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## ART AND REPRESENTATION

## The Powerful and Pragmatic Faces of Medieval Coinage

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## Introduction

A persistent trope in numismatic literature and exhibitions is that coins are art. It is seen, perhaps, as a way of making these small objects more engaging or of asserting their equivalence with other works found in galleries. It is perhaps also a projection onto the Middle Ages of the phenomenon developed in the fifteenth century of the decorative medal as a form of artistic expression. The idea of medieval coins as art, however, faces a twofold problem. First, the concept of "art" in the Middle Ages is contested by historians of visual and material culture because although objects might have been beautifully made in the Middle Ages this was always secondary to and in service of another (non-aesthetic) primary purpose. The concepts of beauty as its own purpose and the artist as individual were absent (Berger 1972; Belting 1994; Kessler 2004). Second, while many medieval coins are attractive and enticing to modern eyes, others challenge even the most culturally relativist viewer to assert with confidence that these objects were created to be admired for their beauty. They were all, however certainly intended to be tools of representation. Indeed, representation is integral to the identity of a coin. Without designs marking it apart, a lump of metal is not a coin; it is simply a lump of metal, or perhaps an ingot. Marking a coin with a representation to make it recognizable theoretically simplifies transactions, as people are able simply to exchange coins in specified amounts rather than having to test the purity and weight of metal themselves or pay somebody else to do so (Kroll 2012: 39-40). In the medieval world this did not always work perfectly in practice, as some examples in this chapter will demonstrate, and the rationale for issuing coins in the Middle Ages was not necessarily exclusively to facilitate transactions. Nevertheless, the aims and
consequences of representation are in all cases fundamental to understanding the role of money in the Middle Ages.

Consequently this chapter focuses not on coins as art but on the interactions which made representation on a medieval coin possible and meaningful. These interactions are usually discussed in terms of the connection between the authority which caused a coin to be made and the intended audience for its use, as a top-down communication, which only rarely extended into a visible dialogue, for example when an intended audience rejected a coin or a contemporary commentator mentioned some change in design. This dialogue is explicit in the documentary record of, for example, King James I of Catalonia-Aragon (r. 1213-76), under whom a council of merchants in Barcelona was given authority to negotiate with the king about coin production (Crusafont et al. 2013: 51). The process is visible, even if the details are not, in the account of the so-called Maronite chronicle compiled in Syria in the seventh century which records that in $c .661$ the Muslim ruler Mu'awiya, in territories populated mainly by Christians, "minted gold and silver, but it was not accepted because it had no cross on it" (Palmer 1993: 32). Such interpretation is, however, implicitly grounded in the idea of coins as art (or perhaps propaganda - also a problematic term in medieval contexts since it is closely associated with modern ideas about the conscious aim and capacity of states to influence directly and totally the political consciousness of their subjects), in which the authority becomes the artist and minute details or changes in coin design have been read as sensitive barometers revealing the personal feelings and political preferences of kings and emperors (e.g. Fü̈eg 2007: 16; Treadwell 2009: 369; Kotsis 2012). A medieval coin, though, was fundamentally an object of use, created to mediate a range of social contexts, from paying taxes and armies, or engaging in commerce, to giving religious donations, or distributing imperial largesse. Its uses thus all required an audience which both understood and accepted the social role played by that coin.

Consequently, this chapter begins with the intended audience, examining the ways in which people in the Middle Ages encountered coins and what this tells us about the capacity for
representation on coins to communicate within, and to create, shared visual contexts. Only then does it turn to the authority, examining how and why issuers of coins decided to situate their representational choices on a spectrum between conservatism and innovation. These choices, however, were not usually enacted by the authorities who ordered coins to be made. The oftenoverlooked role played by makers of medieval money is considered as a separate and vital component in representation and visual communication. Finally, this chapter turns to unintended audiences. Medieval money travelled, as money has always done, and representation on coins influenced visual culture far beyond the spaces controlled by its issuing authority. Differences in the responses of unintended and intended audiences to medieval money bring us closer to understanding complex landscapes of visual familiarity and foreignness, both during the Middle Ages, as coins traversed space and time, and in the present, where the ultimate unintended audience - the modern viewer, collector, scholar or curator - responds to representation on medieval coins, but also generates new understandings of it.

When this chapter talks about representation it takes in all of the intentional visual symbols placed on coins by their makers. It includes human images and other complex designs of animals, buildings or abstract patterns. It also includes smaller, simpler representations, which might be part of these complex images or which might appear beside them. Some of these formed part of the wider visual culture of the coin's intended audience, such as crosses on coinages issues by Christian polities. Crosses could be encountered in multiple contexts, such as in wall paintings, manuscripts and sculpture, and were probably immediately familiar to most of their viewers. Other images and marks had more esoteric and specific meanings which may have been irrelevant or unknown to many users of these coins, such as mint marks. Other marks, though useful to numismatists today for identifying and seriating coins, are still not always understood and may have had specific meaning or have been purely decorative, such as stars or dots (often termed "pellets") around the main design. Representation on coins can also refer to text in the form of inscriptions making political statements, proclaiming titles and religious views, or naming the maker, the mint or the
value or denomination of the coin. The balance of image and word itself became an issue of political representation in the Middle Ages, discussed below.

## The Intended Audience

The starting assumption with every coin series is that its intended audience consisted of the people subject to the authority issuing it, but this already subsumes a range of complex questions, from the uses people intended to make of coins, to the status and social roles of those people. Beginning with the use people intended to make of a coin, to ask whether coinages in the early Middle Ages were primarily used for fiscal purposes (for the payment of employees by the state and of taxation to the state) or whether they were primarily market coinages, designed for buying and selling commercially, is a simplification, but the crux of a long-standing and still fundamental debate (Grierson 1959; Hendy 1985; Banaji 2001; Metcalf 2006). It also provokes important considerations about how the context in which a coin was received or relinquished might have affected reactions to its representation. While both rich and poor may have been intended audiences for medieval coins, at least in some states, it is also likely that their experiences of coinage would have been very different. Peter Sarris has emphasized, for example, that when the emperor Anastasius I (r. 491-527) reformed Roman base-metal coinage, he was lauded by elite writers for enriching the treasury and reviled by non-elite commentators because these reforms reduced the buying power of the low-value coinage on which the urban poor relied (Sarris 2006: 200-1). By the later Middle Ages, significant commercial and fiscal roles for coinage are both visible but that in no way obviates the question of how each individual encountered a coin (Spufford 1988). Some coins, moreover, appear to have been created for audiences outside their issuing society, for export or payment of tribute, raising further questions about the possible dialogue between creator and intended audience. As in the case of much medieval evidence, however, the responses of elites are usually more visible to us.

A finely wrought gold armband (fig. 1 below), probably made in the mid-seventh century and now in the Dumbarton Oaks Museum, Washington D.C., features five gold coins set into a decorative panel and hints at such elite responses (Ross 2005 (1965): 44-6, BZ.1938.64M, available online: http://museum.doaks.org/Obj27448?sid=6582\&x=54346\&port=2607). It was probably made in Constantinople, the capital of the state which is known in modern scholarship as the Byzantine Empire, but which considered itself to be the unbroken continuation of the Roman Empire. The armband has been dated to the seventh century on the basis that the coins set into it are of the emperors Maurice Tiberius (r. 582-602), Phocas (r. 602-610) and Heraclius (r. 610-41). It is, of course, possible that it could have been made at any time later, but if so one might expect coins of later emperors to have been included. Other stylistic features of the armband itself also match other specimens of seventh-century Byzantine gold work. The lavishness of the object makes it likely that the wearer would have been an attendant in some capacity at the imperial court; bearing this in mind, the choice of coins even for a mid-seventh-century date, is perplexing. All five coins are set into frames of beaded gold with the imperial portraits facing outwards when worn. In the middle of the five coins is a solidus (the highest gold denomination, also known in Greek as a nomisma) of the emperor Phocas. It is surrounded by four lower denomination gold coins, of Maurice, Phocas and Heraclius. This is curious because Heraclius came to power by deposing Phocas in a violent coup.

Figure 1: A Byzantine armband with framed gold coins, probably made in Constantinople in the seventh century. © Dumbarton Oaks, Byzantine collection, Washington, DC, BZ.1938.64.

Phocas had himself deposed Maurice in 602 in a bloody rebellion which sparked renewed warfare with the Sasanian Persian Empire, the eastern neighbour of the Byzantine state. While the accuracy of accounts which all post-date Phocas's death is hard to judge, he is reviled in surviving sources as an unstable, bloodthirsty nepotist who almost destroyed the state (Turtledove 1982: 1-3). Assuming, therefore, that the armband was made for an attendee at the court of Heraclius, an image
of Phocas in its centre might be interpreted as either a dramatic and possibly dangerous political statement, or an act of extremely ill-judged carelessness. That is, however, only if one assumed that anybody would have noticed or cared. While it is tempting to construct political conspiracies, the presentation of these coins raises the question of what their purpose may have been in this particular visual setting. The mixture of recent, good-quality and unworn, but not necessarily brand new coins suggests that for the jeweller, and therefore probably the commissioner of this piece, the coins were decorative items, displaying status and access to resources. They represented wealth and were perhaps fashionable within a wider symbolic language of dress in toto, of which coins were recognizable but not closely scrutinized components. A late sixth or early seventh-century Byzantine marriage belt or necklace (Fig. 2), also in the Dumbarton Oaks collection, and made of twenty-three coin-like circles of metal strung together suggests the visual impression which small round, stamped golden shapes were meant to create (Ross 2005 [1965]: 37-9, BZ.1937.33, available online: $\underline{\text { http://museum.doaks.org/Obj27445?sid=6582\&x=3690\&port=2607). Thus one of }}$ the core intended audiences for Byzantine gold coinage, the elite of the imperial court - the regular recipients of wages and largesse from the emperor, as discussed below - exhibited in these two objects an understanding that gold coins represented recognizable units of value, but this understanding also transcended any particular representation on an individual coin.

Figure 2: An early Byzantine marriage belt or necklace with round, coin-like medallions, probably made in Constantinople at an unknown date. © Dumbarton Oaks, Byzantine collection, Washington, DC, BZ.1937.33.

Coins used as jewellery or in dress provide a valuable reminder that representation using coins in the Middle Ages was not just a matter of the designs imprinted upon them. Coins were routinely used in spectacles of imperial generosity, and indeed, subjects of the empire expected to receive not just material enrichment but also public recognition and confirmation of status by this means. Liutprand of Cremona, a western diplomat travelling to Constantinople in the mid-tenth century, graphically described Byzantine court officials receiving from the emperor large sums of
money, carefully graded from huge bags laid "on [the recipient's] shoulders, and not into [his] hands", to smaller ones not received directly from the emperor but from his chamberlain, in an annual ceremony held before Easter (Squatriti 2007: 200-2). Liutprand's record of a table "fifteen feet long and six feet broad" being placed at the front of the court, with bags of money labelled with their value placed upon it and then disbursed, "each one receiving a sum proportionate to his office," makes clear the element of spectacle and the affirmation of social hierarchy involved. Coins were also presented at imperial wedding ceremonies and diplomatic visits (Hendy 1985: 269-72). Spectacle, therefore, could play a vital role in the interactions between audiences and money in the Middle Ages, and was not restricted to the Byzantine world. The Life of the Merovingian saint Eligius (c. 558-660) makes reference to Eligius earning the favour of the king, who "turned over to him a huge heap of gold and silver and gems without even weighing them". The reference to heaping up the gold and gems, closely followed by reference to jealousy among other courtiers strongly suggests another context of public reward, simultaneously signifying status, and thus also the participation of the intended audience in this representation of power through wealth (McNamara 2001: 143-4).

If these examples provide a warning not to assume that coins were always read by their intended audiences primarily as vehicles for imagery, they should not imply that intended audiences never responded to the depictions stamped onto coinage. A remarkable Carolingian manuscript (Sankt Gallen Stiftbibliothek MS 731) produced in the monastery of Regensburg, features an image alongside the text of a law code of a denarius or denier of the king, later emperor, Charlemagne (r. 768-814) (Garipzanov 2016). The image is unusual in using the power of the idea of a coin, on which the inscription Karolus Rex (King Charles) is prominently visible, to convey the authority of the king himself. It is also a very detailed and accurate rendition of a coin type which had only recently been introduced, and suggests that for at least one member of the intended audience the visual language of this coin, which proclaimed the king's status in a highly Romanising fashion, using Latin and a monogram form which had been employed in Roman architecture and on coinage
for centuries, had very much the effect intended by the issuing authority. It communicated the power and above all the legitimacy of the king to act as an endorsement of law and order within a Roman tradition. In the context of debates about the nature of Carolingian government, this image is of particular value. Despite the undoubted military power of the Carolingians, the administration of the realm may have been quite light-touch, with governance consisting of repeated acts of participation by largely autonomous magnates who chose to consider themselves part of the empire for the sake of mainly symbolic benefit and unity. The Carolingian Empire was certainly a realm made up of a variety of different peoples, many of whom continued to use their own laws, language and customs. That they now did so under the aegis of the king, who was militarily powerful but not necessarily unchallengeably so, hints at the importance of shared symbolic languages, visual codes and accepted narratives of authority which could make everyday difference coexist with a sense of broad-scale inclusion. Codex Sangallensis 731 offers just a hint at how monetary representation might have played a role in the dialogue which made this possible.

The Byzantine armband and Codex Sangallensis 731 illustration provide opposite audience reactions to representation on coins, from apparent indifference to detailed examination, but a vast space lay between them in the Middle Ages, which again sometimes emerges in our sources. Francesco Balducci Pegolotti was a fourteenth-century Italian merchant to whom a guide has been attributed to European and especially Mediterranean trade. This includes a list of coins which merchants might encounter. It is an invaluable insight into trading practices and responses to coin imagery in a world in which states issued competing and complementary currencies, and in whcih merchants were accustomed to using fluctuating coin values to turn a profit. The most commonly used coins are not described at all, except in terms of their weight and fineness. More unusual coins receive a few lines of description. One example refers to imitations by Latin rulers in the eastern Mediterranean of coins of John III Vatatzes (r. 1222-54) of the Empire of Thessaloniki. The type was based on traditional Byzantine coin design and featured imagery which might be considered familiar within a Christian Mediterranean context. On the obverse sits Christ, enthroned, with a halo
behind his head containing the mark of the cross. On the reverse, in a slightly more distinctively Byzantine image, the Virgin Mary crowns John III Vatatzes, clothed in Byzantine imperial garb, with abbreviated Greek legends visible to either side (Fig. 3).

Figure 3: Latin imitation of a gold hyperperon of John III Vatatzes, probably minted in Constantinople, 4.62g. Photograph courtesy of Barber Institute of Fine Arts (B6088).

Pegolotti is pragmatic and concise. The coin, he says, may be recognized because on one side it has two figures. One holds a pestle which hangs down between them. On the other side there is a single figure. Above the cross are some small shapes. These are then drawn in the manuscript, and the author remarks that the quality of gold is worse when the coin carries some of these signs in comparison to the others (Evans 1936: 288; Leonard Jr 2008: 81). There is, in other words, throughout the text and in this example, a consistent and total lack of interest in what these figures were meant to represent, even when they had been observed quite closely by the author. The appearance of the coin in this context was a key to its identification and thus its value, and denoted to the author's mind only exchangeability.

## The Authority

The coin described by Pegolotti provides some insight into the choices available to the authority issuing coins as well as to audience responses. Why were Latin rulers, who in the first half of the thirteenth century controlled the Byzantine Empire from Constantinople, nonetheless issuing copies of coins produced by a ruler in Thessaloniki, who was himself copying earlier Byzantine styles in order to project his claim to be the legitimate, if exiled, emperor of Byzantium? Representation on medieval coinage is often described as highly conservative, or less generously as repetitive and unimaginative, but there were important premiums attached to continuity and consistency for any issuing authority. This authority need not be a state, but in the medieval world usually was. Early

Anglo-Saxon and Frisian pennies, also termed sceattas in the numismatic literature, may constitute an exception, with current research suggesting that they were produced by merchants who collectively agreed on their fineness and value for mutual convenience (Naismith 2012: 143-4). For the most part, though, money was a creation of states and so, officially, a product of the head of that state. This was frequently denoted by the name of the ruler appearing on coins, often alongside a depiction either of the person or a symbol of their authority. In all cases though, the primary aim of the issuing authority in producing coinage was that the coin be usable, for whatever purpose they required. Usually this seems to have been a mixture of commercial and fiscal payments, and so coinage had to acceptable to the employees of the state who were paid in it, and to traders wishing to do business with it. It also usually had to be recognizable as the medium by which people returned payments to the state, most obviously through taxation. From this perspective, changing the appearance of coins as little as possible from one issuer to the next within the same system made sense. It preserved familiarity, trust, and therefore usability. As a head of state, placing one's own name on coins which resembled those of previous rulers also seems to have legitimized the most recent ruler by situating him, or more rarely her, in an unbroken line of continuity from earlier rulers (Naismith 2012: 47-68). The speed with which usurpers, rebels and even legitimate but short-lived rulers produced coins in the medieval world suggests that the ability to produce recognized and accepted coinage was a vital demonstration of political viability, which in most cases seems to have mitigated against innovation. Thus, while changes in design offer the clearest indication of the aims and representational strategies of issuing authorities, conservatism was itself a potentially conscious and effective mode of visual communication. In the example of the Latin imitation of Vatatzes, discussed above, both issuing authorities - the Latin emperors of Constantinople, and John of Thessaloniki - made use of continuity and conservatism as statements of political ambition in extremely unstable times.

Another period of instability, marked by innovation rather than conservatism occurred in the seventh century. This chapter has already touched on the difficulties faced by a succession of

Byzantine emperors from Maurice to Heraclius at the turn of the seventh century. From 610, when Heraclius was crowned emperor, war with Persia was followed by the emergence of the first armies fighting in the name of the Prophet Muhammad from the Arabian Peninsula. 629 witnessed both the final and definitive conclusion of the Byzantine-Persian war, with Heraclius winning an improbable and hard-fought victory, and the first incursions of armies from Arabia into Syria. Heraclius did not live to see this new power stabilize as the first Islamic Caliphate, but did witness the fall of the Sasanian Persian Empire before it and the loss of almost all Byzantine territory in North Africa, Egypt and the Levant. By the 690s the Umayyad Caliphate had changed the shape of the Mediterranean and established Muslim rule over most of the Middle and Near East and the southern shores of the Mediterranean (Kennedy 2004). The coins of Heraclius, his grandson Constans II (r. 641-68) and the Umayyad Caliph Abd al-Malik (r. 685-705) reveal particular uses of representation on money as a means for issuing authorities to communicate with their subjects, in a century for which narrative historical sources are extremely thin.

Figure 4: Byzantine silver hexagram of Heraclius, Constantinople, 6.47g. Photograph courtesy of Barber Institute of Fine Arts (B3057).

Figure 4 depicts a hexagram of Heraclius, a coin which demonstrates the use of both innovation and continuity. It communicates a very precise set of messages and appears to have specific, as well as general audiences in mind. The hexagram was minted in silver at a time when the Byzantine monetary system was based on gold coins with linked copper alloy denominations. This reflected economic necessity at a time when Heraclius' resources were severely depleted by the war with Persia. Making some state payments in silver, while continuing to receive taxes in gold seems to have been a strategy for eking out the state's limited funds (Kaegi 2003: 90-1). The use of silver may also have carried visual and symbolic weight. It has been argued that one of the reasons the Byzantine state did not regularly issue silver coinage by the seventh century was because by then
silver had come to be associated with ecclesiastical use (Leader-Newby 2004). Church ornaments and altar covers were made of silver and so gold became the metal of worldly payments and silver the metal of God. Theophanes, a ninth-century chronicler who provides the only substantial narrative source for Byzantine history in the seventh century, records that Heraclius took silver plate form the churches of Constantinople and melted it to help the treasury (Hendy 1985: 495). The appearance of the hexagram, and (perhaps in Constantinople at least) some awareness of use of church silver in making them, may have been designed to evoke a sense of divine approval of the Christian, coin-issuing emperor, fighting against non-Christian enemies. The remarkable inscription on these coins supports such an interpretation. It read DEVS ADIVTA ROMANIS or "God help the Romans." While the impact of this prayer may have been intended for the Christian population of the empire at large, it seems possible in this case to discern a more particular audience for such representation. It is likely that the army formed a large component of Heraclius' intended audience for the hexagram and there is a hint of dialogue in the choice of inscription. Heraclius's imperial predecessor-but-one produced a manual on warfare, the Strategikon of Maurice, dating to the late sixth or early seventh century, which records a call-and-response, to be used during training as being a valuable morale-booster for troops. In this exercise the officer would shout adiuta ("help [us]") and the soldiers would reply Deus! ("[oh] God!") (Dennis 1984: 146). The hexagram might, therefore, be perceived as both a prayer by the head of a Christian state and a message of solidarity with his troops issued by an emperor who was an active field commander.

The design was not, however, wholly innovative, and its continuities reflect other communications which were considered valuable at a time of crisis and uncertainty. The cross on the reverse had been introduced by Tiberius II (r. 574-82) and became a standard depiction on Byzantine precious metal coinage, a powerful but simple symbol of a Christian empire. The obverse carries an image of Heraclius flanked by his son, Heraclius Constantine, later emperor Constantine III (r. 641). Heraclius Constantine, probably born in 612, shortly after his father became emperor, was almost immediately made co-emperor and depicted alongside his father on coins, presumably
to indicate that upon Heraclius's death there would be a smooth transition of rulership, unlike the violent coup which had brought him to power. As the years passed Heraclius Constantine was presented in varying stages of maturity, starting as a small, and chubby-cheeked child alongside a bearded Heraclius, becoming a young man of almost equal size to his father, either beardless or with a fuzz around his chin, and culminating in a portrait of a full-sized and bearded man beside a mature Heraclius, now sporting a lavish, chest-length beard with wide moustaches (Grierson 1982: 84-138; Arnold 2013). These changes, at a time when rulers on medieval coinage were often portrayed in an entirely stereotyped fashion without clear differentiation between individual, age or other aspects of personal identity, have generated suggestions that Heraclius sought to revive "portraiture," in the sense of physical likeness, in order to convey elements of his personal identity. One speculation has tried to connect this to a possible Armenian origin for the emperor's family (Douglas 1992: 141).

Representations of Heraclius and his family, however, are better understood in terms of modern developments in the analysis of medieval portraiture than efforts to match monetary images to personality traits. The modern concept of portraiture, which derives from a Renaissance and postRenaissance idea of individuality, judges portraits by how closely they represent the physical likeness of the individual, their unique personal characteristics, and perhaps some intangible sense of their personality (West 2004). Research into medieval imagery, however, has shown that this individual likeness was not the primary goal of representation. Instead, portraits were valued for representing the social identity of the individual. The image was not expected to look like the physical body of the person represented but to show to an audience, using socially comprehensible visual codes, the social status and relationships of the individual: their age, sex, employment, social or marital status and perhaps regional identification. Thus, representation might focus on dress, symbols of maturity or wealth, or images of religiosity. In the context of the coinage of Heraclius, the emphasis on beard length and height focuses on the relative maturity and therefore social status of the figures. The pair of images perhaps also emphasized initially that Heraclius had an heir, and
therefore a viable plan for succession, and as time went on projected the growing capability of that heir, as a full adult, to rule meaningfully and independently in his father's stead (Brubaker 2013).

The addition of Heraclius's second son, Constantine Heraclius, usually known as Heraclonas, to the imperial coinage after his birth in 626 operated within the same set of visual symbols but communicated something slightly different, showing the flexibility of even outwardly conservative representation. Heraclonas was the son of Heraclius and his second wife, Martina. Martina, however, was also Heraclius's niece, causing the marriage to be condemned by the church as incestuous and raising questions about Heraclonas's legitimacy. Nevertheless, Heraclius elevated Heraclonas to the status of co-emperor and Heraclonas appeared on coinage alongside his father and half-brother with no visible difference except initially in his height and beard length, denoting his youth. Beyond that, the sons are indistinguishable on the coins, both from each other and from their father. All wear and carry the emblems of Christian emperorship and the coins project an unambiguous statement Heraclonas was to be considered a legitimate and worthy co-heir to Heraclius.

Examining familial representation alongside the hexagram, however, suggests that more important for the seventh-century emperors of Byzantium than any particular coin design was communication of their ability to issue a working currency despite crisis. Even when the state had to use silver to make ends meet it did not give up altogether on gold coinage and its determination to keep the economic structures of the empire going is most apparent in the issue of copper-alloy coinage. Seventh-century base metal coinage is often left out of discussions of representation on coinage, and it is initially easy to see why. Constans II's copper-alloy coinage, like most emperors of the seventh century, is marked by a tendency towards low-quality production, with simple and often poorly executed imagery. The flans or blanks onto which these coins were struck were often hacked out of metal in irregular shapes, and were sometimes not even blank. Coins could be restruck directly over existing coins, leaving the old design showing through and obscuring the new. Nevertheless, the images on these copper coins had to be cut into dies, in a skilled process which
will be explored in more detail below. Mint workers had to be employed to strike the coins and people had to receive them. Copper-alloy coinage of the mid-seventh century was not a neglected space of representation, and indeed, how could it be? Just as, at their simplest level, coins are objects of representation, which cannot exist without images, so no coinage, however unprepossessing its appearance, can ever be the result of total neglect.

Making money requires resources, and any coin represents at least a minimum expenditure of effort. It is not clear for whom these coins were struck or why it was at times necessary to produce them sufficiently quickly or with such a lack of resources that the depictions on them are all but incomprehensible, but this perhaps leads us back to the realm of spectacle, to coins as representation, rather than carriers of representation. For urban non-elites, for soldiers receiving regular payment rather than an annual lump sum, or changing their lump sum into something they could spend, or for tax payers expecting change back from handing gold over to the state, it is possible that the coinage of Constans II simply needed to exist, to be a tangible reminder at the point of disbursement, which might itself have been a moment of governmental theatre - a military parade, a public procession, festival or communal tax gathering - that the state remained committed to performing the functions of government, and thus providing small change (Fig. 5).

Figure 5: Byzantine copper-alloy follis of Constans II, Constantinople, 4.38g., overstruck on a coin of Heraclius, Photograph courtesy of Barber Institute of Fine Arts (B3982).

Towards the end of the seventh century the Caliph Abd al-Malik introduced one of the most dramatic innovations in coin representation in the medieval world, but it too was closely connected to this need for rulers to exhibit their capacity to generate and regulate currency. By the 690s the newly formed Islamic polity, now known as the Umayyad Caliphate, was faced with the task of running a single fiscal administration across territories and bureaucracies formed from two entirely different currency systems and visual traditions. The territories of the former Sasanian Empire were
accustomed to a silver-based currency system and a repertoire of state imagery derived from Zoroastrianism, while the subjects of the formerly Byzantine regions of North Africa, Egypt and the Levant operated with a gold-standard currency and a shared visual arena dominated by Christianity (Treadwell 2009). In addition to, or as a result of this difficulty, in the reign of Abd al-Malik the projection by the Umayyad state of a clearly identifiable Muslim identity also became visible for the first time in a range of sources, from the built architecture of the Dome of the Rock to the earliest copies of the text of the Qur'an (Johns 2003). In the case of coinage some attempt was made just to modify the existing Sasanian and Byzantine systems, but these were ultimately abandoned in favour of an entirely new design (along with new weight standards). This new design rejected all imagery and instead used political and religious inscriptions in Arabic (Heidemann 1998). It in turn subsequently became the basis for consistency, becoming the model for Islamic coinage with little deviation for several hundred years (Fig. 6).

Figure 6: A gold dinar of Abd al-Malik, minted A.D. 701-702 at an unnamed Middle Eastern mint, 4.27g. © Fitzwilliam Museum, Cambridge, CM.PG.8449-2006

This inscriptional model was still the default for most Islamic coins by the mid-thirteenth century when the Levant was contested by local Muslim rulers and states set up by western Europeans, who had travelled eastwards on Crusade. It was a situation which gave rise to a rich and sophisticated (as well as violent and contested) exchange of visual languages. This is especially clear on the coins of the Crusader kingdom of Acre, particularly on one issue of 1251 (Fig. 7). Minted by the beleaguered Christian kingdom, these coins were anonymous silver dirhams in the style of local Muslim coinage, including a largely aniconic Arabic design. In this case, however, a cross in the centre of the obverse suggests hints at innovation by the issuing authority, which is continued in the inscription itself. The Arabic reads "one God alone, one faith alone, one baptism alone," and on the reverse, "Father, Son, Holy Spirit, one Godhead alone" (Malloy et al. 1994: 138). While the desire to communicate and the beliefs of the issuing authority are clear - an
unequivocal commitment to Christianity, directed towards key points of disagreement between Christian and Muslim belief - the audience is less certain.

Figure 7: Anonymous Crusader silver dirham of the kingdom of Acre, struck 1251, 2.92g. Photograph courtesy of Barber Institute of Fine Arts (CR014).

There were by 1251 bilingual Christians living in Crusader states like Acre who had grown up in the Levant and spoke Arabic fluently, but Latin or another European language was perhaps a more obvious medium for addressing these people in a way which conveyed religious and cultural solidarity, and a unity that excluded Muslim neighbours. Alternatively, the coins were perhaps intended for Arabic-speaking Muslims in the region, but the hope of converting people via messages on money seems either far-fetched or a sign of desperation. The blending of visual messages on this coinage, layering linguistic, representational and theological codes into a fascinating but confusing whole, reflects the difficulties the issuing authority faced both in knowing and communicating effectively with plural audiences in a contested political space. It also hints at the difficulty of trying to read a dialogue for which we often only have half of the script.

## The Maker

The examples considered so far have addressed the interactions of intended audiences and issuing authorities with representation on money, but representation on coins was not simply a dialogue between authority and intended audience, situated on a scale between conservatism and familiarity at one end, and innovation and engagement at the other. We have few indications of how coin design was actually enacted in medieval polities. These imply that coin design was a political pronouncement by the ruling authority, but the same can be said of almost any act made possible or claimed by authority. Kings and emperors built walls (Brubaker and Haldon 2011: 413), supported religious foundations (Jordan 2009), commissioned manuscripts (Hilsdale 2005), led armies (Flori 2006), and made laws (Wormald 1977). We usually do not know what the level of personal
involvement in these tasks was any more than we know how far emperors and kings approved their coin designs or whether they were even consulted by officials. It seems plausible to argue that the more a coin broke with expectation and tradition in its design, the more likely it was that increasingly senior voices of a kingdom or empire were consulted or initiated the changes. Thus, when Edward III (r. 1327-77) introduced a gold denomination to the English monetary system in 1344 he personally selected mint masters to oversee its (unsuccessful) development (Allen 2012: 214). When Theudebert of Francia (r. 534-48) had his own name engraved in place of the Roman emperor, it is likely that this development too was approved directly, but we do not know for sure (Grierson and Blackburn 1986: 115-16). The rarity with which sources mention direct guidance about the appearance of coins suggests that it was unusual for authorities to be so prescriptive. In every case, though, after a decision had been made, how was it enacted?
"Maker" is a simple-sounding but tricky category. An initial definition of the maker might be "the moneyer", a term for a figure given responsibility for issuing coinage or "mint-master" if the person responsible actually managed a larger team of workers, but these likewise offers little assistance. For most medieval polities we do not know much about these figures, nor even in some cases whether there was one such general overseer at every mint. While mint organization in the Byzantine Empire, for example, was undoubtedly complex with multiple workshops and, at times, multiple mints producing similar designs across the empire, nothing personal is known of any moneyer or overseer. For other places, we know more. In the Merovingian Empire, for example, gold coins were issued in the names of moneyers rather than kings from c. 570-670 and silver until the mid-eighth century, and in some cases we even have documentary sources which provide biographical information about these figures (Jarnut and Strothmann 2013). Nevertheless, being able to attach a name and, more rarely, a story to a moneyer gives an illusion rather than a reality of intimacy, especially when it comes to representation on coins. Maybe, in the case of small-scale coinages, one man was responsible for every stage of production, but probably not for larger operations in which, beneath the term "moneyer," we ought to imagine a whole variety of people
responsible for aspects of production. Dies, used for striking most western and Middle Eastern medieval coins, are complex pieces of technology. They were cut, with the design inverted, into hardened metal (Malkmus 2007). They had a limited lifespan, and could either crack and break as a result of wear, or be retired because a design changed or an emperor or king ceased to rule or because demand for coinage or the bullion to make it from waned. Much of what we think of as representation on coins was thus the direct product not of the commissioning authority, nor even the moneyer in the sense of overseer, but of the die cutters.

These were the people who created the images that we see on coins. Their skill, or apparent lack thereof, created many of the fine details which have optimistically been read as insights into the minds of issuing authorities. This can sometimes overlook fairly significant gaps in our knowledge, such as how designs, even if sanctioned by an authority, were transmitted to mints further away for die cutters to engrave. In some cases, for example across most of the Sasanian Empire from the fifth century, it seems that dies were cut centrally and distributed to mints (Schindel 2005: 292). For the Carolingian Empire, the 864 Edict of Pî̀tres includes a description of the design to be used on imperial coins, though this is sufficiently vague that it could not have been the sole instruction sent out to moneyers (Hill 2013: 101, 104). The edict, however, refers to moneyers coming to the court to receive silver from which to strike coins, while the Domesday Book from eleventh-century England also refers to moneyers coming to court to receive dies (Archibald et al. 1995; Naismith 2012: 139), suggesting various models of centralization. From France and the Iberian peninsula in the high Middle Ages, examples have been found of coin-like objects (Fig. 8), known as piedforts (or piếforts), in designs which seem not to have been struck as coins, and which have been tentatively identified as prototypes circulated to mints to demonstrate new designs (Crusafont et al. 2013: 152).

Figure 8: Silver object found in 2007 in Staffordshire, measuring 20.5 mm and weighing 7.19 g . It has been identified as a piedfort striking of a coin type of Philip IV, King of France (r. 1285-1314). Image courtesy of the Portable Antiquities Scheme, WMID-47EBE7.

In addition to the die-cutters, who were almost certainly skilled and valued artisans, the term "maker" included other individuals relevant to the issue of representation. Working through the stages of making a medieval coin highlights a number of processes which might have fallen within the remit of a variable number of people. Somebody had to calculate the metallic composition of the blank flans onto which coins were struck, or decide not to and select an appropriate number of old coins and poorly-formed pieces of metal, with serious implications for representation. An even mixture would take a struck design better than a mixture full of different metals. A heavily leadbased copper alloy, for instance, such as that used in a series of coins produced in Sri Lanka during the fifth and sixth centuries (Fig. 9), limited the design that could be impressed on the coins, as it made the metal friable and likely to crack under pressure (Walburg 2008: 67). It should be remembered, indeed, that the creator of the alloy from which coins were struck may have been a more valued worker to medieval mint-masters even than a skilled die-cutter. It requires a great deal of technical expertise to create flans of correct metallic composition and weight, and especially in the case of precious metal coinages these characteristics were more likely to determine the success of a coinage than the designs impressed upon them.

Figure 9: Image of a copper-alloy imitation of a late Roman nummus made in Sri Lanka, from the National Archaeology Museum, Colombo. Image by R. Darley, 2011.

Even if the composition of flans was important beyond the designs impressed upon them, it also affected the legibility and extent of designs. Flans of even thickness would take a design better than one thicker at one end than the other, and it is, of course, easier to strike a more elaborate design onto a larger coin, while thick coins with small diameters limited the space for inscription or image. In the later Byzantine Empire, from the mid-eleventh century, coins were struck on concave flans, involving a complex process of using multiple dies to strike images clearly onto the two curved sides, and so the skill of the maker of the flans and of the person or people physically striking the coins were crucial to the resulting image (Bendall and Sellwood 1973; Sellwood 1980; Bendall 1998). Finally, a host of other, probably increasingly less skilled makers played their part in
the appearance of a coin, such as the person or people responsible for placing the flans between the two dies for striking. Whether this was done consistently or accurately affected both the overall appearance of a series of coins and, on each individual coin, how much of the design created by the die cutters was actually visible.

The arrangement of a mint may also have contributed to the results of makers' efforts. Some coinages of apparently "crude" appearance are thought to have been rushed or made in peripatetic mints. This is not impossible, but should provoke some consideration of logistics. Even in a mint moving with a royal court, it seems most likely that the actual acts of die cutting and striking would be done during stopping periods. The idea of a "mint on the move" can sometimes appear in discussions of representation on medieval coins as a kind of fantasy, but should not be over-stated (e.g. Gö̈bl 1971: 32). It may be true that a worker in a mobile mint might have had less time to produce a certain quota of coins before moving on, or that the die sinkers may have had to work with a small repertoire of tools that could be easily carried. The Late Roman Empire, however, seems to have had mobile mints, moving with the court of peripatetic emperors, which were capable of producing coins indistinguishable in their quality from those of any other mint, as did Castilian kings of the late fifteenth century (Hendy 1985: 393-4; Crusafont et al. 2013: 399-400). As a general rule, the higher the value of the coins, the more likely authorities were to enforce good production standards, whether at a fixed or a mobile mint, but this was not always the case. The efforts of English kings between the tenth and fifteenth centuries to prevent not just forgery but also the passing of poor coin by state moneyers and officials testifies as eloquently to recurring failure as it does to intermittent success (Allen 2012: 368-76). The Artuqid rulers of northern Mesopotamia in the eleventh century onwards issued silver only sporadically and mostly minted in copper alloy, but their coins were usually well made, with dies centred accurately on large flans, allowing complex designs to be legibly struck (Hillenbrand 1990; Whelan 2006).

Makers, therefore, played a vital part in the representations we see on coins, and raise important questions about whose work we are reading. Clearly the aims or intentions of authorities
are visible but sometimes so are the makers'. The gold coinage of some of the post-Roman states of western Europe, in particular the Merovingian and Visigothic kingdoms, is striking for its use and modification of Roman and Byzantine models. An examination of the metalwork produced within these societies suggests that prominent stylistic differences from the monetary prototypes being used were not just a result of lack of skill (Perea Caveda 2001; James 1988: 80-96). It is very clear in the case of Visigothic and Merovingian coinage that the coinage of the contemporary Roman/Byzantine world was being consciously imitated (Grierson and Blackburn 1986: 39-54, 81135; Castellanos 2012), but that the end results are visually distinctive may reflect different cultural norms and mores, or the aesthetics of different makers, for whom the images being imitated were translated through a lens of non-Roman image creation and cultural practice.

The Frisian and Anglo-Saxon sceattas mentioned previously suggest similar processes. Many of these carry an image resembling a porcupine (Fig, 10), which evolved from a Late Roman portrait of an emperor, in which the hair became an increasingly prominent crest that eventually replaced a recognizable human bust altogether. Its original meaning and eventually its original appearance faded in importance in comparison to the role of the image as a symbol with a newly constructed set of social meanings.

Figure 10: Silver penny or sceatta, minted in England c. 700-750 at an unknown mint, 1.13g. © Fitzwilliam Museum, Cambridge, CM.1744-2007.

Analysis of these coins, which are usually well made, carefully struck and of good silver, suggests that this distinctive visual feature became a focal point because it was recognizable and distinctive, not because the die-cutters could do no better. The same might be considered in the case of the Visigothic figure of Victory (Fig. 11), who to modern western eyes (eyes trained in the aesthetics of ancient Rome) looks rather lizard-like and in some cases difficult to recognize as humanoid (Grierson and Blackburn 1986: cat. nos 192-208). Rather than a sign of inadequate or inadequately supervised die cutters, however, this might perhaps provide insight into varied cultural "ways of seeing", born out of artisanal practice coming into creative contact with existing models.

Makers played a crucial role in the mediation of representation between authority and intended audience, and thereby in the construction of a shared realm of visual symbolism.

Figure 11: Gold tremissis of Visigothic rulers of Spain, minted c. 507-580, showing on the reverse a standing figure of Victory, 1.44g. © Fitzwilliam Museum, Cambridge, CM.PG.103492006

## Unintended Audiences

All of the interactions with coin representation considered so far have assumed a shared visual context for audience, authority and maker, examining coins in their originally constituted social setting, but in the Middle Ages coins did not circulate exclusively within their original context. The final examples considered here lie potentially, and in many cases actually, beyond their original shared realm of visual symbolism, and outside the lines of communication which coin representation was created for. Unintended audiences, both medieval and modern, are useful to compare in their responses to numismatic representation. On the one hand, many unintended audiences ended up being users of medieval coins whose own spheres of representation were affected by them. On the other hand, the reactions of unintended audiences to medieval coins provide insights into the ways in which the ideal triangulation of maker, authority and intended audience worked in practice. The outside viewer offers a point of comparison and contemplation. Byzantine coins found in India, for example, travelled far beyond their original political and monetary context (Darley 2015). They moved initially by means of long-distance trade but entered a local economic and social context in south India in which they could not easily serve as currency and did not represent a tangible or well-understood political authority. Reactions to the images represented on these coins appear have been the reverse of that seen in, for example, the armband with which this chapter began. It would appear that in a south Indian context Byzantine coins were valued primarily as vehicles for the representations they carried. Great care was shown to the images on them, though usually with no indication as to how these were understood. Imitation or
partial imitation of coins suggests elements of design which were imbued with particular significance (Fig. 12). Alternatively coins might be pierced in India, and earlier Roman coins had often had a frame and loop fitted to enable them to be hung from cloth or on a chain, giving an insight into the way in which people oriented the images they saw. In south India, piercings on Byzantine coins invariably left the portrait bust of the emperor upright, and sometimes patterns of wear show that the portrait was probably worn facing outwards, while the reverse received more wear by rubbing against skin or clothing. Imitations also focused on the imperial bust, even when other features, such as inscription or reverse design, were ignored or altered significantly.

Figure 12: Imitation Byzantine gold solidus of Theodosius II (r. 408-50) found in Karnataka, south India, as part of the Akki Alur Hoard (Day 2012), with double piercings allowing the imperial portrait to hang upright. Weight and place of minting unknown. Photograph reproduced from original by Peter Berghaus, with permission.

In Britain too, where Merovingian coins of the sixth and seventh centuries travelled across the Channel or were copied locally, both original and imitation coins sometimes carry piercings which aligned with certain features to leave them hanging upright (Fig. 13). Use of money, however, is nothing if not unpredictable. The grave of an elite Anglo-Saxon warrior at Sutton Hoo revealed 37 Merovingian coins deposited with the highly-staged ship-burial, recalling the element of performance which can be so elusive in our imagining of medieval coins as tools of representation. The burial, however, contains three other coin-like objects, which present a fascinating contrast. They are entirely blank flans or pseudo-coins, in gold, and of similar weight and size to the Merovingian pieces, but nothing could testify more clearly to coins in this instance representing objects of use not as carriers of representation, their imagery apparently irrelevant to the purpose at hand (Bruce-Mitford 1968: 47).

Figure 13: An imitation of a late-sixth or early seventh-century solidus type from the mint of Marseille. In this case, the imitation was gold-plated, then pierced for suspension before being broken and lost. It was found in Buckenham, England in 2004, 1.8g. Image courtesy of the Portable Antiquity Scheme, SUR-09EA44.

Quite a different interaction with the visual is demonstrated by the coinage of the Artuqids, already mentioned. Artuqid coinage exhibits a promiscuous and highly creative use of coin images borrowed and adapted from other coins and visual media. One side almost always carries an epigraphic Arabic design proclaiming the issuing authority and operating within the tradition of Islamic coinage established by Abd al-Malik in the seventh century. The other side though, might contain images drawn from contemporary Byzantine coins (including the Virgin Mary crowning the Byzantine emperor), from much older coins, including the seventh-century designs of Heraclius and Heraclius Constantine, and even some Roman and older Hellenistic images (Fig. 14).

Figure 14: Artuqid copper alloy coin of Kutb al-din Ilgazi II (r. 1176-84), possibly minted in Mardin, 12.1 g . Beneath it, a prototype for the obverse design, a seventh-century gold solidus of Heraclius and Heraclius Constantine, Constantinople, 4.41g. Photographs courtesy of Barber Institute of Fine Arts (TK0033 and B2818).

The precise economic function of Artuqid coinage is mysterious, but it is well-made and the scope and combination of imagery suggests a concern with what was depicted. The coinage perhaps speaks to multi-focal and deeply historicized ideas of authority which must have been swirling around northern Mesopotamia around the time of the Crusades, with the Byzantine Empire claiming the authority of the Roman Empire, Crusaders claiming the authority of papal Rome, the Seljuks projecting power in an Islamic tradition, and numerous smaller kingdoms all projecting their own claims to identity through a blend of tradition and experimentation.

## Conclusion

There are, therefore, no absolute keys to unlocking medieval coin representation. Some intended audiences saw in coins the things we imagine their issuing authorities intended, but many did not, and reactions could differ up and down the social spectrum. Some makers executed representations with care and others badly enough that the images are all but incomprehensible, but this does not necessarily tell us about the sophistication of the issuing state or what was at stake in producing coins. The process alludes to a world of "live performance," now largely lost, but which may have been crucial to how many medieval coins were used as vehicles of representation. Many unintended audiences, too, saw in coins icons of power or meaning in their local context. Sometimes these seem legible to us - western European kings using Roman imagery, for example. In other cases it is harder to know what Indian users saw in Byzantine coin portraiture, or what the people burying the corpse in Mound One at Sutton Hoo thought was conveyed by the Merovingian coins and ingots buried with him. There are some generalities, however, which tentatively emerge.

All coins must carry some representation, but in much of the medieval world the idea of coinage was familiar enough that the content of that representation did not necessarily matter to all issuers or audiences. It could be enough that a coin was recognizable as a coin, and some of the transactions for which money was produced, such as payments to armies and bureaucracies, could be made in staged contexts in which the representation on a coin might either have become a focal point, perhaps echoing a familiar military acclamation, or could have been entirely subsumed, with money being scattered or given out in bags, of which weight and quantity were the uppermost concerns.

Medieval money provides indications of major political statements being played out through coinage, and designs are often complex and tailored in response to particular circumstances. They could also be highly conservative and imitative, however, and the copying or modification of an existing design, by a predecessor, a neighboring power, or a usurped authority, testify to an evolving visual language of statehood and power shared at least across northern Europe, the

Mediterranean and the Middle East. It was a shared language constructed as well as communicated by the movement and reception of coins. For makers and moneyers, executing the designs of authorities could be an act of craftsmanship and creativity, reformulating old or foreign symbols or experimenting with technological innovation. It might at other times and in other places have been a mechanical task to be accomplished, requiring little skill and the ability to produce quickly and with limited resources. Finally, money moves. This meant that coins frequently came into contact with unintended users, for whom the representations they carried might be more significant than for their intended audiences. These coins could become props in new performances of power or piety and might be worn, buried or imitated and in all of these ways suggest to us how new audiences viewed these coins.

At no point, however, even when coins were used decoratively, is it clear that the term "art" applied in the Middle Ages. It is a label applied to medieval money by perhaps the least intended audience of all - modern viewers. Medieval audiences for coins, however far removed from the original issuer, were dealing not just with interactions of representation but also with realities of interaction with the object and their own social context, whether in the form of diplomatic ties, aggressive neighbors or the use of the exotic to project power in domestic contexts. Even the Artuqids, using images from centuries before, were doing so to make coins of their own and thereby a performance of statehood.

These unintended audiences did not, as far as we know, theorize, explicate or debate the meaning of representation on coins. That has been left to academics, collectors and dealers of the most recent centuries. Due to its imagery appearing "crude" to modern eyes, for a long time medieval coinage stood in the shadow of classical coinage. As its value has been recognized, the meaning of representation on medieval money has been debated and constructed into sometimes overly elaborate "translations." Extensive previous work has enabled this chapter to examine a selection of medieval coin images within their historical and archaeological context, and to leave out hundreds of other examples that might have nuanced, strengthened or diversified the arguments
made. In both cases there is a perhaps unavoidable tendency to discuss representation on medieval coins as if this new forum - constituted from the museum cabinet, the auction catalogue and the journal article or conference paper - is somehow the definitive and the primary arena in which to identify meaning. It is a view which can only be tempered by thinking systematically, as numismatic research increasingly does, about coins as objects with social uses and relationships, embedded into larger material cultural contexts, which shaped representation on money and were in turn modified by that representation.

## Endnotes

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## References

Allen, Martin. 2012. Mints and Money in Medieval England. Cambridge: Cambridge University Press.

Archibald, Marion, Lang, J. and Milne, G. 1995. "Four Early Medieval Coin Dies from the London Waterfront." Numismatic Chronicle, 155: 163-200.

Arnold, John H. 2013. "Theoderic's Invincible Moustache." Journal of Late Antiquity, 6: 152-83.

Banaji, Jairus. 2001. Agrarian Change in Late Antiquity: Gold, Labour and Aristocratic
Dominance. Oxford: Oxford University Press.

Belting, Hans. 1994. Likeness and Presence: a History of the Image before the Era of Art. Chicago: University of Chicago Press.

Bendall, Simon. 1998. "The Double Striking of Late Byzantine Scyphate Coins." Celator, 12(6): 20-3.

Bendall, Simon and Sellwood, David. 1973. "The Method of Striking Scyphate Coins Using Two Obverse Dies In the Light of an Early Thirteenth Century Hoard." Numismatic Chronicle, 18: 93-104.

Berger, John. 1972. Ways of Seeing. London: Penguin and BBC.

Brubaker, Leslie. 2013. "Looking at the Byzantine Family." In Leslie Brubaker and Shaun Tougher (eds.), Approaches to the Byzantine Family. London: Routledge.

Brubaker, Leslie and Haldon, John. 2011. Byzantium in the Iconoclast Era, 680-850: a History. Cambridge: Cambridge University Press.

Bruce-Mitford, Rupert Leo Scott. 1968. The Sutton Hoo Ship Burial: a Handbook. London: Trustees of the British Museum.

Castellanos, Santiago M. 2012. "Creating New Constantines at the End of the Sixth Century." Historical Research, 85: 556-75.

Crusafont, Miquel., Balaguer, Anna. M., and Grierson, Phillip. 2013. Medieval European Coinage 6: the Iberian Peninsula. Cambridge: Cambridge University Press.

Darley, Rebecca R. 2015. "Self, Other and the Use and Appropriation of Late Roman Coins in South India and Sri Lanka (4th-7th Centuries A.D.)." In Himanshu Prabha Ray (ed.), Negotiating Cultural Identity: Landscapes in Early Medieval South Asian History. London and New Delhi: Routledge.

Day, Rebecca R. 2012. "A Tale of 'Four' Hoards (or Unpicking Akki Alur)." Journal of the Oriental Numismatic Society, 211: 5-14.

Dennis, George. T. 1984. Maurice's Strategikon: handbook of Byzantine military strategy. Philadelphia: University of Pennsylvania Press.

Douglas, John M. 1992. The Armenians. New York: J. J. Winthrop Corporation.

Evans, Allan. 1936. Francesco Balducci Pegolotti: La Pratica della Mercatura. Cambridge, MA: Medieval Academy of America.

Flori, Jean. 2006. Richard the Lionheart: King and Knight. Edinburgh: Edinburgh University Press.

Fü̈eg, Franz. 2007. Corpus of the Nomismata from Anastasius II to John I in Constantinople, 713-979, vol. 1. London and Lancaster (PA): Classical Numismatic Group.

Garipzanov, Ildar. 2016. "Regensburg, Wandalgarius and the novi denarii: Charlemagne's Monetary Reform Revisited." Early Medieval Europe, 24: 58-73.

Göbl, Robert. 1971. Sasanian Numismatics. Braunschweig: Klinkhardt \& Biermann.

Grierson, Phillip. 1982. Byzantine Coins. Berkeley and Los Angeles: University of California Press.

Grierson, Phillip. 1959 "Commerce in the Dark Ages: a Critique of the Evidence." Transactions of the Royal Historical Society, 5th Series: 123-140.

Grierson, Phillip and Blackburn, Mark. 1986. Medieval European Coinage, vol. 1: the Early Middle Ages (5th-10th Centuries). Cambridge: Cambridge University Press.

Heidemann, Stefan. 1998. "The Merger of Two Currency Zones in Early Islam: the Byzantine and Sasanian Impact on the Circulation in Former Byzantine Syria and Northern Mesopotamia." Iran, 36: 95-112.

Hendy, Michael. 1985. Studies in the Byzantine Monetary Economy, c. 300-1450. Cambridge:

Hill, Brian. E. 2013. "Charles the Bald's Edict of Pị̂tres: a Translation and Commentary." M.A. thesis, University of Minnesota: Minneapolis.

Hillenbrand, Carole. 1990. A Muslim Principality in Crusader Times: the Early Artuqid State. Istanbul: Nederlands Historisch-Archaeologisch Instituut in Istanbul.

Hilsdale, Cecily J. 2005. "Constructing a Byzantine 'Augusta': a Greek Book for a French Bride." The Art Bulletin, 87: 458-83.

James, Edward. 1988. "The Northern World in the Dark Ages, 400-900." In George A. Holmes (ed.). The Oxford Illustrated History of Medieval Europe. London: Guild Publishing.

Jarnut, Jö̈rg. and Strothmann, Jü̈rgen. (eds). 2013. Die Merowingischen Monetarmünzen als Quelle zum Verständnis des 7. Jahrhunderts in Gallien. Paderborn: Wilhelm Fink GmbH \& Co. VerlagsKG.

Johns, Jeremy. 2003. "Archaeology and the History of Early Islam: the first Seventy Years." Journal of the Economic and Social History of the Orient, 46: 411-96.

Jordan, William Chester. 2009. A Tale of Two Monasteries: Westminster and Saint-Denis in the Thirteenth Century. Princeton: Princeton University Press.

Kaegi, Walter Emil. 2003. Heraclius: Emperor of Byzantium. Cambridge: Cambridge University Press.

Kennedy, Hugh. 2004. The Prophet and the Age of the Caliphate. Revised ed. London: Routledge.

Kessler, Herbert. 2004. Seeing Medieval Art. Plymouth: Broadview Press.

Kotsis, Kriszta. 2012. "Defining Female Authority in Eighth-Century Byzantium: the numismatic Images of the Empress Irene (797-802)." Journal of Late Antiquity, 5: 185-215.

Kroll, John H. 2012. "The Monetary Background of Early Coinage." In William E. Metcalf (ed.), The Oxford Handbook of Greek and Roman Coinage. Oxford: Oxford University Press.

Leader-Newby, Ruth. 2004. Silver and Society in Late Antiquity: Functions and Meaning of Silver Plate in the Fourth to Seventh Centuries. Aldershot: Ashgate

Leonard Jr., Robert. D. 2008. "Effects of the Fourth Crusade on European Gold Coinage." In Thomas F. Madden (ed.). The Fourth Crusade: Event, Aftermath, and Perceptions. Aldershot: Ashgate for the Society for the Study of the Crusades and the Latin East.

Malkmus, William. 2007. "Ancient and Medieval Coin Dies: Catalogue and Notes." In Lucia Travaini and Alessia Bolis (eds). Conii e scene di coniazione. Rome: Quasar.

Malloy, Alex G., et al. 1994. Coins of the Crusader States, 1098-1291: Including the Kingdom of Jerusalem and Its Vassal States of Syria and Palestine, the Lusignan Kingdom of Cyprus (1192-1489), and the Latin Empire of Constantinople and its Vassal States of Greece and the Archipelago. Cheltenham: Attic Books.

McNamara, Jo Ann. 2001. "Life of Saint Eligius by Dado, Bishop of Rouen." In T. Head (ed.). Medieval Hagiography: a Sourcebook. London: Routledge, 137-67.

Metcalf, David Michael. 2006. "Monetary Circulation in Merovingian Gaul, 561-674. A propos Cahiers Emest Babelon, 8." Revue numismatique, 162: 337-94.

Naismith, Rory. 2012. Money and Power in Anglo-Saxon England: the Southern English Kingdoms, 757-865. Cambridge: Cambridge University Press.

Palmer, Andrew. 1993. The Seventh Century in the West-Syrian Chronicles. Liverpool: Liverpool University Press.

Perea Caveda, Alicia. 2001. El Tesoro Visigodo de Guarrazar. Madrid: Consejo Superior de Investigaciones Científicas.

Ross, Marvin Chauncey. 1965. 2nd ed. with addendum by Susan A. Boyd and Stephen. R. Zwirn. 2005. Catalogue of the Byzantine and Early Mediaeval Antiquities in the Dumbarton Oaks Collection, Vol. 2, Jewelry, Enamels, and Art of the Migration Period. Washington, D.C.: Dumbarton Oaks Research Library and Collection.

Sarris, Peter. 2006. Economy and Society in the Age of Justinian. Cambridge: Cambridge University Press.

Schindel, Nikolaus. 2005. "Sasanian Mint Abbreviations: the Evidence of Style." Numismatic Chronicle, 165: 287-99.

Sellwood, David. 1980. "The Production of Flans for Byzantine Trachy Issues." In David Michael Metcalf and Andrew Oddy (eds.), Metallurgy in Numismatics. London: Royal Numismatic Society.

Spufford, Peter. 1988. Money and its Use in Medieval Europe. Cambridge: Cambridge University Press.

Treadwell, Luke. 2009. "'Abd al-Malik’s Coinage Reforms: the Role of the Damascus Mint." Revue numismatique, 165: 357-81.

Turtledove, Harry. 1982. The Chronicle of Theophanes, Anni Mundi 6095-6305 (AD 602-813). Philadelphia: University of Pennsylvania Press.

Walburg, Reinhold. 2008. Coins and Tokens from Ancient Ceylon: Ancient Ruhuna - Sri LankanGerman Archaeological Project in the southern Province, vol. 2. Wiesbaden: Reichert Verlag.

West, Shearer. 2004. Portraiture. Oxford: Oxford University Press.

Whelan, Estelle J. 2006. The Public Figure: Political Iconography in Medieval Mesopotamia. London: Melisende.

Wormald, Patrick. 1977. "Lex scripta and verbum regis: Legislation and Germanic Kingship, from Euric to Cnut." In Peter Hayes Sawyer and Ian N. Wood (eds.), Early Medieval Kingship. Leeds: University of Leeds.

Wright, F. A. 1930. The Works of Liudprand of Cremona: Antapodosis, Liber de Rebus Gestis
Ottonia and Relatio de Legatione Constantinopolitana. London: George Routledge and Sons, Ltd.

