens. These had to be exchanged for a "banknote" when traders and colonists left the colony and the note could then be cashed in for valid coin upon arrival in England, so there was no reason for travellers to bring the tokens back. The site also yielded the largest number of German *Rechenpfennige* (counters) found in the New World, but the author does not consider them as part of the tokens for use as money in the colony.[86]

Beverly Straube proposes that the numismatic material from Fort James testifies to a monetary scheme by the Virginia Company, meant to facilitate wage and goods payments within the colony, but one that was short-lived or

84 Straube, "Numismatic portals".
85 Ibid., pp. 192–96 and 199.
86 Ibid., pp. 185–86 and 194–201.

abandoned before it could be fully implemented due to hostile natives forcing the settlers to temporarily vacate the site.[87] The numbers of coins and tokens found at this small colonial settlement were, however, not small (167, of which 140 were deposited between 1607 and 1610, and 500 *Rechenpfennige*), especially if measured against the numbers one would recover from any ordinary European contemporary context. (For example, the loss rate in most Scandinavian churches has been estimated at less than one coin every two years.) So however short-lived the scheme was, it must have been attempted seriously and may have played an important role while it lasted.

In this case, archaeologically retrieved numismatic data provided openings to a historical narrative on which written sources remained silent. The faraway and specific context also provided a material record that was partially different from what was known (in collections and archaeologically) from Europe, and brought clarity to several specific issues regarding the material itself. For example, some tokens could be re-attributed, one previously undated English halfpenny pattern could be dated, and an entirely new type of object was found, namely tokens to be presented at Royal "Touch" ceremonies.[88] One trial plate of scrap copper retrieved from a well (dated to *c.*1608–1610) inside Fort James, where it was buried with coins and tokens, suggested rather surprisingly that the origin for the numismatic material was the Royal Mint. Straube suggests that the Fort James obsolete coins and tokens were in fact supplied by the Mint's master-worker, who was also a shareholder in the Virginia Company and the father of one prominent Jamestown colonist.

One final interesting example of successful interplay between archaeology and numismatic material is drawn from the 20th-century Channel Islands.[89] In this case, archaeological theory regarding object biographies and material culture in general, rather than excavations, provided the results. Gilly Carr investigates the shortage of small change in the occupied Channel Islands during the Second World War and how this came about despite the fact that six currencies (British, Guernsey, Jersey, French, and three German) circulated side by side. She concludes that the shortage was due mainly to two parallel processes. First, German soldiers used to send coins bearing the badges and crests of the Channel Islands home as souvenirs from the conquered land. Second, numerous coins were transformed into "trench art" by both Germans and locals, the latter using them as small items of resistance and identity. While

87 Ibid., p. 204.

88 Ibid., pp. 197–201; concerning the "Touch" ceremonies, see Farquahar, "Royal charities", Bloch, *Les Rois thaumaturges*, and Brogan, *The Royal Touch*.

89 Carr, "Coins, crests and kings".

Germans favoured coins with crests, locals preferred the image of the king, but they were both made into similar objects, such as badges and cigarette lighters.[90] A triumphant takeover of material culture for the occupants was instead a defiant and secretive statement for the occupied, who wore the coin-badges inside their lapels to flash as a signal to trusted friends and to communicate group solidarity.[91]

Interestingly, there are similarities between the German soldiers' fascination for Channel Island coins in Carr's study and the Fort James tokens. Although their first phase of use – and in this case, also their re-use as tokens – was of economic character, in both places the coins were subject to modifications and a non-monetary re-use which may have been rooted partly in a common interest in souvenirs and partly in the feeling that one was taking possession of the enemy's icons and identity. Like the coins from the Channel Islands which were brought or sent to Germany as souvenirs or trophies of war, many of the coins and tokens from Jamestown turned up in new contexts as they became status symbols (or lucky charms?) for Native Americans. The New World tokens were again re-contextualized when they eventually followed their owners into their graves,[92] and the trench art and souvenir coins in many cases remain treasured family heirlooms.[93]

Decoding Money through Archaeology

This chapter has argued for the benefits of a close relationship between archaeology, coins and numismatics in several ways: by looking at how coins and money may be used within a theoretical and methodological archaeological framework; at coins as vital for archaeological research history; at coins as archaeological material; at the ways archaeology may contribute additional value to coin studies and vice versa; and finally at examples of the useful interplay among archaeology, coins, and numismatics with a few cases taken from different periods, locations, and research traditions. To develop the archaeological study of coins, and what could be called a "third space of coin studies"[94] in the intersection between archaeology and numismatics, we rely on good examples and illustrative case studies such as these to analyse and illustrate how coins

90 Ibid., p. 330.
91 Ibid., p. 334.
92 Straube, "Numismatic portals", p. 199.
93 Carr, "Coins, crests and kings", p. 328.
94 For the concept of "Third space", see e.g., Bhabha, *The Location of Culture*.

may be put to use for purposeful and thought-provoking inquiries into the past and present.

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CHAPTER 11

Money and Literature

Elizabeth Edwards

The topic of money and literature opens a subject broad and deep: not only are there a number of approaches that could be used, and a vast array of possible texts to consider, but there are immediate complications such as the medieval status of a category such as "literature". For example, there is a little French-Flemish dialogue, translated by Caxton into English, which also exists in versions in Middle Dutch and Middle German; it is primarily a language manual, but includes lessons in how to calculate exchange rates in different currencies – but insofar as it has characters, rhyme, and a certain pleasing if rough form, it could arguably be *both* literature and an important historical source for understanding the currency market.[1] However, in the space offered here, I shall take "literature" to mean mainly the high-culture products of poets such as Dante and Chaucer, together with the recognized genres of the period.

My remarks will of necessity be confined to the high and late Middle Ages, and to literature mainly in French and English. I characterize a literary approach, on the part of both medieval authors and modern critics, as fundamentally a consideration of the *meaning* of money, in terms not of its face value or purchasing power, but its psychological and symbolic significance. For if anything is characteristic of the literary approach, it is the consideration of works in terms of what I will call hyper-economies: those systems of desire, social prestige, metaphoric or symbolic significance, and even sexual drive that attend any actual financial transaction. Thus literature concerns itself with the psychically and morally charged domains of desire, greed, envy, satisfaction, prestige, and magnificence that, no doubt, continue to mark our own relation to our own money.

I will begin by setting out some of the approaches taken by literary scholars to the question of money, including the field of "new economic criticism", as it is called by Martha Woodmansee and Mark Osteen in a valuable essay collection.[2] The remainder of this chapter will be demonstrative; relying on the work of critics in the field, I will give brief samples of the literary criticism

1 Discussed in Howell, *Commerce before Capitalism*, pp. 19–22.
2 Woodmansee and Osteen (eds.), *The New Economic Criticism*.

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of money: first, in relation to the trope of plenty – the mysterious increase of money – across the two great genres of fabliaux and romance. Next, I will consider the meaning of money in the very dense symbolism of Dante's *Commedia*, and finally I will turn to a consideration of what golden money meant to Chaucer in the age Peter Spufford calls "the victory of gold".[3]

The approaches taken to texts by critics can be characterized as follows: representation; conditions of production and consumption; reflective or speculative; and theoretical.[4] The first looks at representations of money and its uses. Literature, like other texts, provides a valuable testimony to the status of money; Chaucer's *Shipman's Tale* offers a splendid example in its account of trading shields against franks (*francs*) in Paris and Bruges. Gerhard Joseph gives a cogent account of the research on the path to profit as the merchant borrows franks in Paris to pay debts incurred in "shields" (or *ecus*), a money of account that was not an actual currency or coin.[5] Other critics follow the economics of the production of literature, considered both from external documents and historical evidence, as in Richard Firth Green's *Poets and Princepleasers*, and from the internal evidences of the needy poet and the "complaint to the purse" genre, of which Thomas Hoccleve provides the most outstanding English example. In particular, new historicist criticism reads non-literary texts to produce an account of the social forces that inflect the literary work in question.

By "reflective or speculative", I mean two things. The first is the research that shows the reflection of, for example, scholastic theories of money or economics in literary texts. A classic example is Jill Mann's "Price and value in *Sir Gawain and the Green Knight*", which accounts for the commercial language in a highly courtly poem.[6] But in addition, many literary works are highly speculative, themselves presenting theories of money and economic life. The best example is William Langland's *Piers Plowman* and the tradition it initiated – it presents a complex account, one it is not possible to do justice to here. John Gower's *Confessio Amantis* and even *Le Roman de la Rose* likewise "perform" economic theory in poetic form. By "theoretical," I mean the way in which economic theories open up literary texts to interpretation. This final category, then, is a way of reading.

3 Spufford, *Money and Its Use*, ch. 12.

4 Some of these are close to Woodmansee and Osteen's categories – "Production", "External Circulation and Consumption", "Internal Circulation", and "Metatheoretical" – in "Taking account of the new economic criticism", pp. 35–39.

5 Joseph, "Chaucer's coinage", pp. 347–48 and fn. 16.

6 Mann, "Price and value in *Sir Gawain and the Green Knight*".

In particular, postmodern economic theories have been of the utmost importance in contemporary criticism. These theories include Marcel Mauss's early work on the gift; Jean-Joseph Goux's incendiary work on symbolic economies, in which he reads economics through Marx and Freud; Jean-François Lyotard's notion of libidinal economy as the distribution of sexual energy inside other economies; Georges Bataille's "general economy", a theory of sumptuary expenditure, of excess rather than scarcity as the root economic "problem"; and Pierre Bourdieu's theories of social capital in honour and prestige cultures. Literary critics often follow the seminal 1978 work of Marc Shell, *The Economy of Literature*, which argues that literary language is itself an economy of tropes, signs, and exchanges, and that "the economy of literature seeks also to understand the relation between such literary exchanges and the exchanges that constitute the political economy".[7]

Jack L. Amariglio and David Ruccio consider whether these understandings of "economy" in postmodern theory are meaningful to real economists, and offer a helpful critical account, concluding that these "hyper-economies", as I will call them, do have something to contribute to the dismal science, to challenge "the maxims of rational economic behaviour, particularly maximization of expected utility".[8] It is not surprising to a medievalist to find that money always had moral and libidinal understandings that supplemented the simple Aristotelian account of money as a means and a medium of utility. Thus the economies of desire, expenditure, and exploitation in modern theory map well onto the medieval understanding, with perhaps the exception of the religious economy of salvation that in a sense regulated the earthly economies of exchange and lack. "Economy" is a large term, and while the present essay largely limits itself to instances of money in literature, many discussions of money occur in works with a larger vision of literature and economics. An outstanding example is D. Vance Smith's *Arts of Possession: The Middle-English Household Imaginary*, which presents, through exemplary readings of literary texts, a holistic picture of the *oikos*, the role of the political household, the meaning of money, and the social imaginary in which expenditure took place.

At a step down from considerations of the whole economy, there is a general understanding among literary critics that the link between language and money is close, and that this is chiefly because both are sign systems. Key texts include Aristotle's influential account in *Nicomachean Ethics*, Book 5, of money's having been established by convention, and Augustine's similar argument

7 Shell, *The Economy of Literature*, p. 7.
8 Amariglio and Ruccio, "Literary/cultural 'economies', economic discourse, and the question of Marxism", p. 387.

about language as a sign system of "human institution" in *De Doctrina Christiana*, Book 2. The prevalence of semiotic theory in 20th-century thought is in some ways congruent with, and caused a reinvestigation of, medieval sign theory. Sign theory forms the basis of several important works on medieval coins and literature, including that of R.A. Shoaf, whose work on the meaning of money for Dante and Chaucer remains an important commentary.[9] Andrew Cowell's book *At Play in the Tavern: Signs, Coins, and Bodies in the Middle Ages* launches an ambitious argument that the literature of the tavern, a literature often scurrilous, satirical, and sexual, in an urban, mercantile, and profit-driven setting, provides an alternative to the ecclesiastical understanding of signs as requiring fixity. The tavern represents the rising profit economy of the later Middle Ages, and sets the stage for the shifting monetary exchange value sign that refuses the "concept of fixed community value and semiotic stability".[10] The notion that money dissolves fixed meanings and replaces older forms of community is widespread, whether it is celebrated, as by Cowell, or seen as a problem. Shoaf sees both Dante and Chaucer as anxious about the slipping away of stable reference for signs, which money exemplifies, for money, as is clear from Aristotle, "is the more or less temporary disappearance of difference"[11]; it dissolves the character of things in replacing them with abstract exchangeability. I shall return to this point in conclusion, but at present will simply stress that this conception of money (as fungible, dissolving, shifting) is reflected in the structure of genres of medieval literature; "courtly" and aristocratic works such as romance and epic tend to preserve a vision of a gift economy, which obscures monetary transactions, while genres such as the fabliaux represent the fun that money can bring.

Money and Plenty/Plenty of Money

Narrative characterizes literature, and literature provides a narrative about the origin of money that runs alongside the widespread Aristotelian account of convenience and convention. This is a story of a golden age of plenty and fulness of being, a world without want in part because of the simplicity of human life, in part because of the fecundity of nature, when, as Chaucer puts it in

9 Shoaf, *Dante, Chaucer and Currency of the Word.*
10 Cowell, *At Play in the Tavern*, p. 250.
11 Shoaf, *Dante, Chaucer and Currency of the Word*, p. 12.

"The Former Age", the "corn up-sprong, unsowe of mannes hond".[12] This age is violently interrupted by shortage and yields gradually to "modern" economics of profit, avarice, deceit, and coin-making. The story appears in Metrum v of Book II of Boethius' *Consolation of Philosophy*, and very influentially in Jean de Meun's *Roman de la Rose*. All versions propose a world without riches, and therefore without covetousness and war, and place the fall of man in the invention of riches, gold and precious gems and stamped coins, at the point when (in Chaucer's words) "men first dide hir swety bysiness/To grobbe up metal, lurkinge in darknesse" (ll. 29–30). In the time of plenty, ships did not sail, for there was no need to ship anything. Money partakes of the logic of distance and absence; money stands in for something not present. It is thus an intrinsic part of the lack that causes war, hoarding, and avarice.

Chaucer's contemporary John Gower makes his well-known attack on money in Book v of *Confessio Amantis*. This work is a long (very long) poem taking the form of a dialogue between Amans and his confessor, full of embedded narrative exempla, and Book v's explicit topic is avarice, which is to say, the false love of goods or money. Gower's account of avarice is radical in the blame he puts on money itself – it is not a good or even a neutral thing distorted by the vice, but itself is the cause. It is when "men knewen the moneie/Tho wente pes out of the weie/And werre cam on every side".[13] Further, "Tofor the time, er gold was smite/In coign, that men the florin knewe/There was welnigh noman untrewe" (v. 334–36). As Robert Epstein writes of these lines, "the problem is money itself: the intentional, artificial abstraction of wealth".[14] Gower's argument is that wealth is an accumulation, and as such is a paradoxical form of poverty, for the hoarder cannot spend his riches without diminishing his wealth. Instead, he is condemned to continuous anxiety and care for the protection of what he cannot spend and of which he cannot ever get enough. *Confessio Amantis* exemplifies these moral points about money with helpful narratives illustrating various subsets of Avarice. These include a high number of sins and vices more ordinarily considered sexual. This coincidence of the monetary and the sexual is very frequent in the literature of the period here considered. Just after the first story, that of Midas, the Confessor turns to the question of sexual Jealousy. He makes the connection with Avarice explicit at

12 Chaucer, *The Former Age*, l. 10. All references to Chaucer are to *The Riverside Chaucer*, ed. L.D. Benson.

13 Gower, *Confessio Amantis* v. ll. 11–13. All citations of Gower are to *The English Works of John Gower*, ed. G.C. Macaulay.

14 Epstein, "Dismal science", p. 226.

v. ll. 595–610: these vices are alike because neither has any peace or joy in its possessions, money or spouse. Sexual hoarding is just like hoarding money.

Other works of literature attest not to a lost era of plenty, but to a proliferation or increase in money and profits, often brought about by expenditure. The question of money is inflected by genres, some of which are more prone to discuss it than others, and in particular those that Andrew Cowell calls "comico-realist" – the literature of the tavern, the genre of the fabliau, the comic tale. These genres are often contrasted with the more courtly or martial settings of romance or epic; these tend to efface the money economy while presenting an economy of the gift and of aristocratic largess. While the representation of monetary transactions is perhaps more prevalent in "comico-realism," I will instead stress figurations of money that transcend generic boundaries: the phantasy of a plenitude that overcomes lack, the fairy origin of money, and its unnatural proliferation.

It is impossible to talk about the meaning of money in medieval literature without talking about sex. Many comico-realist stories show the "profits" that can be made by circulation alone, and many of these profits are sexual, or "in kind" rewards in excess of the basic monetary transactions. In both Chaucer's *Reeve's Tale* and *Shipman's Tale*, for example, when money moves, sexual profits accrue. Unlike the hoarding situation of Gower's Avarice, spending is proposed as the road to plenty. In the *Reeve's Tale*, two clerks are anxious that they will be robbed by a suspect miller; he tricks them by loosing their horse, and robs them anyway of half a bushel of grain. The clerks decide to accept the inevitable, but in the course of an evening spent at the miller's home manage to convert their losses into sexual pleasure with the women of the house. While Alan the clerk expresses the theory of "equivalence in kind" directly – "gif a man in a point be agreved,/That in another he sal be releved" (4181–82) – in fact the clerks get the sex and the flour back too. This is the typical comic pattern of total restitution and added profit but of additional interest is the moment when the previously thrifty clerks, apparently conceding their losses, offer up a goose dinner and a good quantity of ale: "Lo, here oure silver, redy for to spende" says John (4135), marking the turn towards the denouement with an extraordinary and unnecessary festive expenditure.[15] Spending is the sovereign remedy; the clerk's anxiety and stinginess gives way to a general economy of abundance and expenditure.

15 As I have argued at greater length in Edwards, "The economics of justice in Chaucer's Miller's and Reeve's Tales", pp.100–1.

The 13th-century French fabliau *Trubert* shows a fantastic set of bartering and exchanges that begins badly for the *vilain* protagonist because he misunderstands the conversion value of different denominations of money. Setting out to sell a calf, but thinking that there are twenty *deniers* in a *sou*, rather than twelve, he accepts one bad bargain after another on a path that seems destined to lead to destitution. However, when a chance encounter over a painted goat brings him into contact with the aristocracy, everything is reversed. Now his bargains involve a sexual component: he bargains with the Duchess for the goat at the price of "un foutre et cinc sous de deniers"[16] [a shag and five sous of deniers]. The story is fuelled by the notion of slippage and proliferation inside exchange rates, and plays on the simple notion that money is partitive – there might be any number of deniers in a sou. There is not one unit of currency, but many, and what is included in any price turns out to be entirely negotiable. In a complicated narrative of unmotivated class malignancy, Trubert goes on to profit mightily from his tricks, all accompanied by sexual conquests. Sexual pleasure is the fantastic supplement to financial profit, culminating in a scene in which Trubert, now disguised as a woman in her marriage bed with a king, catches the king's penis in "une borse grant et parfonde" (l. 2767) [a purse large and deep] and strangulates it by pulling the purse strings. Part of the entertainment here is that *borse* is slang for the male testicles in many, many fabliaux, yet here it is doing duty as a simulacrum of the female *con*; thus, as Simon Gaunt writes, the word-play is "exploiting linguistic indeterminacy and making it analogous to gender indeterminacy".[17] It is also catching the phallic equipment within the economic paradigm which sets the story going, the question of what is in one's purse.

The scurrilous and smutty configurations of money are sometimes held to be characteristic of the "lowly" genre of fabliaux-type tales. At the nadir, money is associated with flatulence and faeces, as shown in the *Summoner's Tale* where the greedy Friar's "payment" is a fart, and more amply demonstrated in the "Shitting Ducats" chapter of Valerie Allen's *On Farting*. These comico-realist genres are contrasted with others, particularly romance. Romance, of course, is held to be the genre farthest from "realism", a genre that reflects a world valourizing aristocratic self-image, and since Erich Auerbach, as erasing and mystifying the real economic functions of the class it represents. However, I will briefly argue that romance also establishes a mythos of plenty, of fantastic expenditures and the strange proliferation and breeding of money.

16 *Trubert*, ed. de Lage, l. 156.

17 Gaunt, *Gender and Genre in Medieval French Literature*, p. 250.

The most obvious romance to consider is Marie de France's 12th-century *lai* of *Lanval*, in which a fairy mistress gives a poor knight the wherewithal to spend as he likes on the condition that he never boast of her or even mention her existence; "Cum plus despendres richement/[E] plus avrat or e argent" [the more lavishly he spends, the more gold and silver he will have].[18] Needless to say, he breaks the one rule given him, suffers calumny and persecution, and in the end is restored to plenitude in an extravagant act of restitution and vindication when the lady reveals herself to Arthur's court. The vindication is indeed so total that it is difficult not to read this text psychologically as a compensatory fantasy; the neglected knight/child is able to demonstrate publicly that rather than lacking everything, he has it all – the most beautiful mistress ever seen, fairy gold, revenge on all his enemies – so it is not surprising that he disappears entirely into the realm of fairy at the end of the tale. Lanval is the original example of the "poor knight", a typical figure in romance, for example Balin le sauvage in the 13th-century *Suite de Merlin* and in Malory's *Morte d'Arthur*, or in *Sir Isumbras* or *Sir Amadace*.

In comparing Marie's *Lanval* with the late-14th-century English *Sir Launfal*, Vance Smith writes: "Marie's version … emphasizes what we could call the erotics of feudal magnificence".[19] Magnificence is a hallmark of a feudal gift economy, where social bonds are realized in gifts, and are set in an aristocratic economy of rich commodities and adornments.[20] The poem proposes spending as the only economic activity, and fairy gold as the only origin of the money to spend. Smith provides a rich and nuanced reading of the ways in which the later poem, still generically committed to the romance "enchantment" of the economic base, nonetheless "subsumes the explicit forms of and concerns with social capital in Marie's story to the more pressing and urgent concerns of real capital …"[21] While the later version supports the original's view of the aristocratic gift economy, one founded on courtly largess, on the giving of presents and clothing to supporters and the distribution of alms, it also subverts it, intentionally or not, by representing all the precise modes of calculation and economy that go into the ability to give. Thomas Chestre's Sir Launfal is indeed poor because he has given great gifts: "He gaf gyftys largelyche,/Gold and sylver

18 Marie de France, *Lais*, ed. A. Ewert, ll. 140–41.

19 Smith, *Arts of Possession*, p. 158.

20 The beginning point for an economics of the gift is Marcel Mauss' "Essai sur le don" of 1923. The collection assembled by Alan Schrift in *The Logic of the Gift* provides the best entrance to the debates on the topic, with essays by Claude Levi-Strauss, Marshall Sahlins, Pierre Bourdieu, Jacques Derrida, and Marilyn Strathern.

21 Smith, *Arts of Possession*, p. 164.

and clothes ryche".[22] We are told that in one year "So saveglych hys good he besette/That he ware yn greet dette" (130–31), where the key word "savagely" hints that divesting himself of his goods is almost a frenzy.

While in Marie's version the mode of transmission of the gold is not specified, in the English reworking Launfal is given a magical *alner* (purse) with a precise, if impressive, withdrawal amount of a mark of gold (l. 323). After blurting out the secret of the fairy, the first thing he does is check the alner – which, alas, is empty (l. 736). The poem demonstrates a problem with the limits of largess. The purpose of money is, as in the fabliaux, to spend it, that is clear; but what distinguishes the Aristotelian mean of generosity (largess) from profligacy, from the "wasting" described in a nearly contemporaneous poem, *Wynner and Waster*? *Sir Launfal* works hard to maintain the carefree model of earlier romance, while encoding a great deal of anxiety about wealth and status in a changed economic era. It would be possible to continue this story with an account of other Middle English romances of economics, such as *Sir Amadace* and *Sir Isumbras*, which also raise precise questions of money, before solving them with a return to supernatural restitutions.

I have argued that two often-contrasted genres show a surprising congruence in their theory of money as productive when in circulation. Both involve spending to get, and an important part of what they get is sexual profit. They both attest to the libidinal meaning of money. The next section turns to Dante, which is also a turn from narrative representation to the matter of literary symbolism.

The Meaning of Money

Dante's *Commedia* provides vivid examples of ways in which money does not simply "mean" its exchange value. An economic theorist as much as a political, poetical, and cosmographical commentator, Dante thinks of the role of money in society in deeply literary ways. He follows largely on scholastic understandings of money, especially by Thomas Aquinas, but these theories come to life, take on characters, and speak. Simply put, for Dante money is one of the goods of community. It is part of what enables trusting relations of mutuality between members of the same city-state, *res publica*, or empire. It is because money only works by mutual agreement, trust, and credence that it appears in Canto 24 of *Paradiso* as an appropriate metaphor for faith itself. Corruption in

22 Chestre, *Sir Launfal*, ed. A. Laskaya and E. Salisbury, ll. 28–29.

monetary matters, easy to fall into as a routine venality, is then actually a vitiating corruption of the very fabric of trust and community itself (including, in the strongest sense, the co-communing Christians living within the same sacramental dispensation). *Inferno*, for example, includes hellish levels for a rich variety of economic criminals and sinners: hoarders and misers; spendthrifts; profligates; usurers; simoniacs; sellers of public office; thieves; alchemists; counterfeiters. Such is the scope of Dante's argument about the establishment of community on bonds of mutual trust that it is difficult to separate economic fraud from other types of fraud such as seduction; even the condemnation of sodomites seems to have an economic basis. *The Divine Comedy* presents a view of economic life deserving of longer consideration, but in this brief account I will follow only one aspect of it in the image of a single coin: the heavy symbolic freight carried by the Florentine florin.

In Dante's rich understanding, symbols work at many levels, and not even merely the four he mentions specifically in the famous letter to Can Grande, or in the opening pages of *Convivio*. The florin, setting the gold standard for Europe at this time, stands as a metonym for the commercial practices of Florence – and also for the greed, avarice and crass mercantilism that Dante sees as the result of those practices. This is perhaps to be expected, that any author's currency would do duty to stand for greed. But the florin is not only a symbol: it is itself inscribed with symbols, and these lead to interesting interpretive moments. On one side of the coin is a heraldic lily, with the word *Florentia* inscribed around it, on the other a figure of St John the Baptist in a hair shirt, his name the inscription. In Canto 13 of *Inferno*, in the wood of the suicides, an unknown suicide-turned-tree, mutilated by the fleeing profligate Jacapo da Sant' Andrea, delivers the following lament:

> I'fui de la città che nel Batista
> mutò 'l primo padrone, ond' ei per questo
> sempre con l'arte sua farà trista.[23]

[I am of the city that changed to the Baptist from its first patron, and for this he ever grieves it with his arts.]

The "first patron" was ancient Mars, whose temple was replaced by a church to St John the Baptist. The sense is that in doing so, Florence gave up her claim to martial prowess, and suffers for it. The soul goes on to say that had not some

23 All quotations from Dante and their translations are from the editions of *Inferno* and *Paradise* by Anthony Esolen.

fragments of the old god been preserved in the Arno bridge, the city could not have been rebuilt after its destruction by Attila. This is not so much a commendation of paganism as a criticism of his city as preferring the florin, and mercantilism, to the noble arts of Mars. It is a place of bankers and traders, not Christian soldiers.

But this is not the florin's only aspect. It is also made of gold; thus, to falsify the metal that carries communal trust is a very grave sin. It is in the last and lowest of the ditches of fraud that we find the counterfeiter, Master Adam. Swollen beyond recognition, hydroptic, and yearning for the fountains that he is cursed to remember in hell, he admits "io falsai/la lega suggellata del Batista" [I falsified the money stamped with the Baptist] (I.30.73–74) and yet still blames those who led him on and "m'indessero a batter li fiorini/ch'avevan tre carati di mondiglia" [induced me to coin the florins with three carats of dross] (I.30.89–90). Master Adam was burned by the authorities for his crime, and suffers now in the *contrapasso* (the suitable punishment) the irony of being burned by thirst, by the image of water. R.A. Shoaf has admirably brought out all the complexities in this image; Adam is the "old Adam", the figure of original sin that inhabits us all. As a counterfeiter, he distorted what the coin is an image of, just as he is now himself a distortion of the image of God-in-man – man made in the image of God – as his distorted gross body and wasted face show. He created a substanceless simulacrum, rather than a true image – a sign backed by nothing or only by a substance infected by dross. Shoaf emphasizes Master Adam's connection with Narcissus, whose error was to fall in love with his own image, rather than to see the image of the divine in himself.[24] Falsifiers and counterfeiters pose a special threat for a poet, for he too works in images; he copies nature, "coins" phrases, creates fictional (or false?) realities, and lures others to believe in such things. Dante's concern over the entire *Commedia* is to establish the true coin of his images; as Shoaf writes, "even as he strikes the image ("batter li fiorini"), he must strike it from reality, lest it falsify …"[25] Many of the shades in the ditch of the falsifiers have the aspect of poetic Doppelgängers: liars like Simon, abusers of images, and alchemists such as Capocchio, "che falsai li metalli" [who made false metals] (I.29.137), who tells Dante, "e te dee ricordar … /com'io fui di natura buona scimia" [you should remember how good an ape of Nature I was]. The poet treads a fine line between artist and ape, a mimic without substance.

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24 My account summarizes Shoaf, *Dante, Chaucer and Currency of the Word*, pp. 24–26 and 31–36.

25 Ibid., p. 37.

Thus the coins of the damned are as fallen as they themselves. Master Adam is eternally fixed in the disease of desire, of perpetual, unassuageable yearning that Dante elsewhere associates with the desire for riches. As he writes in *Convivio* IV.12, "when [riches] are amassed to that point, in place of satiety and refreshment, they give and produce the thirst of a feverish bosom and are not to be endured; and in the place of sufficiency, they offer a new limit … a greater quantity to long for".[26] This desire is unlike other desires; the desire for knowledge, for example, can meet with satisfaction. One final coincidence in the two places in hell I have discussed is that both are accompanied by minor appearances from the spirits of the notorious Squanderers' or Wasters' Brigade: in Canto 13, Jacapo da Sant' Andrea, who threw gold coins into the Po, and the four noblemen named at Canto 29, 124–31. If greed, avarice, and excessive desire for riches mistake the rational function of money as a means of exchange for an end in itself, the aristocratic disdain for the good of money is savagely destructive of community.

Dante returns to the florin as symbol in *Paradise*. Canto 18, set in the heaven of the just rulers on Jupiter, ends with a surprising turn to an invective against commerce in the Temple, in the specific form of an unnamed pope (John XXII or Boniface) who extorts money in exchange for revoking his own excommunications. This pope has forgotten Peter and Paul, because, as he says "I' ho fermo 'l disiro/sì a colui che volle viver solo/e che per salti fu tratto al martiro" [My heart's so firmly set/on him who chose to live his life alone,/whom a dance dragged to martyrdom] (18. 133–36). Plainly this remarkable reference is to John the Baptist, the saint on the florin, and the sense is that venality has replaced the apostolic mission, that greed is the only prophet this pope knows. It is also remarkable because it is a criticism of the Baptist as one who chooses to live his life alone, that is, outside the good of community that is the aim of the just rulers on Jupiter. The florin of greed, like the Baptist, is isolated and isolating. This denunciation seems almost a non-sequitur in its location (why scold a pope in the heaven of those who deliver *temporal* justice?), but it makes sense on the figural level. The central image of the Canto is when the final letter M of "Diligite Iustitiam" [Love Justice] morphs first into the shape of a lily, then an eagle. Do they stand for France and then the Roman empire reborn, as many commentators think? Or is the lily the one found on the obverse side of the florin? In any case, both are frequent images on coins, and thus provide the train of associations that leads Dante to the florin, greed, and the solitary Baptist. The association is at the figural level of the poem.

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26 *The Convivio of Dante Aleghieri*, trans. P.H. Wicksteed.

For Dante, the symbols on money are not contingent or accidental. They express something real, the real of the symbol which is the concern of literature and which should direct its users to the real point of money. Dante's fascination with this symbolism is surely unparalleled, but money has figurative power in most other poets too.

"The noble yforged newe": The Gold Standard in Chaucer's Poetry

Chaucer gives many accounts of monetary transactions, from the Summoner's attempted extortion of 12 pence from a widow in the *Friar's Tale* to the 500 pounds in gold spent by Aurelius on a magician in the *Franklin's Tale*. As Chaucer's work experience as controller of customs or Clerk of the King's Works indicates, he had deep familiarity with the finances of trade and public administration. Considerable debate has thus ensued about every particular financial instance in his oeuvre,[27] though, rather surprisingly, there is no single work that addresses the totality.

In what follows I will briefly consider what gold means to Chaucer, particularly in the form of coins, by looking at its figurative use and gold as a lure that drives narrative forward in the *Pardoner's* and *Canon's Yeoman's Tales*. Metaphoric gold, like real gold, sets the standard for authenticity, purity, and value. The metaphoric value of gold has always been to set the ultimate standard of comparison – that which is "as good as gold" is that which is permanent, incorruptible, untarnished, and enduring, not to mention beautiful and precious. It can also be refined and purified, and thus participates in a metaphysics of perfectibility. A routine example can be found in John Lydgate's poem "Beware of Doubleness": "O ye wymmen, which bene enclyned/ … To been as pure as gold y-fined …"[28]; or, in *Sir Gawain and the Green Knight*, "Gawan watz for gode knawen, and as golde pured,/Voyded of vche vylany" [Gawain was known for goodness, and like refined gold, he was devoid of villainy].[29] On the other hand, the word "gold" is a metonym meaning "money." Chaucer's most famous metaphor for authenticity is certainly that from the description of the Parson in the General Prologue: "yf gold rust, what shal yren do?/For if a preest be foul,

27 For example, on the question as to whether the sly remark about the Merchant in the *General Prologue*, "Wel koude he in eschaunge sheeldes selle" (l. 278) means he was breaking the law or merely bending it. See Baker, "Gold coins in medieval English literature", p. 286; and Mann, *Chaucer and Medieval Estates Satire*, p. 100, respectively.

28 Lydgate, *Minor Poems*, ed. H.N. MacCracken, vol. 2, p. 442.

29 *Sir Gawain and the Green Knight*, ed. J.R.R. Tolkien, ll. 634–35.

on whom we truste,/No wonder is a lewed man to ruste" (505). Gold, obviously, does not rust, and the sense of the metaphor is that it ought not: that priests, of finer quality than their "lewed" flock, should be stable and enduring, and that their substance should be true. Yet elsewhere Chaucer raises the spectre of rusty gold, of gold that morphs and shifts. What does the gold standard mean in Chaucer's poetry?

As early as *The House of Fame*, gold seems less than certain as the standard for permanent value. The house of the grotesque goddess of Fame "was plated half a foote thikke/Of gold …" (1345–46). It seems initially, perhaps *because* of the gold, to represent stable and enduring reputation or fame, but though glittering, it is shaky in substance; it is about shifting appearance rather than permanent value, built on "a feble fundament" [a weak foundation] (1132) of melting ice. Fame is swayed not by permanent value, but by such inducements as the "nobles and sterelynges" (1315) a crowd of people shake out to buy her favour. Even the specie gold metal of the temple is tied to money: it is "fyn as ducat in Venyse", which is to say, 99 per cent pure, like the coin "of which to lite al in my pouche is" (ll. 1348–49). The cash economy erodes the measure of real value and qualifies the metaphoric gold standard of merit.

Chaucer's most famous coin metaphor is in the description of Alisoun in the *Miller's Tale*. In a metaphoric cornucopia, she is compared to flora and fauna of the burgeoning natural world, the behaviour of young animals, the social stratification of the marriage market, and good food. She is also compared with money: "ful brighter was the shynyng of hire hewe/Than in the Tour the noble forged new" (*CT* 3255–56). The metaphors combine to show Alisoun as a creature of extraordinary value, a treasure, a hoard – a coin. We have already learned that her husband is jealous, in the typical conjunction of sexual jealousy and avarice, both types of hoarding possessiveness. The sense of the metaphor is that Alisoun glows; she is bright and shiny, a "golden girl" in the usual sense, or as the current slang has it, "she's so money." Certainly the economic tenor of the expression is not lost; Alisoun's "exchangeability" is stressed in a precisely class-conscious assessment of her "value": "she was a prymerole, a piggesneye,/For any lord to leggen in his bedde,/Or yet for any good yeman to wedde" (3268–70). She has wed the yeoman, but as the tale famously demonstrates, that does not mean she is off the sexual circuit. Elizabeth Scala has drawn attention to the metaphor of the noble in relation to the trajectory of the *Canterbury Tales*; the Knight has just told a "noble" story, as all the pilgrims agree at line 3111. It is noble because of its gravitas and dignity and genre, and also because it concerns actual nobles (aristocrats). By line 3255, the ineffable nobility of a "high sentence" and tale of chivalry has turned into a coin, an actual physical object, tangible, glittering, and commercial.[30] The libidinal economy is here again a money economy.

The noble has received as much attention from literary scholars as from historians. It was a golden coin first minted in 1344 for Edward III, and reminted periodically till 1460. When on display in the Fitzwilliam Museum, Cambridge, for example, it is certainly an object of beauty in its own right. It was the first successful golden coin in English currency in over 200 years. Peter Spufford's magisterial account locates what he calls the "victory of gold" in currency, in particular of northwest Europe (England) exactly in the mid-14th century.[31] The noble represents the attempt by the English Crown to intervene in the gold standard previously maintained by the florin and Venetian ducat, and to impose its currency in European trade. The English sterling had been long established as the silver standard. Spufford gives examples from before the victory of golden money of foreign gold coins being treated in England "more as a commodity than a currency" and "used for such strictly uncommercial purposes as prestigious alms-giving by Kings".[32] The romance *Sir Isumbras* represents such high-end charity, when Sir Isumbras' unnamed wife, having become a queen, distributes "florins" to beggars, including her husband.[33] The confusing nature of gold as jewellery or ornament, as prestige commodity in the romance tradition, complicates its becoming money. For example, the word "gold" appears most frequently for Chaucer in the *Knight's Tale*, where it adorns saddles and gilds statues in the economy of ostentation, as in Thomas Chestre's *Sir Launfal*, but where it also means money, as when Theseus gives the disguised Arcite "gold to mayntene his degree" (1441). Gold and "gold" continue in an uneasy relation between golden substance and monetary sign, neatly conjoined in Chaucer's sly remark about the physician. He prospered during the plague, "for gold in physic is a cordial" (*CT* 445), meaning both that money is a welcome thing to the physician, and that specie gold is an ingredient in medicine.

The noble is inscribed with an image of the sword-wielding king in a ship; the ship is supposed to represent Edward's naval victory at Sluys in 1340 and presumably, in the case of mintings for later kings, the perennial intention to return to France. The king is circled by his stylings (which include in most mintings a pretention to the throne of France). The other side has the image of a cross, and an intriguing exergue from Luke 4:31: IHC AUTEM TRANSIENS PER MEDIUM ILLORUM IBAT ("But Jesus passing through their midst went

30 Scala, *Desire in the Canterbury Tales*, p. 10.
31 Spufford, *Money*, p. 267.
32 Ibid., p. 277.
33 *Sir Isumbras*, ed. H. Hudson, l. 540.

his way"). This inscription has caused debate, but I take it to be a strange little charm, apparently against robbery – the wish is that this coin might also pass unnoticed through crowding dangers as Jesus did. So the coin is beautiful, golden, conventionally valuable, and talismanic, all at once. D. Vance Smith has written persuasively of the complex symbolic functions of "a coin intended to signify England's arrival on the continent" both in terms of military conquest and intervention in foreign markets;[34] Spufford details Edward's attempts to control the influx of foreign gold to England and his success in flooding Europe with nobles.[35] Thus the "nobles or sterelynges" that appear in Chaucer's writing[36] are not only standing for good money, reliable money, but also for *English* money – and Alisoun is an avatar of that.

The Pardoner's and Canon's Yeoman's Tales: The Lure of Gold

These two stories represent the power of gold to draw people along the path of desire, even at the cost of real economic advantage. *Radix malorum est cupiditas*: gold is death, is the moral of the story told by the Pardoner. The three revellers, from a tavern in Flanders, following an old man in pursuit of Death, whom they take to be a person, find him in the form of eight bushels of "florins fyne of gold ycoyned rounde" (*CT* vi l. 770). Two watch the gold while the third is sent for celebratory wine; he poisons the wine to have the gold, but the remaining two kill him to have the gold, then drink the wine, and thus they all find death. The florins here are not necessarily Florentine, since many regimes struck their own coins to the same specification – in other words, a "florin" was not a national coinage speaking directly to Florence as in Dante, but was widely understood to be a matter of its substance, its weight in gold, rather than its signage. In any case, eight bushels is a fortune.

The tale and its end demonstrate three separate economies. The revellers are wasters, in Middle English terms – spenders, gluttons, rioters, gamblers (l. 465–69). They conform to the theory of the tavern as advanced by Andrew Cowell as a paradigm of profit and play. Since they are wasters and revellers, those who enjoy spending and consuming at the expense of earning and getting, they in fact attest to an economy of plenty – waste can only occur when there is something to waste. The Pardoner thus begins his sermon with an attack on gluttony, the sin of senseless and excessive consumption. The riot is

34 Smith, *Arts of Possession*, p. 124.
35 Spufford, *Money*, pp. 277 and 286.
36 At *Pardoner's Tale* ll. 907 and 930; *House of Fame* l. 1315; *Miller's Tale* l. 3256.

interrupted by the intrusion of Death, the ultimate figure of an economy of shortage, and the revellers determine to slay him, but in looking for him, they are lured into an economy of shortage, of cupidity. The eight bushels of coins demonstrate only that there can never be enough money, as Gower said; the hoard of gold produces absolute dearth: Death. The vehicle of the men's competitive striving for the coins comes, however, as in the fabliaux, from the remnant of the tavern mentality of wasting – they send for wine. But the celebration is over. The third economic register of the text is in the tail link, in which the Pardoner tries to convert this cautionary tale into more money, disguised as a return to the gift economy of charitable donation. He calls for "nobles or sterlynges,/or elles silver broches, spoones, rynges" (ll. 907–8) in exchange for his pardon, or "Nobles or pens, whiche that be goode and trewe" (l. 930) for kissing his relics, eventually discounting this rate to a mere groat for the Host. Here is the debasement of the very economy of salvation: fraudulent relics and heaven-for-sale as converted into cold, hard specie metal.

As in the *Pardoner's Tale*, gold is a lure in the Yeoman's tale of the alchemist canon. Here, gold as specie causes real misrecognition of the actual economic transaction taking place. What the alchemist succeeds in doing is selling the promise of gold for money "goode and trewe": actual currency, rather than the metal that might be held to make it "goode". Alchemy, we are told, is the "slydinge science" of multiplication (l. 732); it is an "elvysshe craft" (l. 751), or "elvysshe nyce loore" (l. 842). The only other occurrence of the word "elvish" in *Canterbury Tales* is in the mock romance *Sir Thopas*, where it might be expected; here it certainly evokes the fairy origin of gold, though in a version close to demonic, complete with fiends and brimstone. The Yeoman first makes extravagant claims about his master's abilities, saying he could pave the streets with gold, but actually gives a story in which the canon gulls his victims by appearing to make silver from quicksilver. The actual effect of alchemy is that of a reverse Rumpelstiltskin, turning gold into dross. The Yeoman's first theme is impoverishment – the lure of gold and silver as specie metals actually causes poverty; he is heavily in debt "Of gold that I have borwed" to finance the futile attempt to "multiply" it (l. 735). Robert Epstein, in an article that is a model of a detailed approach to the economic study of literature, contrasts Gower's depiction of alchemy in Book IV of *Confessio Amantis* to Chaucer's, showing that Gower falls on the side of the alchemists, who "insisted they were augmenting the true content of metals through entirely natural processes".[37] Their work is a kind of refining that results in increase; or it is a smoke-and-mirrors

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37 Epstein, "Dismal Science" p. 230.

process that results in decrease. The irony of the tale is that the greedy will spend money to get gold. The Yeoman stresses a confusion of gold and money, and a concomitant attempt (through alchemy) to separate specie gold from money – and then turn it back into money. Jean-Joseph Goux comments on the fetish character of gold, for gold is excessive in relation to any real economic function, and the fetish is that which obscures or disavows its own origin.[38] The precious metal thus hides exchange value behind its alluring, attractive surface. The alchemist plays on this fetish character and is not impoverished, but enriched. He is not himself blinded by the lure of gold, but is purely in pursuit of money. His story is, in effect, about how to convert one mark (as a weight of silver) into 40 pounds – the sum he charges for his spurious alchemical recipe. Thus he has himself effected the multiplication he has advertised, though not in the manner claimed.

The swindle in question concerns not gold, but silver, and this modest touch is no doubt central to how the con actually works – not grandiose but achievable alchemy, modest fraud. Interestingly, the confidence needed for the con game is established by a loan of money: the canon borrows a mark and promptly repays it, thus establishing his credit with the priest he is gulling: "And to the preest he took his gold agayn" (l. 1034). It is impossible to tell if the loan was of golden coins, or whether "gold" means simply "money" here. This equivocation is central to the meaning of the tale, which concerns the conversion or exchange of money into "gold" and back again.

In the end, the gulled priest pays the price. By his elvish craft, the alchemist has succeeded in turning a mark of silver into 40 pounds in *nobles*, that is to say, into *golden* coin; he has not turned quicksilver into silver, but silver into gold. Epstein argues that the "technology" Chaucer is interested in is not alchemy, but money.[39] Real value is not in the substance of gold, but in the denominations of money embodied in the golden coin. The tale is an illustration of the effect of inordinate desire for plenty; it is also, perhaps sadly, a demonstration that the "good hope [that] crepeth in oure herte" (l. 870) can be converted or exchanged into money.

It is no doubt wrong to generalize from my three examples to a position about Chaucer's position on gold and golden money; the tales I have emphasized concern a cheating wife and two con men, and if we add the *Shipman's Tale*, another cheating wife and a suspect merchant. So I do not conclude that the gold standard has rusted for Chaucer. But these configurations of

38 Goux, *Symbolic Economies*, p. 33.
39 Epstein, "Dismal Science", p. 238.

money – as shifting, dissolving, and morphing values – provide an investigation of the possibilities inherent in the money economy. Chaucer's metaphoric and narrative money undoes the presumption of any fixity in money; it will proliferate illogically through use, circulation, expenditure, foreign exchange, and swindling.

Conclusions

In the writings I have discussed, literary critics have seen, in varying degrees, a reflection of the rising mercantile and profit economy in the later Middle Ages. Jean Favier gives an account of the increasing *abstraction* of wealth, from money to letters of exchange to letters of credit;[40] such abstraction was seen to unmoor money, like a sign, from any proper referent and towards the shifting values of exchange and circulation that enable "capital". Such a process necessarily took place over several centuries, and it is often difficult to arrive at precise accounts of which part of it is present in literature.[41] For example, the economies of commodity and gift, of feudal obligation, remain enshrined in the romance genre long after other economies had taken over – but partly *because* such practices were enshrined in the social imaginary of honour to which literature testifies, they endured in the kind of social practices Martha Howell describes as "gift work".[42] I have suggested that certain configurations across genres endured in the late Middle Ages, such as the imaginary of money as plenty, while precise readings of different avatars of this trope, such as Smith's reading of *Lanval* and *Sir Launfal*, can demonstrate historical specificity.

A major topic in literary criticism has been the analogy between language and money in terms of sign. I return to the view that the sign of money erases difference; it makes unlike things the same in the interest of exchanging them. Thus it can be held to cause the flux and indeterminacy that erodes real value, or, to put it in linguistic terms, that uncouples signifier from signified. This suspicion of the dissolving power of money and its relation to language in medieval literature is found by modern critics everywhere: money economy introduces semiotic flux, change in meanings, fluidity, exchange, instability,

40 Favier, *Gold and Spices*, p. 215.

41 Judith Kellogg (*Medieval Artistry and Exchange*) locates the rising profit in texts as early as the 11th century and Andrew Cowell (*At Play*) in the 12th, while Joel Kaye (*Economy and Nature*) argues for the English fourteenth century.

42 Howell, *Commerce before Capitalism*, ch. 3. Gift-giving, she argues, establishes honour, which in credit economy in fact *means* credit, p. 201.

whether this is held to be positive or lamentable. For example, James R. Simpson claims of *Trubert* (discussed above), that Trubert's "absence of a fixed identity is a sign of the way in which money created a variety of social networks that had not previously existed".[43] Judith Kellogg sees in the *Roman de la Rose* a dissolution of real social bonds in the "shift from a gift to a profit economy" characterized by commodification and cash.[44] Lee Patterson remarks that the *Shipman's Tale* shows "nothing less than the primary condition of economic man: when the worth of goods is determined solely by their exchange value, then value is radically contingent".[45] Andrew Cowell asserts that the tavern texts in themselves provide the theory of money as play and change that explains the rising cash economy after the 12th century. Gerhard Joseph's argument about the *Shipman's Tale* is that just as impossible profits accrue through the circulation of money, so the puns of the tale show an extraordinary surplus value, creating two meanings for one and thus undoing the presumption of a stable referent. R.A. Shoaf states, on the other hand, that anxiety about the possibly unstable nature of monetary and linguistic signs causes Dante and Chaucer to work *towards* the stabilization of the referent, in a "poetics of reference".[46]

I have suggested that golden money complicates the sign theory of money because its substance, not what makes it money, is in conflict with the general equivalency in exchange that is its money-nature. Is the English noble guaranteed by the sign of the king, or by the fineness of its metal? Which aspect truly guarantees the series of values? Goux quotes Marx as finding in gold the fetish character, "the false semblance" the "magic of money"[47] – exactly what we have seen in medieval narratives of money. Gold does not so much obfuscate and hide the shifting meaning of money as attest to the desire that money *not* shift. At the same time, the becoming-money of gold undoes the "gold standard" of metaphor. Gold, appearing as money, introduces lack, or "imperfection" as Dante argues in *Convivio*: gold and gems "in themselves considered, are perfect things – not [as] riches, however, but as gold or gems".[48] Figurations of money in the literature of the later Middle Ages play along the spectrum between the "substance" of golden coin and the morphing values of pure exchangeability.

43 Simpson, *Fantasy, Identity and Misrecognition in Medieval French Narrative*, p. 229.
44 Kellogg, *Medieval Artistry and Exchange*, p.158.
45 Patterson, *Chaucer and the Subject of History*, p. 351.
46 Shoaf, *Dante, Chaucer and Currency of the Word*, p. 15.
47 Groux, *Symbolic Economies*, p. 33.
48 Dante, *Convivio* IV.xi.

Money in medieval literature appears in all the guises possible in its society, most of which I have passed over in silence. I have tried to discuss some of the main significances assigned to money by medieval writers and modern literary critics. I have concentrated on those manifestations in literature that are less matters of representation than those that perform fully "literary" functions: to provide mythologies, origin stories, and even fantasies of plenty. Money functions inside the "economy" of literature differently than it does in the market. There, it attracts moral commentary, but also libidinal and affective meanings, symbolic and allegorical significance. Literature provides a working through of expenditure and gain, in which justice can be done to the hyper-economies of desire, sex, greed, salvation, and the metaphoric values that attend money in excess of apparent denominations.

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CHAPTER 12

Art in the Round: Tradition and Creativity in Early Anglo-Saxon Coinage

Anna Gannon

We take it for granted that coins bear images, but we rarely stop to think what an intimate connection actually exists between money and art: it is the design hammered into a blob of metal that turns it into a coin. This is not just pure embellishment. Reflecting on the intellectual leap of imagination achieved in the transition from weighing bullion to trusting coins, it is the iconography that acts as guarantor of fair play and that expresses authority, as is apparent from the earliest coins known. The electrum coins from Lydia, dated to the 7th century B.C. and minted to very precise weight standards, are powerfully characterized by the protome of a roaring lion, a symbol of the issuing authority. The relationship between money and art is therefore a pivotal one to examine in a volume that explores the roles that money and coinage play in society.

Through the discussion of a number of case-studies, the aim of this chapter is to consider the development of early Anglo-Saxon coinage in the crucial period between the 7th and 8th centuries by focusing on the exploration of iconographic choices as artistic responses to specific political and commercial needs within a particular historical, cultural, and social context. In the light of the tumultuous changes of the period in question and the tension between the weight of tradition on one hand, versus the drive towards innovation, creativity, and experimentation on the other, it will offer an overview and commentary concentrating in particular on what shaped the all-important visual elements which were drawn on as sources and signifiers of power, including inscriptions. In an age of ambition and complexity, with a richly diverse visual vocabulary to be drawn on, such a creative response makes "art in the round" an apt label for Anglo-Saxon coins.

The first question we may want to address is whether we are at all justified in exploring these coins through the lens of art, as opposed to regarding them as interesting archaeological/antiquarian artefacts. Much depends on our definition of art – which, for the purpose of this work, will be concerned on the one hand with creative responses and the translation of abstract concepts in the coins, and on the other with their intellectual significance. This chapter will explore the ways in which the Anglo-Saxons rose to the challenge

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of establishing their own independent coinage, as well as the ways in which conceptual drives and resonances directed their iconographic choices. It will become apparent that, although simply reproducing some passable imitations could have been an option, the true merit of Anglo-Saxon coin-makers is to be found in their active response to the challenge of having to fit in with established models while making sure that their creations remained meaningful in their own culture. They did so in a manner that was visually interesting, pleasing, and intellectually stimulating.

It must be conceded that people unfamiliar with the period may find their conventional notions of aesthetics uncomfortably challenged when beholding early coinage. The richly imaginative and creative art of Anglo-Saxon England requires equal testing and stretching of traditional models of aesthetics. The apparent clumsiness of execution of early coins commonly engenders amused curiosity, if not bafflement, especially when they are compared to Greek, Roman, or later medieval specimens, which more readily match classically trained visual sensibilities. In truth, if beauty is in the eye of the beholder, it must be admitted that very often considerable effort is necessary in order to begin to perceive their "iconography", let alone "beauty". However, as shall be argued, there is far more than looks to the early coins, and indeed more than aesthetic concerns when considering them.

Intellectually, our appreciation of the visual culture that developed in Britain and Ireland has advanced and matured considerably in recent times thanks to a number of important scholarly contributions,[1] so that rather than a stagnant "Dark Ages", the early Middle Ages are now widely perceived as interesting times of change and development. The art of the period has come to be appreciated as a subtle, multi-layered, and learned response to an array of stimuli springing from the political and cultural complexities of the times. The wealth, breadth, and sophistication of contemporary visual vocabularies have come to be recognized and the artists appreciated as witnesses to connections and relations who often helpfully filled the gaps left by the paucity of written evidence. Thanks to this awareness of what can fruitfully be gleaned from visual sources, early medieval coinage is also being investigated in exciting new ways, moving beyond purely numismatic preoccupations with lists and classifications to explore wider multidisciplinary questions encompassing the context of coin production, the ideologies behind it, and the balance between

1 Among many: Henderson, *Vision and Image in Early Christian England*; Moss, *Making and Meaning in Insular Art*; Karkov, *The Art of Anglo-Saxon England*; Webster, *Anglo-Saxon Art*; and Boulton, Hawkes, and Herman, *The Art, Literature and Material Culture of the Medieval World*.

what needed signifying and how meaning could be constructed. Scholars are now interrogating coin iconography more attentively as an expressive symbolic language rich in meaning, and as a window into the socio-economic context and political necessities into which coined money fit.

The Inception of Anglo-Saxon Coinage: New and Old Status Symbols

It is a well-established fact that for the Anglo-Saxons – who were well-acquainted with, and used and admired fine foreign coins – the decision to mint their own currency at the turn of the 6th to 7th century meant a re-engagement with an activity that had been abandoned for well over a century and a half on British shores. The early coins were of gold, like then-current continental issues, and their production was initially quite localized and restricted, but there is evidence of quite substantial use of coins from the end of the 7th century.[2] The period in question was one of major political, religious, and cultural transformations, of which the inception of coinage was but one facet. The decision to mint coins can be understood as a political choice with evident economic benefits.

Particularly in these early stages, with commercial credibility of paramount importance for the fledgling currency to be fully viable, not only were conformity of weight and fineness of metal essential, but design choices needed to conform to other "proper coins".[3] Hence the iconography on Anglo-Saxon coinage had to rely strongly on the familiar visual pattern set by many foreign coins, themselves re-elaborations of Roman prototypes, displaying a bust on the obverse and a cross on the reverse. Several also retained more or less garbled lettering representing inscriptions, another familiar feature evidently considered necessary for a respectable coin: for illiterate or semiliterate audiences, even pseudo-script acted as an awe-inspiring bearer of authority and bolstered what was transmitted by the designs. Yet, as we shall see, even within such strictures, "imitation" engendered a vivacious intellectual creativity.[4]

Of course, the reality behind the adoption of coinage was far more complex and nuanced than the succinct narrative above appears to suggest. It is worth reflecting on how we tend to assume that the decision to do so was an

2 For a more detailed discussion see Gannon, *British Museum Anglo-Saxon Coins I* (hereafter *SCBI 63*), pp. 84–89, and bibliographical references.

3 Gannon, "Imitation is the sincerest form of flattery", pp. 194–95.

4 Gannon, "Imitation", p. 206.

obviously progressive move on the part of a ruler or a magnate wanting to establish his credentials and proclaim his power in step with the times – and to control and profit from local economy and commerce. However, we should perhaps entertain the notion that it was more likely a leap of faith. When we consider coinage versus more traditional and established signifiers of power and status among Germanic people, such as polychromatic jewellery, we must register a fundamental difference – and therefore a potential problem.

The rich assemblage in Mound 1 at Sutton Hoo (*c.*620s)[5] in East Anglia is a case in point. The regalia consist of a large number of artefacts of exquisite craftsmanship, with finely executed details repaying careful viewing on account of their intricacy and variety of design: the appeal was of an aesthetic of variety. Aside from their magnificent glittering appearance (which could be appreciated, albeit dimly, at a distance), such details could only be perceived accurately and appreciated fully when one was admitted to stand in close proximity to the king himself. Their iconography and craftsmanship were meant to engender admiration and awe in the beholder and perhaps lead to discussion with the king, but in fact this traditional art was essential in the orchestration of highly charged encounters and for defining power structures. Such close and personal interactions were part of the bonding between the leader and his warriors: the importance of status-marking artefacts in Anglo-Saxon warrior society is testified to by the custom of the gifting of precious objects.[6] The societal importance of beautifully crafted artefacts is also demonstrated by the special position of goldsmiths in the hierarchy of Anglo-Saxon society,[7] precisely because of their role as royal "image makers".

Coins struck from the same dies, on the other hand, are unsurprisingly pretty much identical, their iconography repetitive.[8] Their small size still demands close scrutiny of the design, but does not require proximity to the king issuing them or much by way of explanation: their iconography/epigraphy should be self-evident in proclaiming his message of power. Coins are meant for dissemination: they are centrifugal in their message, as opposite to centripetal

5 For the latest discussion of the dating of Mound 1 depositions in relation to the coins, see Archibald, "Numismatics and the chronological model", p. 502; and Archibald, "The Wilton Cross coin pendant", pp. 64–69.

6 Famously, one of the king's appellations in *Beowulf* (line 1102) is *béag-gyfa*, the ring-giver.

7 In the early 7th century goldsmiths were assigned a high *wergild*, as encoded in the laws of King Æthelberht of Kent: Attenborough, *The Laws of the Earliest English Kings*, p. 4, item 7.

8 Discussing the subtle differences in the zoomorphic filigree infill panels on the Sutton Hoo shoulder clasps, Noël Adams makes the point that these were deliberate and to do with the belief that perfect matches were ill-omened (Adams, "Rethinking the Sutton Hoo shoulder clasps and armour", p. 87).

in their lure, in the way that precious objects were meant to be scrutinized and deciphered at close quarters. What we now consider highly advantageous characteristics of a coinage (i.e., standardized production, wide dissemination, inbuilt and clear propaganda) may have actually proven problematic in the cultural milieu of the time. We may hypothesize that neither king nor goldsmith, as official "image makers", took to the new vogue for coins, conceiving them to be but sterile and repetitive objects, offering little scope for virtuosity or pageant – and perhaps especially unhelpful for the engendering of meaningful encounters and social bonding.[9]

The fact that the purse at Sutton Hoo contained 37 Merovingian tremisses, all of different types, has been much discussed.[10] Whether such variety in the assemblage was intentional or not, the collection was almost certainly exploratory and suggestive of a certain level of interest in these coins. But ultimately it also tells of their inexorable rejection, confined to tinkle in an exquisite and totally traditional bejewelled purse, itself rich in iconography and opportunities for ekphrasis.

To our current state of knowledge, in spite of its wealth and prestige and array of connections, East Anglia appears to have bypassed the "early gold" stage entirely in the minting of its own coinage;[11] there seem to be no local issues until the "pale gold" phase (*c.*650–675).[12] Whether this apparent reluctance might be understood as a political expression of resistance to continental Christianity, as argued by Martin Carver,[13] a preference for more traditional status symbols, or procrastination because of dissatisfaction with the Merovingian prototypes available is open to discussion. Unquestionably though, when the minting of pale-gold coins began in earnest in the region towards the mid-650s, it took inspiration from new models altogether, eschewing Merovingian coinage and opting instead for impressive imperial Roman coins as their prototypes.

9 Andrew Woods (personal communication) suggests, however, that there may have been a "performative" aspect to the coinage, with small amounts struck, perhaps on important occasions and in the presence of the king, thus making the minting itself meaningful and the coins special on account of their association to the ceremonial event.

10 Stahl, "The nature of the Sutton Hoo coin parcel", p. 11; G. Williams, "The circulation and function of coinage in conversion-period England", pp. 177–79.

11 However, significant numbers of gold coins have been found at both Rendlesham and Coddenham.

12 *SCBI 63*, fig. 2, 92–95.

13 Carver, *Sutton Hoo*, a publication of the fieldwork of 1983–1992.

Early Interactions with Coins

It is interesting to consider how many Roman or imported coins (and indeed even early Anglo-Saxon coins and pseudo-coins) were initially transformed into ornaments by the Anglo-Saxons and simply pierced, displayed by means of suspension loops, or mounted in spectacular garnet settings.[14] Evidence from early Anglo-Saxon cemetery finds testifies that even when worn, Roman coins were highly sought after and often reused as pendants or sewn to clothes.[15] Such reuse is generally explained as opportunistic "recycling", or as talismanic,[16] while in the case of impressive pieces, such as the early-7th-century Sarre necklace,[17] which included four gold *solidi* as pendants, the coins are seen as conspicuous displays of power, connections, accumulated wealth, and aspirations of *Romanitas*.[18] However, these modifications and adaptations are to be understood in the context of Anglo-Saxon visual tradition, artistic creativity, and construction of meaning.[19] By wearing them so prominently, the Anglo-Saxons would have greatly increased the coins' visual impact. Having transformed them into traditional personal adornments, thereby making it possible for these objects to fit into a long-established culture of display, they would have also facilitated the translation and adjustment of their original symbolic meanings as "coins" into the traditional language of beautifully crafted artefacts as signifiers of power and status so that the meaning of these new exotic things could be better understood and shared by all. It is important to highlight the role of women as wearer of coin jewellery in brokering such change.[20]

The Wilton Cross coin pendant (dating to the second half of the 7th century), as is well-known, displays the reverse of a Byzantine solidus featuring a cross

14 Abdy and Williams, "A catalogue of hoards and single finds from the British Isles", pp. 22–29 and 58–59.

15 *SCBI 63*, p. 85.

16 Meaney, *Anglo-Saxon Amulets and Curing Stones*, pp. 220–21.

17 British Museum 1860, 1024.1. BM numbers designate accession numbers of objects in the British Museum. These can be used to identify specific items via the museum's online catalogue.

18 Gannon, "Money, power and women", p. 214.

19 The custom of wearing coin jewellery is very long-lived, going back to Greek and Roman times. Once reserved for the ruling elites, its use became more widespread down the social scale. From the 9th century onwards the fashion in Anglo-Saxon England was for coin brooches (Williams, "Coin-brooches of Edward the Confessor and William I"), their reverses with crosses (often gilded) as their display side, presumably for devotional purposes.

20 Gannon, "Money, power and women", pp. 213–17.

displayed within a cross-shaped garnet setting.[21] However, as Marion Archibald's careful analysis has demonstrated, the solidus had previously been mounted in a beaded collar with a loop and used as a coin pendant showing the imperial busts, then later modified and set in the pendant, this time privileging its reverse.[22] The complex biography of the solidus is remarkable, as is the fact that essentially the original coin jewel as first conceived lives on in the new setting. We can only postulate that the new Christian meaning was layered on top of whatever noteworthy significance the coin had originally acquired as a pendant.

The transformations of coins from functional tokens to traditional ornaments can thus be recognized as a form of clinging on to old customs – a powerful force, as argued earlier in the context of the assemblage at Sutton Hoo. However, even the making of ornaments out of coins is a significant early stage, a positive interaction with coinage which paved the way to the next logical step: their minting in Anglo-Saxon England. It is valuable to recognize such first dealing with coins as one of two interlocking levels, both engendering some form of transformation.[23] If the first stage may be defined as conservative and relating to foreign coins merely as prestigious objects which lent themselves to transformation into precious artefacts, the second stage witnesses a far more dynamic and critical engagement with the prototypes, and in particular their iconography, leading consequently to the taking over and transformation of designs to suit local tastes and interests. At both levels of interaction new, relevant meanings would have been created and ascribed to the coins.

Models: Inspirations and Ambition

From the geographical extent of the early numismatic finds recorded in the British Isles, it is clear that Anglo-Saxon moneyers, the people in charge of choosing the designs of the coins and who were also guarantors of the quality of their metal, had access to quite a large selection of possible models and prototypes: in addition to ancient British coins, known finds include imperial

21 British Museum 1859, 0512.1 (see figure 1.3, p. 14). The lightweight solidus was struck in the name of the emperor Heraclius (610–641) and his son and co-emperor Heraclius Constantine (613–641).

22 Archibald, "The Wilton Cross ", pp. 58–60 and figures 1.(5) and 1.(6).

23 Although specifically dealing with Paleolithic times, Steven L. Kuhn explores the transitions in the ways early humans employed signalling media and discusses personal ornaments as vehicles for social signalling, eventually becoming abstracted and independent from the individual. Kuhn, "Signaling theory and technologies of communication in the Paleolithic".

coins from Rome and Byzantium, pseudo-imperial Frankish, Visigothic, Burgundian, Ostrogothic, Lombard, and Alemannic coinage, various Merovingian issues, and Frisian and even some Sasanian coins.[24] The vigour of the Anglo-Saxon response to the challenge to produce their own currency is demonstrated by the earliest of the Anglo-Saxon coins, the gold shillings or tremisses. We know a number of these from the large Crondall hoard (dated to the 640s) and other approximately contemporary finds from further afield, such as the group from York.[25] These early stages of minting present us with a snapshot of the motifs available and the range of responses they engendered.

At the early stage of coinage, three main iconographic strands can be discerned as influential, particularly with regard to the treatment of the busts: one focuses on contemporary, mainly Merovingian prototypes; another makes reference to some distinctive traits of Romano-British coinage; while the third and most prestigious is derived from classical sources, predominantly historic Roman coins. It is remarkable how, in spite of the iconographic diversity among these coin types, they all coexisted and conformed in fineness.

Contemporary continental coins, mainly Merovingian, furnished some useful models in the tentative early a stage of Anglo-Saxon coinage; however, in general their influence was temporary and not universal, as already argued for East Anglia. This may have been because the practical concern regarding the need to conform to well-established numismatic models was a relatively short-lived factor, and probably not the main consideration to play a part when deciding on a suitable iconography. We can speculate that far more determining factors would have been the symbolic value and prestige attached to the prototype.

Gold *Benutigoii* coins provide a good example of Merovingian-inspired iconography: they feature neat profile busts with small heads of sharp, linear features, pellet-like eyes, and hair swept back above a diadem.[26] A circle separates the heads from the inscriptions, which are either of runic or Roman lettering.[27] Only a small handful of coins of this type are known: aside from one pair, all are from very different dies and vary widely in size and details, yet the design is distinctive enough to convey a sense of unity, regardless of obvious discrepancies. Presumably this was also the perception in Anglo-Saxon times; yet, it is

24 Abdy and Williams, "A catalogue", pp. 29–58; G. Williams, "Circulation and function".

25 *SCBI 63*, pp. 85–92.

26 *SCBI 63*, pp. 89–90, nos. 7–9. They would influence the early silver Bx Series: ibid., p. 101, nos. 67–68.

27 Also, on the reverses, small equal-armed crosses are surrounded by radiating, rather untidy lettering.

instructive to consider how the three Benutigoii specimens now in the British Museum were originally housed in separate cabinets: because of the different scripts used, only one was believed to be Anglo-Saxon, and the other two were considered continental. This serves as a cautionary tale: our approach to coins is biased by our ideas and priorities. From our literate vantage point, inscriptions are considered to be the main bearers of meaning – however, for a largely illiterate society like that of early Anglo-Saxon England, script may have been an awe-inspiring and mysterious bearer of authority, but arguably the look of the "bust" and other images mattered more for identification.

An important contribution not often brought to bear on numismatic studies of the period, because it has not as yet been fully assessed vis-à-vis Anglo-Saxon coinage, is the debt to ancient British coins, which, then as now, would have been relatively common finds. While questions regarding continuity, change, and acculturation between the post-Roman British and Anglo-Saxons are well beyond the scope of this chapter, this cultural layer is fundamental.[28] The role that the post-Roman British population played – by mediating the Anglo-Saxon perception of continuity with the Roman past and through the visible examples of their former interactions, including the eclectic images on their old coinage – is well worth further investigation. Certain points of contact, continuity, and overlap are clearly discernible between Anglo-Saxon and "Celtic" art. These would culminate in that "fusion" known as Insular art, as powerfully highlighted in a 2015–2016 exhibition at the British Museum and National Museum of Scotland.[29] It is significant that some of them can be observed in connection with coinage as well, with pre-Roman British coins furnishing inspiration to Anglo-Saxon counterparts from their inception until the early 8th century.[30] Among several examples, one may mention the shared emphasis on hair and the common interest in the rendering of hair and diadems as pattern: as points of comparison, the so-called "Ladder Head" coins of Commios (*c.*50–25 B.C.) and the upright, stiff hair seen on several of the Anglo-Saxon coins, including the international Porcupine motif.[31] Frontal images of

28 Esmonde Cleary, *The Ending of Roman Britain*, p. 167.

29 Farley and Fraser Hunter, *Celts*, pp. 176–82; Webster, *Anglo-Saxon Art*, pp. 99–108.

30 Gannon, "Insular numismatics: the relationship between ancient British and early Anglo-Saxon coins".

31 On Commios: Cottam, de Jersey, Rudd, and Sills, *Ancient British Coins*, pp. 1034–40; see also 1564. For the Anglo-Saxon coins, see, for example: "Bust LOND" (no. 71) in Metcalf, *Thrymsas and Sceattas in the Ashmolean Museum, Oxford*; and Gannon, *The Iconography of Early Anglo-Saxon Coinage*, pp. 36–37 and figs. 2.18–2.20 and 2.37a. The characteristic "quills" of so-called Porcupines, i.e., Series E (ibid., pp. 176–81; *SCBI 63*, pp. 110–12) are also derived from such rendering of the hair.

Romano-British gods, such as Belenus, Cernunos, and Medusa,[32] bolster the identification of "facing heads" on Anglo-Saxon coins as sacred images;[33] but most importantly, there are some telling points of contacts in the treatment of inscriptions.

As Jonathan Williams has discussed in the context of the uptake of Latin on British coin inscriptions, the Roman-inspired *staters* of Tincomarus (*c.*25 B.C.–A.D. 10), featuring a finely modelled galloping horseman in classical style on their reverse, have on their obverse the inscription COM · F. (son of Commius) in perfectly correct Latin and canonical epigraphic style, displayed within a tablet or cartouche in a way that was innovative and had no Roman numismatic precedent.[34] However, this pattern would prove quite influential for Anglo-Saxon coinage: among the pre-primary Pada series (*c.*675–680), for instance, the runic name is always displayed horizontally within a rectangular standard, at the side of it (Figures 12.1a and b), or in a round frame.[35]

The more complex TTOII-inscribed standard,[36] a long-lived design derived from the Pada coinage, descended through the substantive silver Series A, C, and R (*c.*680–*c.*750) (Figure 12.2) and, with various modifications, is also behind other major series and types, such as the Porcupines of Series E.[37]

Together with the more classical fashion of numismatic inscriptions disposed along the inside of the rim of a coin, the tradition of horizontally displayed inscriptions would long endure on Anglo-Saxon coinage, as testified to by the many examples produced by King Offa (both with his name and those of his moneyers, even displayed on pelleted standards),[38] and continuing until

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32 See for instance, Cottam, de Jersey, Rudd, and Sills, *Ancient British Coins*, 2912, 1109 and 1076.

33 Gannon, "Coins, images and tales from the Holy Land" and "Firmly I believe and truly".

34 J. Williams, "Coin inscriptions and the origins of writing in pre-Roman Britain", pp. 9–16; Cottam, de Jersey, Rudd, and Sills, *Ancient British Coins*, 1064–67, on type BM 770 (VA 385; Mack 100). Williams comments on p. 10 that the epigraphy and its setting in a cartouche have counterparts in Roman stamps on bricks, etc.

35 *SCBI 63*, nos. 31–33. Pada is understood to be the name of the moneyer (ibid., p. 95).

36 The TTOII inscriptions are understood to be derived from lettering amalgamating different numismatic models (Gannon, *Iconography*, p. 172, n. 106), including depictions of inscribed votive altars (e.g., Constantine I), which may have also been known at first hand. Hence, the impact of monumental inscriptions on both British and Anglo-Saxon coins should be considered. Mattingly, Sydenham, et al., *The Roman Imperial Coinage*, Vol. 7, 305.

37 Gannon, *Iconography*, pp. 171–76, and *SCBI 63*, nos. 42–66, 117–37, 306–418, and 627–710.

38 See, for instance, "Heavy coinage of Canterbury (Æthelmod)", Chick, *The Coinages of Offa and His Contemporaries*, pp. 153–57, Types 229–36. For standards, see "Light coinage of Canterbury (Eoba)", Ibid., pp. 108–12, Types 104–11.

FIGURE 12.1A "Pada", Type PIb. Obv. helmeted bust right. Rev. banner containing TOT /XX, "pada" in runes to right.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 15; CM.1566–2007).

FIGURE 12.1B “Pada”, Type PIIa. Obv. diademed bust right. Rev. “pada” in runes in circle. SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 16; CM.1567–2007).

FIGURE 12.2 Series R, Type R1. Obv. "epa" in runes before radiate bust right. Rev. standard containing T O T/I I, cross below and pseudo-letters to either side
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 78; CM.1914–2007).

the late 10th century with various horizontal types over two or three lines, clearly displaying the names of various moneyers.[39]

Whether in the early stages of Anglo-Saxon coinage these particular choices and the aesthetics they evoked were meant to adumbrate charged political undercurrents, or if they were simply a matter of model availability and convenience, or indeed traditional continuity of craftsmanship, are questions impossible to ascertain. While the influence of British coinage and cultural tradition in filtering Roman appreciation are undeniable, the main source of inspiration and ambition for Anglo-Saxon coin-making was undoubtedly Rome itself. Hence it is to the interaction with Roman heritage in Britain and the influence of Roman coins that the discussion will now turn.

Imagining Rome

The Anglo-Saxon relationship with the cultures of Rome and the physical remains of the Empire in Britain was as intimate as it was complex. Although the Anglo-Saxons had not themselves been directly under Roman rule, they had had interactions with Rome as a political and economic power, and in some cases a certain amount of first-hand experience would have derived from service in the Roman Army before migrating to Britain.[40] Once the Anglo-Saxons had settled in Britain, prominent vestiges of mighty Rome and its imperial past were ubiquitous. Although Nicholas Howe talks lyrically of a postcolonial void, of decay, depopulation, and melancholy, and even if by then in various states of disrepair, monuments and remains were definitely impressive, conditioning and stimulating artistic and literary responses and contributing positively to a wilful mental construct of continuity and belonging, as well as to a sense of a tangible Roman past and heritage.[41] Arguably, the phenomenon of transformation/translation of numismatic prototypes seen in Anglo-Saxon coinage (which engendered cultural overlap, experimentation, and a rhetoric of hybridity) could lend itself to probing through the lens of postcolonial theory.[42]

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39 For the 10th-century coinage, see Archibald and Blunt, *British Museum Anglo-Saxon Coins 5* (hereafter *SCBI 34*). Aside from issues of improved legibility, the horizontal display of inscriptions on "lines" is reminiscent of the enhanced appearance of English legal documents (Webster and Brown, *The Transformation of the Roman World*, p. 220).

40 As testified to by, for instance, the belt-sets and buckles, as well as their imitations found in Britain: see White, *Roman and Celtic Objects from Anglo-Saxon Graves*.

41 Howe, "Anglo-Saxon England and the postcolonial void", pp. 28, 41; Howe, *Writing the Map of Anglo-Saxon England*.

42 This is an approach taken by Karkov, *The Art of Anglo-Saxon England*.

However, while certainly useful in suggesting a more nuanced approach when thinking about the embracing of *Romanitas*, it is important to remember that the relationship between Anglo-Saxon England and Rome was constructed entirely willingly, rather than imposed.

With regard to influential models furnished by imperial Roman coinage, then as now hidden caches and casual losses would have been relatively common, and would have offered enthralling sources of inspiration for multiple generations. The Anglo-Saxons' salvaging and reuse of coins, as already discussed, is evidence of the continuing allure of Rome, and of a burgeoning appreciation and presentation of what they believed Rome to stand for. It could be argued that the use of Roman coins, first as ornaments and then as iconographic models for native coinage, is to be perceived in a symbolic act akin to the deliberate appropriation of Roman *spolia* as carried out in early Christian basilicas in Rome and post-Conversion Anglo-Saxon buildings,[43] and embodying an unequivocal appeal to *Romanitas* in its manifold implications.[44] Thus, the selection of a particular Roman prototype as a model for an Anglo-Saxon coin would have been a highly charged undertaking, intended to encapsulate within the native coin something of the authority and gravitas of the original and turn it into an embodiment of power.

At first, the Anglo-Saxon renderings transform details to suit native aesthetics – in possible pursuit of "the look of power": hair, as discussed, and headgear, as well as rich texture and pattern-making in the drapery. One of the finest of the early imitations of Roman exemplars is the very striking left-facing *Licinivs* type in the Crondall hoard (*c.*640).[45] It features sensitive modelling of the face in high relief, with strong eyebrows, diadem, and abundant hair convincingly rendered – yet much of the design focuses on pattern-making, particularly so on the richly detailed and textured garments. In a similar manner, pellets are scattered lavishly between and through the peaks of the impressive radiate crown of the mid-7th century *Concordia Militum* type,[46] an exaggerated rendering of the curly hair of the Roman originals. The treatment of the helmet on the *Crispus*/delaiona type is also notable:[47] some of the Roman coins of Crispus show helmets chased with volutes of vegetation,[48] but the Anglo-Saxon

43 Eaton, *Plundering the Past*, p. 128; Howe, *Writing the Map*, pp. 91–97; and Coates-Stephens, "Epigraphy as spolia".
44 Coz, *Rome en Angleterre*.
45 Metcalf, *Thrymsas and Sceattas*, nos. 33–41.
46 *SCBI 63*, nos. 19–20.
47 *SCBI 63*, no. 21.
48 E.g., Mattingly, Sydenham, et al., *The Roman Imperial Coinage*, Vol. 7, p. 281.

rendering is actually more akin to representations of the hairstyle on the *antoniniani* of Ulpia Severina (270–275)[49] and turns the headgear into geometrical patterns of concentric Cs.

The plentiful late 4th-century "Two Emperors" type offers an example of a prestigious design with a very wide appeal: not only do we have an early gold imitation mounted as a pendant,[50] but the "Two Emperors" counts as the most common type among the pale gold shillings (*c.*660–670).[51] The design is manipulated to best fit the small size of the coins – hence it focuses on the three heads (the emperors and the "victory") and the shared globe, with the central struts of the throne forming a prominent saltire (Figure 12.3).

Familiarity with the Roman prototype accounts for the return to the original two seated emperors on rare silver pennies struck in the names of King Alfred of Wessex (r. 871–899) and King Ceolwulf II of Mercia (874–879).[52] The coins were well-represented in the Watlington Hoard (dated to the late 870s), and have contributed to a reassessment of the history of this period.[53] The fact that the coins were struck at different mints and over several years proves that there was a political allegiance between the two kings that lasted over a number of years. The subtle manipulation of the Roman prototype so that the kings could be shown sitting facing each other and interacting is thus vindicated.[54]

Another instance of a long and varied use of Roman numismatic imagery is derived from the Constantinian type *Urbs Roma*. Aside from its famous reproduction, both obverse and reverse, on the 5th- and 6th-century Undley Bracteate,[55] in the first half of the 8th century the motif of the she-wolf and twins was deployed on silver coins of Series V, albeit in a rather reworked form, with "adult" twins taking up most of the flan, and, as I have argued, with religious connotations (Figure 12.4).[56]

A comparable shift of meaning and iconography, again with grown-up twins but this time attended by two wolves, features on the Franks Casket,[57] an elaborately carved whalebone box, aptly labelled "self-consciously clever".[58]

49 E.g., Mattingly, Sydenham, et al., *The Roman Imperial Coinage*, Vol. 4. For recent finds of these coins in England see: https://finds.org.uk/database/search/results/show/40/sort/created/broadperiod/ROMAN/thumbnail/1/rulerName/Severina.

50 Ashmolean Museum 1942, 220. See Gannon, *Iconography*, fig. 3.7.

51 *SCBI 63*, nos. 22–30.

52 See also Karkov, *The Ruler Portraits of Anglo-Saxon England*, p. 26.

53 The Watlington Hoard (Oxfordshire) was found by a metal detectorist in October 2015.

54 Gannon, *Iconography*, pp. 84–87.

55 British Museum 1984, 1101.1; see Webster, *The Franks Casket*, p. 41, fig. 31.

56 Gannon, *Iconography*, pp. 144–48; Neuman de Vegvar, "The travelling twins", pp. 256–67.

57 BM 1867, 0120.1; see: Webster, *Franks Casket*, p. 40, fig. 29.

58 Wood, "Ripon, Francia and the Franks casket", p. 5. See also below.

FIGURE 12.3 "Two Emperors" type.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 9; CM.1562–2007).

FIGURE 12.4 Series V (Type 7).
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 619; CM.1977–2007).

In the late 8th-century, the East Anglian moneyer Lul, working for Æthelberht II (d. 794) and then Offa of Mercia (d. 796), returned to a traditional Constantinian model for his take on the she-wolf and twins, a striking and unique reverse which he used for both kings.[59] We may wonder whether the re-use of the Roman motif (crowned by the word REX) was meant as a charged gesture of defiance on the part of Æthelberht, a pun on the dynastic name Wuffingas, a homage to Rome as Mother Church, or a proud revival of the tradition of using Roman numismatic prototypes in East Anglia. The answer may have been complex and itself multilayered.[60] Arguably such a major paradigm shift in the deployment of coin iconography – from practical use to intellectual appropriation and transformation – was helped and mediated by the adoption of Christianity and its ingrained practice of seeking layers of significance and moving from literal to spiritual meanings.

The Conversion to Christianity

As James Campbell strikingly put it, it was through the Conversion that barbarians moved from "eating from a Roman plate to believing themselves Roman".[61] Howe has argued that after the Conversion, the relevance of Rome for the Anglo-Saxons morphed from historical to current, Rome having become the location of Mother Church.[62] They most certainly considered themselves "heirs of Rome", where the imperial and Christian appear to have neatly coincided and overlapped.[63] The adoption of the new religion, along with its traditions of Latin and literacy and the minting of coinage, were important strategic indicators of assimilation and facilitated claims and corroboration of royal claims to power, both internally and abroad. In addition to a more intellectualized perception of the imperial past, the increasingly direct relationship with Rome itself and the extensive travelling and importation of commodities necessary for the establishment and upholding of the fledgling Anglo-Saxon Church augmented the cultural and visual vocabulary available. All this stimulated far more ambitious undertakings in the arts, including what was then attempted on the coinage, particularly in the silver series of the first half of the 8th century.

59 Naismith, *Money and Power in Anglo-Saxon England*, p. 152.
60 Gannon, "Three coins in a fountain", pp. 294–302, figs. 13.2–13.5.
61 Campbell, "The first Christian kings", p. 67.
62 Howe, *Writing the Map*, p. 101.
63 Howe, "Anglo-Saxon England", p. 38.

To this period also belongs what is arguably the earliest representation of coins in Anglo-Saxon art. Perhaps unsurprisingly, it is found on the Franks Casket,[64] a most remarkable object which bears witness to the way in which the Anglo-Saxons engaged with learning by means of metaphors, complex correlations, and ultimately transformation of meaning. In panels framed by bands of riddling runic writing, the casket juxtaposes and invites comparisons between scenes derived from Germanic legends and Christian and historical sources. The right of the front panel portrays the Adoration of the Magi.[65] The first of the three kings to present an offering to the Infant Christ holds a chalice with three "discs" atop. Traditionally, the present is supposed to be of gold, hence the chalice can be interpreted as brimming over with gold coins. However, in the riddling context of the casket, we are invited to meditate upon the transformation of the earthly treasure of precious coins into hosts, presented in a chalice as sacred Eucharistic offering, the ultimate gift of Salvation, far more precious than any gold coins – a sort of transubstantiation.

Although well-understood as mirroring the intense early 8th-century *Zeitgeist*, the casket's patronage, its intended recipient(s), and whether it should be understood as belonging in a monastic or secular milieu are questions long debated by scholars.[66] Its extraordinary interplay of imagery and layering of meaning have parallels in the art of some of the contemporary silver coinage of which the very same questions are also now being asked.

The Silver Coinage

By the turn of the 8th century, through progressive debasement and for enhanced convenience, Anglo-Saxon England as well as the continent struck coinage in silver: these silver pennies are the so-called *sceattas*. By this time coinage was utilized quite extensively across wider areas, including East Anglia and the Midlands and, of course, across the North Sea. By far the most widely used types were the so-called Porcupines (Series E). These were very plentiful and important commercially, and distinctive for their almost abstract design which, on account of its plentiful production, needed to be of rapid execution, but had no artistic pretence.[67]

64 Webster, "The iconographic programme of the Franks casket"; Webster, *Anglo-Saxon Art*, pp. 91–97; and Webster, *Franks Casket*.

65 See illustration in Webster, *Franks Casket*, p. 35, fig. 22.

66 Karkov, *Art of Anglo-Saxon England*, p. 147.

67 Gannon, *Iconography*, pp. 176–81; *SCBI 63*, pp. 110–12.

Far more engaging visually and intellectually are the many types of sceattas which introduce innovative iconographies. Among them are to be found a remarkable avidity for experimentation and a great wealth of human figures, animals, birds, and vegetation motifs, as well as intricate patterns and crosses and interesting takes on busts.[68] Their designs were more often than not derived from non-numismatic sources. Some are demonstrably based on Roman gems, presumably local finds, while for others we can only postulate the availability of some quite exotic prototypes.[69] The appropriation of imagery derived from gems must be viewed in a similar way to the spolia discussed above: these trophies from the past added distinction to the present, albeit with no awareness of their original meaning or context, as demonstrated by the misunderstanding of details in the composition.[70] As an example, we can compare the treatment of Hercules, a subject found both on coins of Cunobelinus (*c.*A.D. 8–41) and a unique *sceat* in the Ashmolean Museum.[71] While the British coin shows a good awareness of some original classical prototype, with a naked, muscular Hercules holding a club and the Nemean lion's skin, the Anglo-Saxon rendering (from a different model,[72] with Hercules slaying the Hydra) depicts a slim figure dressed in a long tunic, while the monster and the lion's skin (not understood as such) have dissolved in vegetation motifs. Only the pose of the original, with the raised arm holding a club, remains. What meaning this reworked image was intended to convey remains uncertain: it fits alongside other coins showing figures among vegetation, but stands out among them as elegantly appropriating a Roman "original".[73]

We witness equally striking innovations across the whole breadth of the artistic output of the time, which has fittingly been called the golden age of Anglo-Saxon art. Intellectually much of the iconography of these particular sceattas is steeped in complex religious imagery and reveals knowledge of and active engagement with the major theological issues and controversies of the

68 Gannon, *Iconography*.

69 Gannon, *Iconography*, p. 185; see figs. 2.63/2.64 and 4.37a/4.37b for the use of two related Bacchic gems as the obverse/reverse of coins of Series K, Type 42.

70 Gannon, *Iconography*, p. 93.

71 On Cunobelinus: Hobbs *British Iron Age Coins in the British Museum* 1884–1885 and see Cottam, de Jersey, Rudd, and Sills, *Ancient British Coins*, 2864. The Anglo-Saxon coin is no. 361 in Metcalf, *Thrymsas and Sceattas*, and illustrated in Gannon, *Iconography*, Fig. 3.18a.

72 An example of a possible iconographic source is the gem illustrated in Gannon, *Iconography*, Fig. 3.18b.

73 Gannon, *Iconography*, pp. 94–95. The "vegetation" on these sceattas is often a sinuous fruited plant, presumably a vine. See below for a discussion on the iconography of birds in vines.

time.[74] Thus, in addition to more straightforward-seeming symbols such as crosses,[75] the coins explore far more complex iconography relating (for example) to the growing importance of the cult of the Virgin Mary (Figure 12.5)[76] or the nature of Christ and His representation in the form of a lamb.[77]

Visually, while many useful *comparanda* have been lost, enough survive among manuscripts, sculpture, and metalwork to justify the claim that these sceattas not only bear witness to the intellectual refinement of the times, but can be seen to fit in artistically among "related sets of objects within a single standard and context of patronage".[78]

As already noted, from the early times of production, inscriptions had formed a major part in coins' credibility – yet, notoriously, sceattas carry very few. This is due partly to their small size, but also to the fact that their iconography is far more complex. A few are very competently inscribed in Latin characters and are exceptional models of legibility, but the majority are garbled and tokenistic (Figures 12.6a and b).[79] The short runic inscriptions (or pseudo-inscriptions, as they tend to degenerate) ÆPA/APA/EPA, which are understood to have originally represented the name of a moneyer, appear in front of the busts of Series C and R (see Figure 12.2).[80]

In observing how much the Anglo-Saxons were exposed to texts, labels, and inscribed, speaking objects, Catherine Karkov posits that images and text were perceived as equal in conveying meaning,[81] while Rory Naismith, commenting specifically on coins, states that letters functioned as a verbal as well as a visual manifestation of authority.[82] With these observations in mind, we can move a step further in thinking how the combination of script and bust may have been received and understood by their viewers, perhaps even at a performative level. We may postulate that the inscription which endorses the moneyer's name on behalf of the authority represented by the bust actually gives the bust a voice, so that as a result the mandate is perceived to be conveyed not only visually, but

74 Ó Carragáin and Thacker, "Wilfrid in Rome".
75 See Gannon, *Iconography*, pp. 161–65 for composite and hidden crosses as devotional patterns akin to carpet pages in Gospel books.
76 Gannon, "Coins, images and tales", pp. 99–103.
77 Gannon, "Firmly I believe and truly".
78 Plunkett, "The Mercian perspective", p. 210.
79 Particularly fine are *SCBI 63*, pp. 558–59. See the discussion regarding the imitation and subsequent degeneration of the original inscription DE LVNDONIA among Series L, "Celtic Cross and Rosettes," and DELVNDONIA/MONITASCORVM/SCORVM types: *SCBI 63*, pp. 119–23 and nos. 524–32, 549, and 558–61. See also Naismith, "Money of the saints", pp. 83–87.
80 *SCBI 63*, nos. 117–37 and 627–710.
81 Karkov, *Art of Anglo-Saxon England*, pp. 135–37.
82 Naismith, *Money and Power*, p. 79.

FIGURE 12.5 "Cross and Rosettes", Type 106 variant.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 433; CM.1832–2007).

aurally.[83] Of course, over-familiarity with the combination of bust and inscription and the sheer volume of coins produced would have led to all but cursory

83 I have argued (Gannon, *Iconography and the Visual Imagination*) that this voicing of the inscription can be compared to the interpretation of the healing "breath" on bracteates (Hauck, "Gott als Arzt", pp. 19–62).

FIGURE 12.6A MONITASCORVM type, Type 9 variant.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 437; CM.1837–2007).

interactions with the objects themselves; this accounts for the degeneration in both image and script, although it is important to note that both were retained. The very conservative Series C and R, which descend via coins of Series A from pale gold issues of the 650s, can also be said to be the most bureaucratic.[84]

84 Gannon, *Iconography*, pp. 42–45 and fig. 2.28.

FIGURE 12.6B MONITASCORVM type, Type 14 variant.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 439; CM.1838–2007).

Among other sceattas, it is quite a different story. In some cases, the imagery itself is so dense that, even if not accompanied by an inscription, it can be postulated to be emblematic for entire passages of text, as in the case for coins featuring birds in vines, which allude to the lines "I am the true vine" in the Gospel of St John (15:1–8) (Figure 12.7).[85] This is a very encouraging passage, promising food, refuge, and life: a visualization of Paradise of universal appeal that everybody would have been able to connect to and appreciate in its basic simplicity.

If in the silver series both artistic verve and iconographic choices demonstrate a new sense of confidence on the part of the coin designers, the moneyers and the authority behind the coinage (whoever that was) appear to have been established enough to sponsor original designs and explore new ideas – in some cases even to the extent of doing away with traditional busts and so blurring distinctions between obverse and reverse. While it is clear that all types of sceattas were used for transactions, the sophistication of the iconographies and their execution appear remarkable enough to lead to speculations that religious-themed coins had supplementary functions in addition to purely commercial ones.[86] It should be noted that sceattas, rather than showing a great number of different types (as numismatists tend to classify them according to diversity), actually have a few main themes which are expressed according to regional artistic variations. As examples, one might consider the different representations of lions, which we can define as "local".[87]

Although undoubtedly sceattas are the most engaging of all Anglo-Saxon coins, and certainly the ones which, as an art historian, I have most enjoyed writing about, these beautiful, creative coins are as ephemeral as they are unique. Their complex imagery was all but swept away by the monetary reforms of the mid-8th century which saw the adoption of explicitly royal coinages, mainly adhering to the well-established pattern of bust/cross/inscription. This combination would prove to be the fundamental blueprint for medieval coins for centuries to come and facilitated plenty of opportunities for interesting variations and experimentation.

Offa's Reform

The most justly celebrated of the reformed coinages of the end of the 8th century is that of King Offa of Mercia, which has been painstakingly collected, studied, and written about.[88] It still lacks a systematic art historical survey – and

85 Hawkes, "The plant-life of early Anglo-Saxon art", pp. 275–82; Gannon, *Iconography*, pp. 117–20. Coins with birds in vine-scrolls find counterparts in much metalwork and sculpture of the time, most famously on the Ruthwell and Bewcastle crosses. Ó Carragáin, *Ritual and the Rood*, pp. 285–87.

86 Gannon, "Firmly I believe and truly".

87 The lion theme is discussed in detail in Gannon, *Iconography*, pp. 125–35.

88 Chick, *Offa*; Naismith, *Money and Power*.

FIGURE 12.7 Archer Group, Type 94.
SOURCE: FITZWILLIAM MUSEUM, CAMBRIDGE (*MEC* 8, NO. 442; CM.1840–2007).

indeed, to do justice to the remarkable variety and elegance of the many types that made up Offa's coinage would call for a major publication rather than a general survey. Some of its most striking busts, however, have already attracted comments.[89] The fact that the busts could be conceived so as to portray King

89 Gannon, *Iconography*, pp. 31–33 and 59–61; Naismith, *Money and Power*, pp. 54–64.

Offa while hinting at the personas and qualities of King David or the Emperor Constantine – and even going as far as showing Offa bare-chested as "heroic nude" – as the embodiment of "those virtues that made a man seem like a hero to his contemporaries"[90] force us to further our understanding of how coinage iconography was made to work at the time.

In addition to being explicitly royal, the imagery could be manipulated to convey subtle messages of propaganda. This is quite a self-assured leap, perhaps consciously coming full circle with the way Roman coinage was used for political means, including producing coins with the representation of the royal spouse.[91] Queen Cynethryth's coins are equally extraordinary: judging by the numbers of known specimens and their variety they must have been quite substantial productions, with a different distribution pattern from Offa's, but a function not yet fully understood.[92] All of the ten known types produced in Cynethryth's name, including the three which (re)use busts of Offa, display her name and title on the reverse around a beaded circle containing the ornamental uncial M (for Merciorum). The name of the only moneyer to work for her, Eoba, is on the obverse, in front of the image.[93] One of the issues facing coin designers was the length of names. Cynethryth's, of course, was too long to fit in front of her bust, but here too we can imagine that the inscription gives voice to *her* command to the moneyer, which here particularly serves to stress her authority. An interesting comparison is with coins of Offa by the moneyer Ibba, where the two name inscriptions are interchangeable between obverse and reverse. In this case, either Ibba's or Offa's four characters could be made to fit neatly among the foliate extensions sprouting at the four corners of the central lozenge with inner cross that features on the reverse.

Offa's coinage is distinctive among contemporary coin issues, both in England and on the Continent, on account of the variety and inventiveness of the iconography used. It is also remarkable, especially as it was striving towards standardization. The majority of the designs and dispositions of lettering and inscriptions are to be read as variations and expansions on the motif of the cross.[94] In the wake of the various theological issues and controversies which had rocked Byzantium and Rome and which even came to be mirrored in the

90 Hallett, *The Roman Nude*, p. 219; Gannon, *Iconography*, p. 61; Chick, *Offa*, pp. 57–60 (Light coinage of London), types 8–10.

91 Naismith, *Money and Power*, pp. 62–64.

92 Chick, *Offa*, pp. 123–28, types 138–48.

93 Chick, *Offa*, pp. 83–86, types 51–53 with moneyer's name on obverse and types 54–57 with moneyer's name on reverse.

94 Gannon, *Iconography*, pp. 168–71.

sceattas, the cross increased in importance both devotionally and visually.[95] Building on a devotional tradition of attentive deciphering of patterns to discover hidden crosses, Offa's moneyers managed to balance the intellectual inventiveness of the artistic tradition with the more sober needs of monetary reform and conformity, with brilliant results.[96] Artistically, Offa's time can be defined as Mercia's golden age, as amply testified to by what remains of its intellectual and material culture, with impressive achievement in metalwork, manuscripts, and sculpture. All showed a creative blend of old traditions with new interpretations of classicism as well as novel, exotic input.[97] It is therefore no surprise that Offa's coinage, too, should be so full of interest and so accomplished artistically as to stand comparison with even that of Charlemagne and his powerful kingdom.

Conclusion

Visually, then, Anglo-Saxon coinage may be said to have moved little over the span of 200 years: coins still featured a bust on the obverse, a cross on the reverse, and inscriptions. However, as this chapter has argued, the numismatic tradition was a rich cultural tapestry enhanced by a variety of artistic and cultural contributions which demonstrate what depth of meaning can underpin iconography.

We have seen how the gold coinage moved swiftly and decidedly away from slavish imitations of Merovingian prototypes to explore more ambitious and complex Roman examples, and how, additionally, influential input came from first-hand contact with ancient British coins, which contributed to a number of features. The early Anglo-Saxon coins, particularly those produced during the pale-gold and pre-primary phases (*c.*650–680) bear witness to freedom and ambition, guided by a desire for designs to have a local cultural resonance, hence the richness of fine details and texture, particularly in the busts. The vast production of silver coinage, the sceattas (680s–750), especially at the turn of the 8th century, testifies to the busy commercial world of the North Sea. High numbers, the need for quick production, and international use meant that coin iconography had to be simplified drastically, resulting in some rather pedestrian productions, such as the Porcupines, which reduced busts and

95 Gannon, "Firmly I believe and truly"; Naismith, *Money and Power*, pp. 69–71.
96 Pirotte, "Hidden order, order revealed".
97 See essays in Brown and Farr, *Mercia*.

inscriptions to a few emblematic lines combined with simple reverses with standards. Alongside these, almost as a reaction, were the rich and varied coins displaying quite remarkable artistic designs, often of outstanding merit and always full of interest for the breadth of discernible influences and models and for their intellectual content. If the reforms of the mid-8th century, striving towards standardization and a stronger and explicit royal grip, swept away the sceattas, the new coins certainly built on their inheritance of inventiveness and variety, albeit within strict rules. The coinage of Offa of Mercia demonstrates a lively artistic interest and engagement with the possibilities offered by the combination of bust/inscription/cross, which would lay the foundations of medieval coinage for centuries to come.

Hence, the best art historical definition to encompass the whole of the early Anglo-Saxon coinage highlights creativity within tradition and an acute awareness of the connectivity of the times, as well as the tumultuous changes, crises, aspirations, and triumphs that history records.

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CHAPTER 13

Coins and Identity: From Mint to Paradise

Lucia Travaini

Identity of the State: Words and Images on Coins

The images and text imprinted with dies transformed disks of metal into coins and guaranteed them. The study of iconography on coins is therefore no less important than that of its other aspects, although each coinage should be studied together with the entire corpus of data and especially with reference where possible to its circulation.[1] It may be difficult sometimes to ascertain how coin iconography was originally understood and received, but in most cases it is at least possible to know the idea behind the creation of different types, the choice of a model or of a language, as part of a crucial interaction of identity between the State and its coinage. We shall examine first some examples of the creative phase, before minting took place, and then examples of how a sense of identity between the coins and the people who used them can be documented, concluding with a very peculiar use of coins as proof of identity for security at the entrance of gates of fortresses at Parma and Reggio Emilia in 1409.[2]

1 St Isidore of Seville stated in his *Etymologiae* that "in coins three things are necessary: metal, images and weight; if any of these is lacking it is not a coin" (*in numismate tria quaerentur: metallum, figura et pondus. Si ex his aliquid defuerit nomisma non eriit*) (Isidore of Seville, *Origenes*, Vol. 16, 18.12). For discussion of method, see Elkins and Krmnicek, *Art in the Round*, and Kemmers and Myrberg, "Rethinking numismatics".

2 For many aspects related to coins and identity, see the papers presented at the symposium "Monnaies et identités" organized by Catherine Grandjean (University of Tours) in 2009 and published in *Revue Numismatique* 169 (2012), particularly those of Grandjean and of Marc Bompaire (both quoted below); see also the contributions in Solway, *Medieval Coins and Seals*; and especially Bedos-Rezak, "Medieval identity". On coins as identity of the state in Byzantium and medieval Europe, see the many contributions by Philip Grierson (e.g., *The Coins of Medieval Europe* and *Catalogue of the Byzantine Coins*) and, for portraits, Travaini, *I capelli di Carlo il Calvo.* On coins as signs of identity and memory for those who used them and in ritual contexts, see Travaini, "Saints and sinners"; Travaini, "Saints, sinners and … a cow"; Travaini, "La moneta in viaggio", pp. 91–94; and Travaini, *Il lato buono della monete*.

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Before the Mint: The Moment of Creation

The role of coins as tokens of identity must be considered from their very origin, even before their production in the mint. I refer here not to the general theme of the "invention" of the first metallic coins,[3] but to the circumstances which induced a state (whether an individual ruler or a city) to strike them, the moment when they were imagined or conceived in weight, fineness, and images. Instructions and models of the chosen images were then passed on to those in charge of the mint. Many documents can shed light on the bond between the State and its coins.

The oldest evidence of this comes from Sestus in Thrace in circa 120 B.C.; an inscription informs us not only that the city would profit from its bronze coins (presumably overvalued in relation to the silver coins) but also that "the striking of coins will make the city's *character* current". In this context the term *character* may well refer to the coin types, or the city's emblem; although the surviving coinage of Sestus bears a variety of types, the original intention may have referred to a diffusion of its signs of identity, such as the representation of Demeter, whose cult was strong in the city.[4]

Religious images indeed identified and protected the status of power. The coins of Athens carried on one side the profile head of the goddess Athena and on the other the owl, often associated with the goddess. According to three inscriptions dated respectively shortly after 385–384 B.C., 369–368 B.C., and 368–367 B.C., some dies and anvils for striking gold coins were kept in the Parthenon, stressing the religious value of issuing coins and the sacrality of the mint.[5]

Terrestrial rulers did portray themselves with divine attributes on coins through the centuries: tetradrachms of Alexander the Great (336–323 B.C.) do not bear his personal portrait but show on one side the head of Heracles, as Alexander's identity, and Zeus on the other. Emperor Nero (A.D. 54–68) introduced his radiate portrait on some of his coins, when previously the only radiate image had been that of the god Sol. There were also religious dimensions to special issues. One may cite the Byzantine emperor Alexius III Megas of Trebizond (1349–1390) who, after a chrysobull dated 1374, inaugurated an

3 The origin of money is a topic of great relevance to historians, numismatists, and economists: see Grierson, *The Origins of Money*; Ingham, *The Nature of Money* beginning on p. 89; for the earliest coinage, see Seaford, *Money and the Early Greek Mind* beginning on p. 125.

4 Melville Jones, *Testimonia Numaria*, Vol. 2, p. 213 no. 377; Picard, "Iconographie et mémoire monétaires", p. 45.

5 For the inscriptions, see Melville Jones, *Testimonia Numaria*, Vol. 1, pp. 167–69, nos. 169–70 and 174–75, and Melville Jones, *Testimonia Numaria*, Vol. 2, pp. 104–6. For the sacrality of mints, see Travaini, "*Sacra moneta*", and Grandjean, "Identité civique", pp. 12–13.

annual grant of a thousand *aspra* defined as "my own God-guarded issue that are called 'Komnenata' ".[6]

In many cases, the images of emperors and kings were carefully chosen to display the face of authority according to time and circumstances. Any coin bearing innovative or "daring" images must have certainly been ordered personally by the ruler and his closest councillors, and some images are recorded in written sources for their special impact. For example, the Byzantine emperor Isaac I Comnenus (1057–1059) was displayed on gold *histamena* in rather aggressive militaristic attire, brandishing his sword. His contemporaries thought it to be a sign of extreme pride on his part, as if he owed his throne to his military qualities and not to divine decree.[7]

Capitularies, edicts, or imperial or papal privileges imposed the types of new coins. In the Edict of Pîtres of 864 Charles the Bald ordered that the new denarii must bear on one side his name in a circular legend around his monogram, and on the other side the name of the city mint around a cross (*ex una parte nomen nostrum habeatur in gyro et in medio nostri nominis monogramma, ex altera vero parte nomen civitatis et in medio crux habeatur*). This type was introduced widely in the Carolingian Empire.[8]

In 1123 the Norman duke of Gaeta, Richard of Carinola, planned the issue of new copper coins supposed to bear his image (*moneta nostrum imago*), but the project was opposed fiercely. The city was ruled by consuls coordinated by the duke; they did not like Richard's attempt to show himself as a sovereign, so they made him promise that the coins "as we see them today … would remain the same, fixed and unchanged for eternity" (*predicta moneta follarum, sicut nunc esse videtur, ita taliter firma, stabilis et immobilis perseveret in sempiternum*).[9]

In 1166 Emperor Frederick I Barbarossa (1152–1190) ordered the production of new denarii to be issued in the imperial city of Aachen: their types (*forma*) had to bear on one side the image and name of Saint Charlemagne and on

6 Hendy, *Studies in the Byzantine Monetary Economy*, p. 523: these were silver coins bearing on obverse and reverse (respectively) the images of St Eugenius and the emperor, both on horseback in similar positions. See below for more examples of this.

7 Grierson, *Catalogue*, pp. 759–60, lists the contemporary sources.

8 Grierson and Blackburn, *Medieval European Coinage* (hereafter *MEC*) 1, p. 232; for the production of the new type, known as the *Gratia D*(*ei*) *Rex*, and its mint attributions, see Grierson, "The 'Gratia Dei Rex' Coinage of Charles the Bald", pp. 52–64; Coupland, "Carolingian single finds and the economy of the early ninth century", and Sarah, "Charlemagne, Charles the Bald and the *Karolus* monogram coinage".

9 Travaini, *La monetazione nell'Italia normanna*, p. 337; Travaini, *I capelli*, pp. 187–88; and Grierson and Travaini, *MEC* 14, p. 70.

the other the image and name of the emperor. (It should be noted here that Frederick I had obtained the canonization of Charlemagne by antipope Pascal III the previous year. By this act, a saint emperor could be superimposed on and confused with the ruling one: power was transferred from Heaven to the physical throne.[10]) A few years after that, in Constantinople, the Byzantine emperor Alexius III Angelus Comnenus (1195–1203) represented himself on gold histamena together with the nimbate saint emperor Constantine the Great, each holding a patriarchal cross, probably with similar ends.[11]

Henry VI of Hohenstaufen (emperor 1191–1197) became king of Sicily on 25 December 1194 (he was married to King Roger II's daughter Constance). His Sicilian coins show a complete break from the Norman traditions, stressing above all his imperial sovereignty; an empire includes by definition a multitude of kingdoms or principalities, but the Kingdom of Sicily was extremely important and rich at this time and it was a major international coup to have it unified with the Roman Empire. By stressing his imperial image and titles, Henry's Sicilian coins demonstrate how carefully the imperial chancery had built his power on image control: copper coins were altogether abolished, Arabic legends were replaced by Latin ones on many coinages, and when they were kept, as on the gold Sicilian *tarì*, they abandoned the Fatimid style of the Norman kings by stating his Roman imperial titles transliterated into Arabic from Latin: *Harir Qaisar Awgust*, Henry Caesar Augustus.[12]

Frederick II of Hohenstaufen became king of Sicily following the premature death of his father Henry VI in 1197, then emperor in 1220 until his death in 1250. His early coins in the Kingdom of Sicily, under the regency of his Norman mother, show a return to Norman traditions, including the use of the Arabic *al mu'azzam* (the magnificent) dynastic title of the Norman kings from the time of Roger II. His billon coins issued at Messina and Brindisi show how his titles were progressively modified in accordance with his evolving status: 1212 King of the Romans, 1220 emperor, 1225 King of Jerusalem. The most striking

10 These *denarii* were never produced. The text is: *forma vero denariorum talis erit, quod in una parte erit imago sancti Karoli et eius superscriptio, ex altera parte nostra imago cum nostri nominis superscriptione* ("the types of the denarii be on one side the image of Saint Charles and his name, and on the other side our image with our name"): *Monumenta Germaniae Historica* Vol. 10, Part 2 (hereafter *MGH*), p. 435, n. 503. Similar superimposed images of celestial and terrestrial rulers can be seen for Bishop-Duke Athanasius II of Naples (878–898), Pope Sergius III (904–911), Wenceslaus IV of Luxembourg, king of Bohemia (1378–1419), and Djuradi Branković, lord of Ragusa/Dubrovnik (*c.*1402–1427): Travaini, *I capelli*, pp. 174–75, 234, and 238.

11 Callegher, "Da imperatore a santo militare".

12 Grierson and Travaini, *MEC* 14, pp. 152 and 443; Travaini, *I capelli*, pp. 192–94.

and imposing impact was reached with the gold *augustalis* issued in 1231: it bears on one side the imperial laureate bust with IMP ROM CAESAR AVG and on the other an eagle with spread wings and +FRIDERICVS; imperial on both sides, with its 20½ carats gold and weight of 5.31 g, this coin was very new in the Sicilian as well as the international panorama, and was meant to reveal the imperial image and arouse devotion and fidelity to his luminous majesty.[13] It was a successful coin and massively produced, and was the masterpiece of Frederick's conscious propaganda.

In the north of Italy Frederick II had to fight against the communes and the pope; towards the end of his life, after being excommunicated for the third time and having lost ground on various fronts, in December 1248 he granted the city of Tortona the privilege to issue new coins in his honour, bearing on one side his name and image, making clear the intention, already expressed for the augustalis, that frequent contact with his image would stir and always increase the devotion of his subjects.[14]

These documents and coins make us understand how conscious rulers could be of coinage as an expression of their identity. This began well before we find it explicitly expressed and recommended to rulers in the treaty *De Regimine Principum* (On the government of rulers) by St Thomas Aquinas (d. 1274), completed by Ptolemy of Lucca (d. 1327?). Ptolemy wrote a specific sentence on coins, calling them "the peculiar adornment of the king … because on coins the image of the king as Caesar is represented … and no other things can display the clarity of his memory like coins" (*nummisma sive moneta propria ornamentum est regis … quia in ea repraesentatur imago regis ut caesaris … unde in nulla re tanta potest esse claritas memoriae ejus … quantum nummisma*).[15]

Many of the examples given above are related to coins well-documented in contemporary official texts; some of the latter have not survived, or may not have been struck as intended. But many coins, even in the absence of

13 Grierson and Travaini, *MEC* 14, pp. 157–70; Travaini, *I capelli*, pp. 194–97.

14 *… ut cudendi monetam in civitate Terdonem ad honorem nostri culminis, ut ipsa nova monetae forma nostri memoriam nominis et nostre maiestatis imaginem eis iugiter representet … et ut frequens ipsius nove monetae inspectio eos in fide et devotione nostra magis ac magis corroboret et accendat* ("to issue coins in our city of Tortona in the honour of our majesty, so that the images of the new coins represent the memory of our name and the image of our majesty, and in order that the frequent observation of these coins may invigorate and awaken more and more their faith and devotion for us"): Huillard-Bréholles, *Historia diplomatica*, Vol. 6, Part 2, pp. 669–70; Travaini, *I capelli*, p. 208. (These coins are not known and may never have been minted.)

15 Thomas Aquinas, *Tractatus de regimine principum* (*de rege et regno*), ch. 13, p. 367 ss.; Ptolemy of Lucca, *On the Government of Rulers*, Vol. 1, Section 13. For the attribution to Ptolemy of Lucca, see Wittreck, *Geld als Instrument der Gerechtigkeit*, pp. 705–8.

documentary evidence, can speak for themselves – and besides, they are solid written evidence as well.

We can detect the moment in which some states or rulers acquired a sense of full awareness of their status and independence. Theoderic, king of the Ostrogoths (493–526), did not sign his gold solidi and tremisses, which occasionally bear his monogram; however, we have a unique specimen of a gold medallion which shows his moustached bust holding a globe surmounted by Victory in its left hand and making a gesture of *adlocutio* with its right. No barbarian king was supposed to display his image on gold coins; in fact, early post-Roman barbarian gold coins were imitations in the names of late imperial or early Byzantine rulers. Theoderic's medallion, with his name as a victorious prince, was a strong statement of independence and power: however, the denomination was of very high value (three solidi) and was not struck for circulation, but to be offered to those close to the king.[16]

The Lombard kings continued producing gold tremisses in the name of Byzantine emperors as had their Ostrogothic predecessors. Only King Cunincpert in 692 introduced a new coin type with his name clearly indicated, and on the other side the image of St Michael Archangel, the national saint of the Lombards and the first saint ever represented on coins.[17] Men in the Lombard nation wore long beards but these were not depicted on the contemporary tremisses, which imitated the profile of Roman tradition. Only when King Aistulf (749–756) conquered Ravenna from the Byzantines in 751 did he issue coins showing himself in his more authentic appearance: the bearded facing bust on these coins, which has sometimes been considered a copy of an image of Emperor Phocas, should be viewed as an original "portrait" of the Lombard identity.[18]

If the rulers of the Kingdom of Italy were more cautious and respectful of the imperial prerogatives on gold coins, some earlier signs of independence from Byzantium were shown by other rulers. The Merovingian Theodebert I of Metz (534–548) signed his gold solidi and aroused violent comments in Constantinople, made explicit by Procopius: "it is not considered right … for any … sovereign in the whole barbarian world to imprint his own likeness on a gold stater".[19]

16 Much has been written about this medallion, and its date is debated (Rome A.D. 500?): see Grierson and Blackburn, *MEC* 1, p. 35; and Travaini, *I capelli*, p. 146.

17 Grierson and Blackburn, *MEC* 1, p. 64; Arslan, "San Michele"; and Travaini, *I capelli*, p. 154.

18 Grierson and Blackburn, *MEC* 1, p. 65; and Travaini, *I capelli*, p. 155.

19 Procopius, *History of the Wars*, Vol 3, p. 33 (quoted from Spufford, *Money and Its Use in Medieval Europe*, p. 14); Grierson and Blackburn, *MEC* 1, p. 116–17; and Travaini, *I capelli*, p. 149.

The Visigoths in the Iberian peninsula gave special characters to the style of their gold, and by *c.*580 King Leovigild (*c.*569–586) was already signing his gold coins with his name, as his successors did until 714.[20]

The early Scandinavian coins minted in Denmark were anonymous and imitative of Anglo-Saxon types until proper regal coinages were introduced, still following the same model, but identified and self conscious in the name of the kings. This occurred under, respectively, Sven Forkbeard of Denmark (986–1014), Olaf Tryggvasson of Norway (995–1000) and Olof Skötkonung of Sweden (994–1022).[21] Occurrences of this pattern are so numerous as to be almost the rule: identity made itself manifest when rulers acquired power and local control and could make their coin types independent from previous models. Some good examples are shown by European imitations of the gold florin of Florence. The early florins of Hungary were issued from 1325 by King Charles Robert of Anjou (1308–1342); they bore the images of St John the Baptist on one side and the lily on the other, like the original model, but replaced the legend FLORENTIA with the king's personal name. This type was continued by King Louis I (1342–1382), who introduced a national type in 1353, removing the lily and replacing it with the arms of Hungary and Anjou.[22]

We can imagine the Catalan count Ermengol V of Urgell (1092–1102) being shown an ancient coin found locally: an Iberian silver denarius or copper ass of Bolskan of the 2nd century B.C. showing on one side a horse-mounted lancer (Figure 13.1). The count must have recognized his own ideal image on the old coin, and must have ordered the mint to strike billon deniers showing the same image perfectly copied, including the Iberian legend in the exergue, with his own name ERMENGAVDVS inscribed on the other side around a cross (Figure 13.2). This coin in itself, with its mix of current and archaic text and images, can tell us a lot about the sense of identity, pride, and culture of the time.[23]

The name of Sancerre, in the French county of Berry, took its origin from Saint Satyrus ("Serre"), whose relics were brought there in the 7th century; however, in the early 12th century, the name *Sacrum Cesaris* was favoured, based on a made-up classical past presuming a foundation by Julius Caesar. This prefabricated past was promptly struck on its coins, with the (medieval

20 Pliego Vàzquez, *La moneda visigoda*, Vol. 1, pp. 81–83: the signed type follows the introduction of the cross-on-steps type by Tiberius II Constantine (578–582). Travaini, *I capelli*, p. 159.

21 For the three coinages, see Malmer, *The Anglo-Scandinavian Coinage*, p. 53; Malmer, *Den svenska mynthistorien*, pp. 22–28; Gullbekk, "The church and money in Norway" beginning on p. 223.

22 Grierson, *Coins*, p. 170.

23 Crusafont, Balaguer, and Grierson, *MEC* 6, p. 92.

FIGURE 13.1 Silver denarius of Bolskan 4.11G, diameter 18mm.
SOURCE: NUMISMATIK NAUMANN GMBH, VIENNA, AUCTION 50, 5 FEBRUARY 2017, LOT 53.

FIGURE 13.2 Count Ermengol V of Urgell (1092–1102), billon denier 0.91G, diameter 18M.
SOURCE: PRIVATE COLLECTION, AUREO & CALICÒ, SUBASTA PUBLICA, BARCELONA 27 OCTOBER 2011, LOT 76.

and bearded!) head and name of IVLIVS CESAR on one side and a cross and the name of the local count on the other (Figure 13.3).[24] The iconography of medieval European coins should be explored in more depth than it has been so far.

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24 Travaini, *I capelli*, pp. 33 and 45.

FIGURE 13.3 Sancerre, billon denier of Count Steven II of Champagne and I of Sancerre (1152–1191) 0.99 G, 19 mm.
SOURCE: MONNAIES D'ANTAN, AUCTION 16, 22 NOVEMBER 2014, NO. 612).

Mints: The Moment of Production

Mints were at the heart of the State, and were kept close to the centre of power. We can see this evidenced by the central location of mints in cities, and the sentiment of pride disclosed by a number of documents. The deathbed oration of the Venetian doge Tomaso Mocenigo (1414–1423) is a good example: "You have seen our mint strike every year one million two hundred thousand gold ducats and in silver coins, among *grossetti*, *mezzanini* and *soldini*, 800,000 [ducats worth] a year". Although the figures may not all be consistent, the mint was in the heart of the dying doge.[25]

The mints could strike prestigious images but were also a source of income, exploited for fiscal purposes. Frederick II used and abused the mints of Brindisi and Messina for the production of progressively debased billon denarii, especially from the late 1230s until his death in 1250. In 1238 he was besieging the city of Brescia and needed cash urgently; in a letter to the Kingdom of Sicily he

25 Stahl, *Zecca*, pp. 379–82. Some 13th- and 14th-century Italian cities documented their pride in their mints by striking coins out of spite; for example, in 1299 a small Venetian expedition disembarked on the quay of the port of Genoa and there raised the banner of St Mark and struck Venetian ducats, "leaving the Genoese shamed and disgraced" (*cum magna infamia, damnis et dedecore Januensium*): Grierson, " 'Coniazioni per dispetto' nell'Italia medievale", p. 345.

ordered his vicars to provide a new issue of these debased coins and said that he was "enclosing models of the new images to be struck" (*formam … interclusam… sub quibus autem ymaginibus hec nova pecunia cudi debeat*).[26]

Competition

The ability to express identity through coins created opportunities for competition between states, especially in the case of imitations. States wanted to have their coins accepted in foreign markets, which was supposed to guarantee economic rewards by avoiding having to exchange gold or silver for somebody else's coins, but it was also a matter of prestige. Some examples of competition can be observed among the Italian cities. The gold florin of Florence was first issued in 1252: its types are the fleur-de-lis and the standing image of John the Baptist, patron saint of the city, with pure fineness of 24 carats and weight of 3.53 g. The gold ducat of Venice was first ordered in 1284 and struck beginning in 1285. The mint order stated that it should be as good as the florin or even better in gold (*tam bona et fina per aurum vel melior ut est florenus*) but the types were independent,[27] showing Christ in a mandorla on one side, and on the other St Mark offering the staff to the kneeling doge.

By 1300 the florin was the most important gold coin in circulation in Europe and to begin with also in the Levant, where the ducat replaced it in the first half of the 14th century. Writing in the 1320s, Florentine merchant and chronicler Giovanni Villani (1276–1348) told a story of how the sultan of Tunis had admired his gold florins and granted the Florentines the same trade privileges as the envious Pisans. These are his words:

> The said new florins having begun to circulate through the world, they were carried to Tunis in Barbary; and being brought before the king of Tunis, which was a worthy and wise lord, they pleased him much, and he caused them to be tried; and finding them to be of fine gold, he much commended them, and having caused his interpreters to interpret the imprint and legend on the florin, he found that it said: S. John the Baptist, and on the side of the lily, Florence. Perceiving it to be Christian money, he sent to the Pisan merchants who were then free of the city and were

26 Grierson and Travaini, *MEC* 14, p. 182; *Acta Imperii*, vol. 1, p. 637. On the iconography and diffusion of these denarii, see Travaini, *I capelli*, p. 199.

27 Stahl, *Zecca*, pp. 28–33; and Grierson, "The fineness of the Venetian ducat and its imitations", p. 95.

much with the king (and even the Florentines traded in Tunis through the Pisans), and asked them what manner of city among Christians was this Florence which made the said florins. The Pisans answered spitefully through envy, saying: “They are our inland Arabs”: which is to say, “our mountain rustics”. Then answered the king wisely: “It does not seem to me the money of Arabs. O you Pisans, what manner of golden money is yours?” Then were they confused, and knew not how to answer. He asked if there were among them any one from Florence, and there was found there a merchant from Oltrarno, by name Pera Balducci, discreet and wise. The king asked him of the state and condition of Florence, whom the Pisans called their Arabs; the which answered wisely, showing the power and magnificence of Florence, and how Pisa in comparison was neither in power nor in inhabitants the half of Florence, and that they had no golden money, and that the florin was the fruit of many victories gained by the Florentines over them. For the which cause the Pisans were shamed, and the king, by reason of the florin and by the words of our wise fellow-citizen, made the Florentines free of the city, and allowed them a place of habitation and a church in Tunis, and he gave them the same privileges as the Pisans.[28]

Cominciati i detti nuovi fiorini a spargersi per lo mondo, ne furono portati a Tunisi in Barberia; e recati dinanzi al re di Tunisi, ch’era valente e savio signore, sì gli piacque molto, e fecene fare saggio, e trovata di fine oro, molto la commendò, e fatta interpetrare a’ suoi interpetri la ‘mpronta e scritta del fiorino, trovò dicea: «Santo Giovanni Batista»; e dal lato del giglio: “Fiorenzia”. Veggendo era moneta di Cristiani, mandò per gli mercatanti pisani che allora erano franchi e molto innanzi al re (e eziandio i Fiorentini si spacciavano in Tunisi per Pisani), e domandogli che città era tra’ Cristiani quella *Florenza* che faceva i detti fiorini. Rispuosono i Pisani dispettosamente e per invidia, dicendo: “Sono nostri Arabi fra terra”, che tanto viene a dire come nostri montanari. Rispuose saviamente il re: “Non mi pare moneta d’Arabi; o voi Pisani, quale moneta d’oro è la vostra?”. Allora furono confusi e non seppono rispondere. Domandò se tra·lloro era alcuno di Florenza; trovovisi uno mercatante d’Oltrarno ch’avea nome Pera Balducci, discreto e savio. Lo re lo domandò dello stato e essere di Firenze, cui i Pisani faceano loro Arabi; lo quale saviamente rispuose, mostrando la potenzia e la magnificenzia di Fiorenza, e come Pisa a comparazione non era di podere né di gente la metà di Firenze,

28 Villani, *Nuova Cronica*, Vol. 7, Sect. 53, trans. Selfe, pp. 161–62.

> e che non aveano moneta d'oro, e che il fiorino era guadagnato per gli Fiorentini sopra loro per molte vittorie. Per la qual cagione i detti Pisani furono vergognati, e lo re per cagione del fiorino, e per le parole del nostro savio cittadino, fece franchi i Fiorentini, e che avessono per loro fondaco d'abitazione e chiesa in Tunisi, e privilegiogli come i Pisani.

In 1422 Florence tried to impose the gold florin over the ducat of Venice in the eastern markets. In their first journey that year to Alexandria, their newly built ships took not only goods (4,000 florins worth), but also 56,000 gold ducats of Venice, the only accepted gold currency there, for buying spices; at the same time the ambassadors there were able to show the sultan their new *fiorini larghi*, also named *di ghalea* ("of the ship"), issued in 1422 with the usual iconography but with a slight weight increase and larger diameter to compete with the ducat.[29] A much earlier case of monetary competition is documented between Rome and Persepolis: was this at least in part a literary *topos*?[30]

Imitations: Using and Abusing Others' Identities

The iconography of coins was not a protected brand and imitation of successful coins was frequent from Antiquity onwards. Legal imitations revealed the identity of the issuing authority with its name or symbols, and although these coins' weight and fineness may have been inferior to those of the original, they were generally tolerated, or at least nothing could really be done against them. In reality, it was a sensitive topic. Imitations entered into competition with the original coins.[31] Special sensitivity was occasionally documented and these cases offer interesting insight into the sense of "identity". Let us consider Florence and Venice in relation to other State authorities.

In 1350 the mint of Rome issued gold ducats in the name of the Roman Senate but imitating those of Venice. Why the Venetian model and not the

29 The ceremony of the launching of the ships is recorded in detail, along with the contents of their cargo: Sapori, "I primi viaggi di Levante e di Ponente delle galee fiorentine", pp. 9–10; and Tripodi, "Viaggi di ambasciatori tra Firenze e il Cairo nel xv secolo", p. 416.

30 Alram, "Monnayage, prestige et identité".

31 The major concern in case of imitations was the risk of the original coins being hoarded or melted, favouring the circulation of lesser-quality ones according to Gresham's law. Illegal forgeries copied the types of the original coin as closely as possible, and were made by covering a base flan with a gold or silver surface. Counterfeiting was considered a treasonous crime, because the fakes diminished the authority of the power behind the

Florentine? Both gold coins were common in the Papal State. While it is possible that the Florentine merchants in charge of the mint of Rome simply did not like the florin to be imitated (as was actually documented later), the Venice type offered a more suitable iconographic scheme. The image of St Mark offering the staff to the doge could be easily adapted to show St Peter offering the staff to the kneeling senator of Rome, suggesting "the superiority of the spiritual power without showing the senator accepting the symbol of office directly from the pope".[32] We know of no protest from Venice against the Senate of Rome; instead, in 1355 Venice sent a letter accusing the Genoese lord Francesco Gattilusio of producing forgeries of the ducat in his mint of Metelino in the island of Lesbos. (They defined the coins as *apparentia consimilem, immo verius sub ducati Venetiarum communis proprio stigmata* [so similar in appearance, with the symbols typical of the ducat of the commune of Venice].) The Genoese authorities ordered Francesco to stop making his forgeries … but in fact the accusations were false: a recent discovery found a specimen of the ducat of Metelino, of very good fineness, with Francesco's name clearly stated and with his image kneeling in military attire. In July 1355 he had been made lord of the island by the Byzantine emperor John V Palaeologus and therefore had minting rights; he may have produced some anonymous imitations before, but these new ducats were an independent statement of conscious propaganda.[33]

The first imitations of the florin were produced by Pope John XXII (1316–1334) in Pont-de-Sorgues (Comtat Venaissin). He did this in agreement with the commune of Florence, following the original standard of weight and fineness and placing crossed keys and COMES VENESI or SANCT PETRV in the legend around the lily so that the coins could thereby be identified and attributed correctly. As far as we know, Florence did not protest formally and actually sent the necessary weight-samples needed to produce good gold florins. Later

legitimate coins. I will not deal with counterfeiting here but one may consider, for example, the Roman law of A.D. 381 which added to the usual list of capital offences that of "the person practiced in sacrilege who reproduces the sacred countenance and lays impious hands upon the divine features by engraving them on sacred objects." (For this and more examples, see Grierson, "The Roman law of counterfeiting", p. 250.)

32 Day, "Antiquity, Rome and Florence", p. 257. Rome had previously issued briefly a gold coin imitating the florin (*c.*1339–1340) (see ibid., pp. 248–49). The earliest gold *romanini*, dated *c.*1270, had autonomous types bearing the crowned personification of Rome seated on a throne and holding a globe and palm branch, with the legend *Roma Caput Mundi* (Travaini, "Per Philip Grierson").

33 Oberlaender-Târnoveanu, "Immo verius sub ducati Venetiarum communis proprio stigmate".

Giovanni Villani, full of resentment, accused the pope of "disguising" the florin.[34] He reported that in December 1324 Pope John had excommunicated anyone who "counterfeited" the florin of Florence and "corrected others, when he should have corrected himself".[35] Obviously, Villani here represents civic pride, and does not take into account the legal aspects of imitations as opposed to mere forgeries.

In the course of the 14th century many mints in Europe were administered by Italian merchants, including Florentines, and a number of these issued imitations of the florin. However, in 1368 the Florentine mintmaster in Rome wanted to protect his city's coins. That year Pope Urban V returned to Rome from Avignon and introduced monetary reforms;[36] he wanted to produce imitations

34 "Papa Giovanni fece fare in Vignone una nuova moneta d'oro fatta del peso e lega e conio del fiorino d'oro di Firenze sanza altra intransegna, se non che da·lato del giglio diceano le lettere il nome del papa Giovanni; per la qual cosa gli fue messa grande riprensione, a fare dissimulare sì fatta moneta come il fiorino di Firenze" ("Pope John had a new gold coin made in Avignon, of the same weight, fineness, and stamp of the gold florin of Florence, without any other marking except his name written on the side of the lily; and for this reason he was highly criticized for such a deception") (Villani, *Nuova Cronica*, Vol. 8, p. 171). The weight standards arrived from Florence on 15 September 1322 and the production started soon after: Bompaire, "La monnaie de Pont-de-Sorgues dans la première moitié du XIVe siècle", p. 151; and Day, "Antiquity, Rome and Florence", pp. 246–47. Later, more mints imitated the florin but not always at the original fineness.

35 "Nel detto anno e mese di dicembre papa Giovanni fece grandi processi e scomunica contra chiunque facesse battere o battesse fiorini d'oro contrafatti e falsi a la forma di que' di Firenze, però che per molti signori erano fatti falsificare, com'era il marchese di Monferrato e Spinoli di Genova. Ma il papa per sue scomuniche coresse altrui, ma in questa parte non coresse sé medesimo, ché fece fare i fiorini a la lega e conio di quegli di Firenze, e non v'avea altra differenza, se non che dal lato de la 'mpronta di santo Giovanni diceano le lettere: «papa Giovanni», e per intrasegna, di costa al santo Giovanni una mitra papale, e dal lato del giglio diceano le lettere: 'sancto Petro et Pauli' " ("In the month of December of that year Pope John held trials and excommunicated any one found striking counterfeit florins similar to those of Florence, as in fact many lords had produced, such as the Marquis of Monferrato or the Spinola of Genoa. In doing so the pope corrected others, when he should have corrected himself, because he ordered florins minted similar to those of Florence, the only difference being the letters *papa Giovanni* and a papal mitre on the side with saint John, and the letters *sancto Petro et Pauli* on the side with the lily") (Villani, *Nuova Cronica*, Vol. 8, p. 278). I am grateful to Katherine L. Jansen for revising my translations in notes 34 and 35. On the use of florin imitations in Europe, see Spufford, *Money and Its Use*, pp. 319–21, and Day, "Antiquity, Rome and Florence", p. 248. A hoard of 210 gold ducats of Venice and florins of Florence found in Montella (Avellino) and buried *c.*1354 contained also 59 florin imitations from many European mints (Travaini and Broggini, *Il Tesoro di Montella*).

36 He introduced the new *bolognino romano*, and *grossi* of the same types as those of Avignon: Muntoni, *La monete dei Papi e degli Stati pontifici*, vol. 1, p. 30; and Martinori, *Annali della Zecca di Roma*, beginning on p. 5.

of the gold florin, but mintmaster Amario di Pietro de' Gianfigliazzi refused "on the grounds that the Florentine statutes prohibited any Florentine from striking false florins under penalty of death".[37] The pope declared that the papal florins would not be false because they would be not only as fine and good as the originals, but easily distinguished by the *descriptio* (obverse legend) and *intersigna* (privy mark). He petitioned the government in Florence on the matter, but the project failed and the mint continued to produce ducats of Venetian type.

Power and Self-Confidence: Market and Legal Rules

Even a dramatic change of government did not necessarily mean a change in coin iconography. Strong statements were normally first made on other media, such as seals; the new power had to enforce local control before changing the face of coins. The Normans conquered Sicily and took Palermo from the Arabs in 1072, but continued to strike quarter dinars there in Arabic with verses of the Koran and with the new ruler's names transliterated into Arabic.[38] The Crusaders in the Holy Land continued the production of dinars in Arabic, and although they developed individual patterns, they never included their authority or names.[39] The Latin emperors of Constantinople after 1204 also never issued coins in their own names, but only imitated Byzantine ones.[40]

Personal pride had on one hand to comply with the rules of the monetary market and on the other to match the legal status of authority. Many Renaissance lords in Italy had portrait medals produced by artists such as Pisanello or Matteo de' Pasti, but only a few of them would display the same portrait on their coins. King Ferdinand of Naples was the first to do so in 1458–1459, and Duke Francesco Sforza in Milan followed in 1462. Borso d'Este had to wait to strike portrait coins in Ferrara until he was made duke by the pope in 1471; before then he was the Imperial Duke of Modena and Reggio, but only the Marquis of Ferrara and could not strike portrait coins of "ducal" aspect in that city.[41]

37 Day, "Antiquity, Rome and Florence", p. 256.
38 Travaini, *La monetazione nell'Italia normanna*, pp. 109–11.
39 They introduced Christian legends, still in Arabic, only after excommunication in 1250: Metcalf, *Coinage of the Crusades and the Latin East in the Ashmolean Museum Oxford*, pp. 43–51 and 150–51. For this and the Norman coinage, see Travaini, "Imitations and adaptations of Arabic coins in southern Italy, Sicily and the Holy Land".
40 Metcalf, *Coinage*, pp. 228–35.
41 Travaini, *I capelli*, pp. 264–71.

Identity of the User: Reading and Misreading Iconography

Coins did bear the images of the issuing authority and, once in circulation, became a means of identity for those who used them. The same happens even today, when a country can be identified by a flag, a coin, and a football team. Literary evidence of coin images and coins as signs of identity is rare, but some medieval texts and coin-find contexts shed important light on this point.

Pilgrims from all over Europe carried their own current coins to Rome and other shrines. Everyday billon coins of low value normally had a very local circulation and were not accepted at foreign markets, while silver and gold coins could be exchanged for local coins through moneychangers on the way. In spite of this, low-value coins from different countries have been found in ritual contexts. After all, for a pilgrim, a small coin was a cheap and durable object that bore the images of his country and transformed an anonymous offer into a personal one through his or her intentions.[42]

An example of this comes from the excavations of the years 1940–1949 under the altar (*Confessione*) of St Peter's in the Vatican, near the tomb of the saint. A total of around 1,900 coins were found: 812 ancient Roman, 628 Italian, and 460 foreign coins dating from the 8th to the 15th centuries. The foreign ones were from mints in today's France, Germany, Switzerland, Low Countries, Spain, England, Ireland, Scandinavia, the Czech Republic, Latvia, Hungary, and Croatia.[43] At least some of them must have been intentionally brought by pilgrims with the intention of offering a personal token of identity and memory in the form of coins "of their own country". Pilgrims travelled at great risk to reach a shrine and to pray there, asking for a special grace or an indulgence for themselves and their families. The memory of this spiritual and physical experience that brought them closer to God would always remain with them. It would seem quite reasonable to imagine that at the end of their long journey

42 In economics, a payment in coin is defined as "anonymous", unlike a payment through a bill of exchange which was signed. In the case of the ritual offering of a coin specifically selected to identify the pilgrim's provenance, the payment became somehow "invisibly signed": the coin created an invisible tie between the pilgrim and the saint. I thought of this "invisible tie" after watching tourists throwing coins in the Trevi Fountain with the wish to come back to Rome, and I first suggested a comparison with medieval offerings in Travaini, "Saints and sinners", pp. 172–73 (see also Travaini, "Le monete a Fontana di Trevi"). This view is now taken also by Gullbekk, "The church and money in Norway", beginning on p. 237.

43 Data taken from Serafini, "Le monete"; see also Arslan and Alteri, *Le monete*. Among these coins is one gold tremissis of Charles the Great: see Arslan, "Il dono di re Carlo all'apostolo Pietro".

they wanted to touch the shrine of the saint and make that physical contact last by offering something of themselves.[44] Low-value coins proved to be very useful for this purpose, ideal tokens of identity and personal memory to leave behind, attached to the shrine, to a saint's body or icon.[45] The coins thus offered were usually of the type available to all, good for their moral value and for personal memory during a connected prayer (plea) or ex-voto (gratitude).[46] The 1940s find was a perfect confirmation of a statement made by Cardinal Jacopo Stefaneschi on the amount of money offered at the two altars of St Peter's and St Paul's in Rome in the 1300 jubilee:

> Those altars, the most visited in the world, … in this Jubilee year gave us, the one of the Prince [i.e., St Peter] thirty thousand florins, and the one of the Doctor [i.e., St Paul] about twenty one thousand, not made of large donations of gold or silver, but simply in small change of each country.
>
> Quae celeberrima toto terrarum orbe altaria, singulis iamdudum annis, ex peregrinantium oblatis Apostolorum Principis Florinorum auri … afferebant, milia triginta Principis circiter unum et viginti milia Doctoris hoc centesimo repulere, non ex magnis auri vel argenti donis, sed ex usualis monete provintie cuiusque minutis.[47]

For the period between 1382 and 1446 we have another important source on coins as identity in the *Libro del pellegrino* of the Siena State Archives. Pilgrims from all Europe on their way to Rome stopped at Siena, and deposited some of their money into the safe hands of the Ospedale di Santa Maria della Scala, opposite the Duomo, with the intention of withdrawing it on their way back home. These deposits are recorded carefully, together with the name and description of each pilgrim and his or her provenance: gold and silver coins were identified and described precisely, but coins of small value were simply recorded as "coins of his/her country" (*monete di suo paese*), the same sort of coins often offered by pilgrims at shrines.[48]

44 Offerings from antiquity included anatomical votives in the shape of parts of the body for which healing was requested.

45 Travaini, "Saints and sinners", pp. 172–74; Travaini, "Saints, sinners and … a cow", pp. 215–16.

46 As note 45; Travaini, *Il lato buono delle monete*, beginning on p. 19; and Travaini, "La moneta in viaggio", pp. 91–94.

47 Frugoni, "Il giubileo di Bonifacio VIII", p. 123; Travaini, "Saints and sinners", p. 174; Travaini, "Saints, sinners and …a cow", p. 217. Stefaneschi had a relevant position in the Papal Curia and his words can be trusted.

48 Travaini, "La moneta in viaggio", pp. 91–94. Relevant evidence for this is related to Assisi and Rimini in the late 14th century, including the 1400 jubilee: Pigozzo, "I denari dei pellegrini", pp. 743–53.

Pilgrims could be very determined in their desire to leave a trace of themselves at the shrine by inserting coins in statues or reliquaries.[49] When the tomb of St Catervius in the Duomo of Tolentino was surveyed in 1750 many such coins were found, as well as belts and rosaries representing personal tokens. The tomb was in a Roman sarcophagus with a heavy lid sealed with plaster, but devout people "entered" the sacred space by breaking it open to insert their offering so that it could touch the sacred body.[50]

As symbols of richness and devil's tools, coins could be dangerous to the soul, but they could also aid in transactions between man and God via almsgiving, offerings, and the like.[51] No doubt there were greedy priests requesting a penny from pilgrims as an offering to the church; but I am also sure that in most cases the coin was offered with devotion, as a physical touch or a personal contact to the saint: the offering was a sacred act, a gift to God, with a special intention of gratitude or plea.[52]

Once more mints became active in Europe and the volume and variety of coins in circulation had increased in the late Middle Ages, the link between

49 A Swedish bracteate of Magnus Eriksson (1319–1363) was found hidden in the hands of the statue of Saint Olaf in the Church of Lunner in Oppland: Skaare, "Universitets Myntkabinett". The bust reliquary of St James the Minor in Santiago de Compostela was made in 1332 and until 1388 was positioned so that devout pilgrims could touch it; during restorations, silver coins were found inserted in it from Castile, León, Navarre, England, and the Low Countries, as well as a bracteate of Schleswig, which were interpreted as pilgrims' offerings (Suárez Otero, "Arqueologia y peregrinación"; and Travaini, "Valori e disvalori simbolici delle monete", p. 35).

50 We must distinguish between coins offered over a long period of time at shrines or accessible saints' graves, and coins offered at the moment of an official survey by those responsible: the intention of the two groups was different. For the tomb in Tolentino, see Alteri, "Le monete dal sarcofago di Catervio" and Travaini, "Saints and sinners", p. 172.

51 For this topic, and the medieval *exempla*, see Bremond, Le Goff, and Schmitt, *L'"Exemplum"*; Thompson, *Motif-Index of Folk Literature*; and Travaini, "Saints and sinners", pp. 176–77. Also, the Charon's obol of classical tradition was a low-value coin, a symbol that death makes rich and poor equal. This perhaps explains why coins in Christian graves from the 12th century onwards were more commonly low-value coins: these were affordable to all. The use of placing a coin in the mouth in medieval graves is limited generally to former Byzantine territories; for evidence from southeastern Europe, see the bibliography in Travaini, "Saints, sinners and …a cow", p. 214 n. 15, including also the exceptional evidence in the Salento with 14th-century graves belonging to communities of Albanian origin (Arthur, "Le monete").

52 The coins we find today in the excavation of a shrine may all be similar; however, some of them may have been charged with the ideal traces of the pilgrim's special devotion and intention, while others may have been offered by pilgrims just because they had to. An English Protestant traveller to Loreto in 1594, disguised as a Catholic, challenged the tradition of coin-offering at the altar, mocking the idolatry of saints. Instead of offering

one's coin and country and oneself became stronger and easier, and also the number of offerings increased.

The conflicting aspects of coins – bad and good according to circumstances and points of view – are somehow magnified when studying Saint Francis of Assisi. Saint Francis wanted to protect his friars from the "contamination" of money, and in the *Regola bollata* of 1223 he prohibited the friars from accepting *denarios aut pecuniam*, i.e., coins and money in all forms. Still, coins were found in the saint's grave in the survey of 1818. The explanation given by the experts in charge of the survey was that coins had been inserted by those who buried the saint *ad indicandum tempus*, i.e., as a chronological token or memory of their own time. I believe this was correct.[53] Saints' graves were the object of surveys and relocations from one part of a church to another. Also, saints' bodies could be dismembered in order to offer parts to new churches, or their graves inspected either to make sure that no parts had been taken or that it was really the original and not that of an impostor. This is, in my opinion, the reason why coins were deposited in saints' graves, including that of St Francis of Assisi, who had forbidden the friars to accept them even as alms.

The grave of St Geminiano in Modena's cathedral is particularly interesting. The saint was a bishop of Modena who died in 397. A basilica *ad corpus* was built on his grave, which was surveyed three times: in 1109, 1184, and 1955, when 72 coins and two silver crosses found with the bones could be attributed to the previous surveys.[54] In 1109 the sarcophagus had to be moved to a new location in the newly built church we see today. A survey of the body was undertaken in the presence of Countess Matilda of Canossa and the bishop: 19 denarii can be dated to this time, and the two silver crosses are to be considered parts of those which decorated the *pallium* offered by Matilda, documented with other gifts.[55] In 1184 there was a second survey in the presence of Pope Lucius

one coin, he took away some from "that Idoll" (Moryson, *An Itinerary*, Vol. 1, p. 217). For the moral quality of coins being offered, with examples ranging from 1171 Dublin to 1619 Persia, see Travaini, "Saints, sinners and …a cow", pp. 216–17.

53 For the *Regola Bollata*, see Merlo, "Francesco d'Assisi e il denaro". For the grave and the interpretation of coins as chronological signs: Travaini, "Saints and sinners", pp. 171–72 and Travaini, "Valori e disvalori", p. 31. According to Saccocci ("Un piccolo ripostiglio", p. 64), coins in saints' graves were offered as signs not of memory but of gratitude and a kind of tithe, as part of the coins offered to the altar. I still favour, however, the memory element, which has become more apparent in the course of my research.

54 For the grave in Modena: Missere Fontana and Travaini, *Monete medievali e materiali nella tomba di San Geminiano di Modena*, pp. 35–57.

55 One similar cross was found in the hoard of Alife (Travaini, "La crocetta d'argento"). I have recently identified a mould used to produce such crosses in the Holy Land: see Rozenberg, *Knights of the Holy Land*, p. 240.

III, who consecrated the new cathedral: fifty-three coins can be dated to this time. I believe that coins were used to indicate the time of these events. More evidence for such interpretation comes from the 1993 survey of the tomb of St Regolo in the Cathedral of Lucca. Previous surveys had taken place in the late 12th century, 1457, and 1658, and while the two later events were "signed" by placing a written record specifying the date and the name of the saint, the medieval one was recorded by leaving in the tomb 18 denarii in a cylindrical lead box, so that the coins were made into a close object by itself.[56]

Privileged graves were often identified by their prominent location and, inside, by explicit signs of identity such as inscribed lead plaques, especially widespread for kings or bishops in the 11th and 12th centuries.[57] Philip Grierson, when trying to identify the tombs and obits of the Byzantine emperors, noted that in Antiquity the likelihood of a sarcophagus bearing a mark of identity "is in inverse proportion to the importance of its occupant; only a sovereign would take it for granted that his tomb would be generally recognized".[58] For memory preserved inside a grave, compare the case of Emperor Lothar III (1125–1137) as recorded in the chronicle of Otto of Freising ("so that they could never be forgotten, the emperor's deeds were inscribed on sheets of lead and buried with him").[59]

Occasionally, coins could also have served the purpose of personal memory, as in the case of the grave of Albert the Bear, margrave of Brandenburg (1124–1170), whose sarcophagus lies beside that of his wife Sophie (d. 1160) in the monastery of Ballenstedt. The coin found in his tomb was a bracteate which carried the image of the standing margrave and his wife, issued in *c.*1155–1160.[60] Albert issued many different coin types from 1134, mainly

56 Macripò, "Un rinvenimento di monete", pp. 33–36.

57 See, for example, those found in the graves of Emperor Conrad II (1024–1039) and Empress Gisela (d. 1043) in Speyer Cathedral, or of Provost Humbert (d. 1086) in Maastricht: Waurick, *Das Reich der Salier*, pp. 289–90 and 339–41; lead Anglo-Saxon inscribed plates are listed in Okasha, "A third supplement to *Hand-List of Anglo-Saxon Non-Runic Inscriptions*".

58 Grierson, "The tombs and obits of the Byzantine emperors", p. 9 n. 35.

59 I quote from Morrison, *History as a Visual Art in the Twelfth-Century Renaissance*, p. 214. The original reads: … *honorifice sepelitur,* [*actusque eius, ut nulla possent aboleri oblivione, in plumbeis laminis descripti iuxta eum reconduntur*]. According to the editor (but not noted by Morrison), the words in square brackets were added in the 13th century: cf. Otto of Freising, *Ottonis Episcopi Frisingensis chronica*, p. 340. The passage about the lead plaque may have been added at that time, but the plaque found in the tomb was presumably deposited at the time of the original burial. See Travaini, "Saints, sinners and … a cow", pp. 212–13 and Travaini, "Saints and sinners", p. 169.

60 Röder, "Über den im grabe Albrechts"; and Bahrfeldt, *Münzwesen der Mark Brandenburg*, p. 79, pl. I, no. 20.

bracteates, but only one showed him together with his wife and this was the very type that was chosen to accompany them in their grave. Whoever was responsible must have understood the relevance of the iconography to the context of this burial. The bracteate depicts a human relationship which continued in the afterlife.

Ordinary people were also occasionally buried with coins, but it is difficult to interpret their meaning as offerings, magic, or *pars pro toto*, standing in for other property. I would also suggest the possibility of personal memory, a token from the living to the dead. We will never know for sure.[61]

Some funeral rituals involving coins might have been considered improper for a Christian, but it is not easy to distinguish neatly between pagan and Christian behaviour, or between a good and a bad gesture, and it is indeed possible that the same gesture could be both pagan and Christian, or good and bad according to circumstances and intention. One coin in an ordinary grave as a rite of passage can be seen as the continuation of a pagan tradition, and we have written evidence of the Church's prohibiting such use, but the practice obviously did occasionally persist: St Augustine insisted that funeral offerings, meals, and celebrations should be abolished, yet they remained in use.[62]

Let us now investigate the idea of memory more closely. Placing coins in a saint's grave was most likely due to the need of chronological memory, the desire to create a certificate of time. Placing coins in the foundation of buildings was in part a propitiatory act, an offering to God, but also a sign of memory, varying according to time and context.[63] In 14th-century Italy foundation rituals started to involve purpose-made medals (Padua), but coins still remained

61 For the hypothesis of offers as *pars pro toto*, see Grinder-Hansen, "Charon's fee in ancient Greece?". For bibliography on coins in graves, see Travaini, "Saints and sinners", pp. 100–1. Hoards or bags of coins in graves ("dead man's treasure") may have been deposited voluntarily, but may have simply been left with a body untouched, e.g., in case of plagues: see ibid, pp. 177–79, corrected in Travaini, "Saints, sinners and …a cow", pp. 213–15; Saccocci, "Un piccolo ripostiglio", pp. 63–64.

62 Boureau, "A royal funeral of 1498", p. 61. In 16th-century Lombardy documents inform us that a black hen was the fee to be paid to Saint Peter, replacing the obol to Charon: Travaini, "Valori e disvalori", p. 39. For more material and discussion of ritual uses of coins in various contexts, see Travaini, *Santi, peccatori, un vitello e Giuda*.

63 According to an anonymous 14th-century chronicler, many coins were deposited in the foundation of the Torre del Mangia in Siena in 1325 "for memory of the tower" (*alquanta moneta per memoria di detta torre*: *Cronache senesi*, pp. 129–30). This is so far the only medieval written evidence on such intention, but see below for one in 1460. For foundation offerings from antiquity to the Middle Ages, see Travaini, "Saints and sinners", p. 175; and Travaini, "Saints, sinners and … a cow", pp. 218–21. (The "cow"–actually a calf–with a

in use for this purpose for some time.[64] I will not touch on this topic in detail, but wish to highlight the foundation ceremony planned by the Florentine architect Antonio Averlino, known as Filarete, for Francesco Sforza's new city of Sforzinda as written by him in the "trattato di architettura" of 1460, in the form of a dialogue between himself and the *signore*. The architect explains that the ceremony of the laying of the first stone will include the presence of notable people and religious authorities, musicians, the lord's sons, and the architect himself. They will lay a marble stone inscribed with the year and the names of the *signore*, the bishop, and the architect, on top of which will be a marble chest containing a bronze book listing all notable things of their time and of the men who achieved them, and also many medals of important men (*molte effigie d'huomini degni*); it will also contain stone vases full of millet, wheat, water, wine, milk, oil, and honey. When the *signore* asks the reason for all this, Filarete replies that human things have an end, so when the time comes, their things will be found and they too will be remembered, just as they remember earlier generations when looking at antiquities found by excavation or by cause of ruin.[65]

Mistaken Identity

People were used to their everyday coins and identified with them, but at the same time they could find some special interest in the occasional foreign or ancient coin they might come across. There is still a lot to investigate in medieval coin iconography and how it was perceived by the public, but as I started to extend my research to include iconography I had to reconsider many coins and

Milanese *denaro* of Frederick II in its mouth, was discovered in a mid-15th-century foundation context in a church at Caronno Pertusella, Varese: details and bibliography Ibid., pp. 220–21). Coins were also found hidden in a sealed niche under the floor of the small church of San Damiano in Assisi, rebuilt by Saint Francis in 1205. Saccocci, " 'Le monete", considers these coins as a personal "ex-voto" offering by the saint, but I believe they were intended as a form of foundation deposit according to an existing tradition; also, it has been observed that the hagiographic episodes of his restoration of the small churches of San Damiano and Santa Maria della Porziuncola have more of a symbolic value than a realistic one, and therefore the saint can hardly be imagined as the material builder (Travaini, "Valori e disvalori", p. 44; and Travaini, "Saints, sinners and …a cow", p. 219). For a debate on the interpretation of medieval foundation offerings in Italy, see the bibliography in Travaini, "Saints, sinners and …a cow", p. 220 n. 36 and a synthesis in Bernardelli, "In defossis locis", p. 383.

64 For medals in building foundations, see Schraven, "Out of sight, yet still in place".

65 Filarete, *Trattato di Architettura*, pp. 102–6.

take a closer look at how medieval people of various social statuses could have understood, or misunderstood, coin images in often-unexpected ways. I will give here one example.

The latest Byzantine gold coins recorded in Italian finds so far are three histamena of the same class, bearing on one side the bearded Basil II (976–1025) holding a cross, together with his son, Constantine VIII. Each of these coins was found as a single specimen in one of three hoards:[66] 1) the Ordona hoard, from northern Apulia, deposited after *c.*1025, consisting of 147 taris of Salerno and one histamenon;[67] 2) the Rome (Torre delle Milizie) hoard, deposited *c.*1185, containing billon denari of Lucca, Pavia, and Provins in Champagne as well as one histamenon; and 3) the Pisa (Logge dei Banchi) hoard, deposited *c.*1266, which consisted of 119 Sicilian Hohenstaufen taris, 16 augustales and one half-augustalis of Frederick II, 91 gold florins of Florence, one gold grosso of Lucca, and one histamenon.

Before working on coin iconography in detail, I thought that the single Byzantine coins were hoarded for their monetary value, but now I believe they were hoarded as devotional icons. We can identify them with the s*antalene d'oro* from Italian coin lists dated *c.*1280–1315 and contained in Italian merchant and arithmetical books; they are not mentioned in later lists. The word "santalena" can only refer to St Helena, implying a female holding a cross, and possibly some connection with Constantine, on Byzantine coins. So I went back to the three hoards, thinking that each single histamenon of Basil II and Constantine VIII was hoarded as an icon of St Helena and Constantine, long past the time when they could have been hoarded for their monetary value: the bearded Basil II was "read" by medieval Italians as Constantine the Great, and the beardless young Constantine VIII was perhaps "read" as St Helena.[68]

66 For the type, see Grierson, *Catalogue*, Vol. 3, Part 2, p. 621; for the three hoards, Travaini, "Les frontières de l'éternité?".

67 The *taris* in the Ordona hoard, attributed to both Salerno and Amalfi in Grierson and Travaini, *MEC* 14, p. 419, must now be attributed to Salerno only: see Travaini, *La monetazione nell'Italia normanna*, p. 3*.

68 For details on this interpretation, see Travaini, "Les frontières"; in the 16th century any Byzantine coin bearing a cross would be perceived as a "medal of St Helena", and this was the case for the coins of the Lateran hoard found in 1586, which gave origin to the numismatic papal bull of 1587 (text and comments Ibid., pp. 173–83). Byzantine coins–especially those with two figures, either of the type with two rulers or the one showing the Virgin crowning or blessing the emperor, interpreted as Constantine and Helena–are the most common among those found in collections, often pierced or reproduced in bronze as devotional medals: see Morrisson and Bendall, "Byzantine 'medals' "; also Travaini, "Coins, images, identity, and interpretations".

Conclusion: Coins as Proof of Identity

We have seen the coins at the heart of the State, from the moment of their creation to the orders passed on to the mints. We have seen how mints could provide the means for the transmission of ideas and power. We have seen how people used and identified with their everyday coins, and how coins became means of transactions between man and God. But there is more to say.

Coins were many, and of many mints, with different details and sizes and metals, each unique in itself. This is why they were, extraordinarily, used as tokens of identity and security at the gates of the cities of Parma and Reggio Emilia and the fortresses in their territories. In 1409 Uguccione Contrari, commander of the army of the Marquis of Ferrara Niccolò III of Este, had recently taken the two cities and the surrounding area, but they were still under threat of further attack. He devised a system of *signa* whereby at each gate a particular coin had to be shown to the guards in order to enter. A total of 30 coins for 30 gates are listed with great detail: possibly there were two specimens for each gate (one for the gatekeeper and one for the person to be admitted), or else one specimen was in the hands of the person to be admitted and the keepers had with them a detailed description or a reproduction.[69]

Coins can thus interconnect the strings of many different fields of research, offering us endless surprises, from the very practical need of security to the less palpable traces of emotions.

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