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INTRODUCTION

(a) historical overview

'Britain', as the venerable Bede began his *Historia ecclesiastica gentis Anglorum*, 'is an island of the ocean … [which] extends 800 miles to the north, and is 200 miles broad, save only where several promontories stretch out further and, counting these, the whole circuit of the coast line covers 4,875 miles' (*Brittania oceani insula … quae per milia passuum dccc in boream longa, latitudinis habet milia cc, exceptis dumtaxat prolixioribus diuersorum promontorium tractibus, quibus efficitur ut circuitus eius quadragies octies lxxv milia conpleat*) (Bede, *HE* i.i, ed. Colgrave and Mynors 1969, 14–15). He continued with a warm description of Ireland: 'broader than Britain, it is healthier and has a much milder climate' (*et latitudine sui status et salubritate ac serenitate aerum multum Brittaniae praestat*). As Bede recognised, the physical situation of Britain and Ireland as islands to the north-west of mainland Europe has been a defining characteristic throughout their history: the encircling seas create at once a physical barrier and a sense of distance and identity, but also provide a conduit for communication and travel. While events within the islands of Britain and Ireland might at times seem comparatively self-contained in the pages of Bede and other early medieval writers, there were strong bonds which anchored the islands to their neighbours across the Channel and the North Sea, and which undermined any notion of complete cultural or political insularity.

Indeed, Britain and Ireland remained in close touch with other parts of Europe throughout the early Middle Ages. The Angles, Saxons and Jutes of England believed their ancestors had emigrated from northern continental Europe in the fifth and sixth centuries, and at least some of them had done so. Scandinavian raiders and settlers made a similar journey in the ninth and tenth centuries, transforming large areas across Britain and Ireland. These incomers are generally known as Vikings (or, probably more correctly, vikings: see Chapter 11, section (a), pp. 278–9). Especially before the arrival of the Vikings, churchmen and traders moved freely and frequently across the Irish Sea, creating a single cultural province which embraced both Britain and Ireland. The legacy of this interaction is most pronounced in shared traditions of script, art and literature. Movement outwards from Britain and Ireland was equally significant: Anglo-Saxon and Irish clergy found favour as scholars and holy men across Europe, and as missionaries played a key role in the introduction and rejuvenation of Christianity in what is now Germany and the Low Countries. Behind these better-attested travels of monks, kings and armies were legions of unrecorded journeys, the innumerable trips which brought continental coins and pots to England in large quantity, for example. In cultural, political and economic terms, early medieval Britain and Ireland were fully engaged members of the European community of the day.

Rule of all early medieval Britain by a single authority was claimed only occasionally, and at best amounted to loose overlordship (Fanning 1991; Keynes 1992; Dumville 1997b, 350–5; Wormald 2006, 106–34; Molyneaux 2011; 2015, 209–14); there was a stronger tradition of asserting kingship of all Ireland, although in practice the authority of such rulers was usually nominal (Charles-Edwards 2000, 481–521; Byrne 2001). The many bonds connecting Britain, Ireland and their neighbours were thus based on a constantly evolving mosaic of large and small political units. Although later medieval and modern historians have traditionally looked back to the post-Roman centuries to find the roots of present-day nations, any analysis of the early medieval past based on the borders of modern England, Ireland, Wales and Scotland is a matter of convenience only. The current borders of Britain and Ireland have no direct bearing on this period. Political boundaries and identities were very much in flux, and regions now considered relatively peripheral (such as the Isle of Man) enjoyed economic and political prominence. Comparisons across the different segments of early medieval Britain and Ireland, and indeed beyond, have quite rightly become a prominent feature of recent historiography in an effort to dissolve traditional distinctions between modern nations (e.g. Charles-Edwards 2003a; Davies 2003; Story 2003; Wickham 2005; Yorke 2006; Stafford 2009).

Whatever the complexities of their political composition, internal geography had a profound effect on the long-term development of all the early medieval societies within Britain and Ireland (cf. Fox 1943; Hooke and Burnell 1995; Hooke 1998; Wickham 2005, 47–53; Clarke 2009; Christie and Stamper 2012) (see Map 1). Rivers provided thoroughfares and borders (Blair 2007); soil types dictated patterns of agriculture and (to some extent) settlement (Brookes 2007); woodland (extensive, but not more so than in the Roman period) provided a valuable economic resource as much as a forbidding wilderness (Wickham 1990; Hooke 2011); naturally occurring minerals and salts represented valuable commodities (Claughton 2011); and mountains and marshes impeded communication and some forms of agriculture (Rackham 2011, esp. 53–5). Lowland areas in much of what is now England gave way to upland territory in the north and west, punctuated with valleys and plains of lowland in (for example) the central lowlands of Scotland. As a general rule, inhabitants of highland areas placed less emphasis on arable production and depended to a greater extent on cattle and other livestock; there were also more obstacles to be overcome in the creation and maintenance of large-scale political units in upland regions, though the emergence of the kingdom of Scotland shows that these challenges were not insurmountable (Wickham 2010, 204–8; see Chapter 12, section (a), pp. 305–10). Ireland has less of a marked highland–lowland divide: its central plain is generally marshy, with extensive areas of upland surrounding it on three sides. Nevertheless, the south and east are on the whole in a stronger position with regard to natural resources than the north and west (Orme 1970; Andrews 2005).

The inhabitants of all the kingdoms of early medieval Britain and Ireland were overwhelmingly preoccupied with the task of producing food, both to support themselves and to maintain the clerical and secular elites with whom surviving written sources are chiefly concerned. Agriculture of one form or another underpinned the functioning of every level of society (Banham and Faith 2014; Kelly 1997). Estimates of population are inevitably vague, for there are no statistical records to speak of before Domesday Book for England in the late eleventh century (Härke 2002). Conclusions based on the 269,000 inhabitants recorded in this survey suggest an English population in 1086 of 1.5–2.5 million (Moore 1997; Bartlett 2000, 290–2), although interpretation of the Domesday survey for demographic purposes is notoriously contentious (Darby 1977, 89;

Map 1. *Britain and Ireland*.

Harvey 1988, 48–9). Scholars have generally shied away from offering specific numerical esti-mates for the population of early medieval Ireland, but the survival of about 45,000 ringforts of broadly early medieval date has been argued to hint at a population of up to half a million (Clarke 2005; Edwards 2005, 235; Ó Corráin 2005, 550; Ó Cróinín 1995, 108–9). Population estimates for Wales have been as low as under 100,000 (Davies 2004, 214), and the territories making up mod-ern Scotland were probably also relatively thinly settled compared with parts of contemporary England and Ireland (Fraser 2009, 279); in the twelfth century the population of Scotland per-haps amounted to 'a few hundred thousand' (Barrell 2000, 19). These figures compare with more optimistic estimates of 3–4 million for the peak population of the Roman province of Britain, based on extrapolations from the density of rural settlement remains (Millett 1990, 181–6; Jones 1996, 13–17). The assumption is that the population fell in the aftermath of Roman rule, but the extent, speed and reasons for the reduction are hazy: the population of the later fourth and the fifth century may well have already receded considerably from the second-century high point of the earlier Roman period, and recurring bouts of plague in the sixth and seventh centuries could have had a far more severe impact than the end of Roman rule in and of itself (Little 2007; Dooley 2007).

Throughout the early medieval period, Britain remained deeply marked by its Roman experi-ence in the four centuries before the trauma of the fifth (Millett 1990; 2005; Salway 1997). Al-though Britain had been on the periphery of the Roman world, and Ireland and most of Scotland had never formally been part of the empire at all, Roman rule had integrated much of Britain into a larger unit and strengthened its contacts with mainland Europe. Within the province, Roman-style cities and a network of high-quality roads were among the key physical legacies. There was great variation in the nature and degree of Romanisation both during and after Roman rule. In terms of administrative impact, the major units of local government under the Romans, *civitates*, often formed the basis of post-Roman kingdoms, under both Britons and Anglo-Saxons. Parts of the lowland east and south had become thoroughly integrated into the empire culturally, politi-cally and economically, while a heavy military presence persisted on the northern frontier. Even regions relatively less touched by the empire, such as western Britain, emerge in the early Middle Ages with some trappings of Roman civilisation, most notably Christianity and Latin. Bede high-lighted the importance of Latin as a unifying language, which bound together all the Christian peoples of Britain (Bede, *HE* i.1, ed. Colgrave and Mynors 1969, 16–17). Latin and Christianity had even extended beyond the bounds of former Roman rule, becoming established in Ireland and Scotland (Yorke 2006). Both territories had benefited from the proximity of the Roman Em-pire as a trading partner, though their lack of integration into the Roman dominion resulted in the development of distinct societies, especially clear in Ireland thanks to its plentiful early legal and literary texts (Wickham 2005, 50–3, 354–64; Kelly 1997). Whether through the imperial past or the Christian present, Rome exercised a potent influence on the societies of Britain and Ireland in the early Middle Ages.

The fifth and sixth centuries were a time of harsh adjustment to the aftermath of imperial rule. Material living standards dropped rapidly as economies of scale permitted by the relative peace and integration of Roman rule collapsed: use of pottery and coin, as well as urban and villa life, all declined in short order (see Chapter 2, section (a), p. 23). By the time of Gildas in the sixth century, the larger diocese and provinces of Britain had given way to a series of small kingdoms. A combination of migration and cultural realignment produced a complex politics of identity in

this period, imagined by later historians including Bede and the anonymous writers behind the *Historia Brittonum* and the *Anglo-Saxon Chronicle* as a diametric opposition between Britons and Germanic-speaking invaders consisting of Angles, Saxons and Jutes. On the ground in the fifth and sixth centuries, however, these labels probably carried limited weight. 'Anglo-Saxon' material culture overlapped with that of the late Roman army, which had included a large proportion of Germanic-speakers: militarisation as well as settlement of migrants probably played a role in the advancement of what was later seen as Anglo-Saxon culture, with pockets of British language and Christian religion surviving under 'Anglo-Saxon' rule, and of Irish-speakers in parts of what are now Wales and Scotland.

The seventh and eighth centuries saw the revival, especially in England, of larger-scale kingship and towns, as well as the creation of an ecclesiastical infrastructure. Northumbria, Mercia and Wessex emerged as the leading kingdoms at different times, though there were many others; among the most important were Kent and East Anglia. In Scotland too, wide-ranging rule was wielded first by the kings of Dál Riata and later the kings of the Picts. The arrival of the Vikings at the end of the eighth century would in the long run destabilise political and economic systems across Britain and Ireland. In the latter, Scandinavian incomers were responsible for severe raids in the ninth century and also the foundation of camps dotted along the coasts that would grow into Ireland's first towns at Dublin, Cork, Waterford and Wexford; in the long run, however, the Vikings became fully immersed in the complex political scene of native Irish kingdoms. In England, two of the four surviving kingdoms (East Anglia and Northumbria) were taken over entirely by the Scandinavians in the ninth century, while another (Mercia) lost a large part of its territory, and even the one surviving major kingdom, Wessex, came close to being conquered. But in time, this disintegration of resistance in the individual kingdoms created the conditions by which Wessex, in alliance with the surviving portion of Mercia, was able to conquer the Scandinavian-held lands of what is now eastern England and create the enlarged medieval kingdom of England. In what is now Scotland, Viking attacks were likewise an important factor in the coalescence of the kingdom of Alba, founded on the union of Picts and Scots, albeit under murky circumstances (see Chapter 12, section (a), pp. 309–10). Political units descended from those founded by Scandinavian settlers in the ninth century survived the longest in northern and western Scotland: these regions only passed into Scottish control in 1266 (with Orkney and Shetland not following until 1468–9). Even if the political outcome of Viking conquest was absorption of the settlers into, and indeed the strengthening of, surviving local polities, Scandinavian language and culture exerted influence across Britain and Ireland long after formal political power passed to other authorities. Scandinavian personal names remained popular in eastern England until well after the Norman Conquest, and place names both there and on Man and in Scotland include a large Old Norse element. Man's Tynwald derives its name from the Old Norse *þingvǫllr*, 'meeting place', and takes place atop a mound, like other similar assemblies across Scandinavia (Wilson 2008, 122–7).

Across Britain and Ireland during the centuries considered here, kingship was the prevalent mode of government (Sawyer and Wood 1977; Davies 1993; A. Williams 1999; Halsall 2007, 455–98; Yorke 2009b), although the centres of power favoured by (often mobile) royal households shifted over time and changed in number. Already in the early part of this period it was possible for successful rulers to weld together large, if often transient, hegemonies by securing the submission of other territories: this was the basis on which Irish overkingships were constructed, and the

supremacies of the seventh-century kings of Gwynedd, Mercia and Northumbria. Assertions of supremacy, implying recognition by other rulers without much expectation of direct authority in their territories, continued long after this time. In Ireland, the rise and fall of larger territorial kingships played out several times over the centuries considered here, with some perennially strong players like the Uí Néill (see Chapter 14, section (a), pp. 323–6). Among the Anglo-Saxon kingdoms, the Mercian rulers of the eighth and early ninth century – Æthelbald, Offa and Coenwulf – presided over a large midland polity which exercised supremacy over most peoples south of the Humber, while later in the ninth century Wessex supplanted Mercian control over the south-east and counterbalanced Mercian strength in southern England more generally. Alfred's position relative to Mercia could be characterised as one of supremacy rather than (at least at first) the incorporation of the two kingdoms into a single unit (Keynes 1998b; 2001a); Æthelstan and his heirs in the tenth century asserted their supremacy over all Britain (Molyneaux 2011). In Scotland too larger hegemonies appeared in the eighth and ninth centuries as the kingdom of the Picts and Dál Riata came together. Wales alone remained dominated by a series of relatively small kingdoms. Some individual rulers such as Rhodri Mawr, Hywel Dda and Gruffydd ap Llewelyn gained authority over most or all of what is now Wales, but did not forge it into a single unit of sustained duration. The malleability of political relationships in the early Middle Ages led to flexible and situational definitions of rulers' status. Rule was generally defined with reference to peoples rather than territories, even if in practice most peoples had a strong sense of where their lands started and ended, and there was nothing to prevent the co-existence of multiple layers of identity: one could be Mercian as well as English, or Venedotian as well as a Briton, and Christian as well as all of these. Laws, genealogies, charters and indeed coins, as well as being demonstrative acts of power, helped create the shared ideology and infrastructure which held a kingdom together. This period was much more than a race to the establishment of the ancestors of modern nations, as consideration of the multi-layered politics of kingdoms and the evolving complexity of royal government reinforces.

(b) general features of the coinage

This volume concerns the coinage of Britain and Ireland in the early Middle Ages, from the effective end of direct Roman authority in the fifth century, which coincides approximately with the spread of Christianity to Ireland. Its close some six or seven centuries later is less easy to pinpoint, for the divergent histories of the various kingdoms in Britain and Ireland do not lend themselves to a single cut-off point. Politically at least, England is the easiest to accommodate, for the Norman Conquest of 1066 resulted in the sudden imposition of a new ruling class, even though there was considerable continuity in language, population and government (including the coinage) (cf. Bates 2005). Ireland also offers a relatively clear end-point: the Anglo-Norman invasion of 1169–71 is traditionally taken as a watershed, not least in monetary history, though the full effects of the invasion only came to be felt gradually. Scotland and Wales are more problematic. In the case of Scotland, the period is taken as ending in 1136 with the first coin production in the name of David I (1124–53), the first king of Scots to issue coins; for Wales, the volume closes with the establishment of mints early in the reign of William II (1087–1100), as part of the consolidation of Anglo-Norman power in the Welsh kingdoms.

Although much interest attaches to the circulation of coin in the territory of modern Scotland and Wales in the early Middle Ages, there is no evidence of minting in either area at this time, and as such discussion of them in this volume must be limited. In Ireland, Dublin became established as a prolific mint in the 990s, and coin was used there on a significant scale, but the frequency of finds dwindles the further one moves away from the city. The lion's share of minting and coin-use took place in the Anglo-Saxon kingdoms, though here too both were distributed very unevenly.

The coins themselves and the context from which they emanate are the focus of this volume, which therefore concentrates on issues such as dating, internal structure, mint organisation and systems of production. Units of account in Ireland, Wales and Anglo-Saxon England are discussed in Appendix 2. Although full analysis of circulation and coin-use is beyond the scope of the present volume, what became of coins after minting is considered when the issue is particularly germane to appreciation of the monetary system as a whole (for selected surveys see Spufford 1988; Rovelli 2009; Naismith 2014g). The transformative effect which growth of metal-detecting has had on British (especially English) numismatics as a whole needs to be underscored, however. Since the 1970s, expansion in the use of metal-detectors has brought many thousands of early medieval coins to light (Blackburn 2003b; Naismith 2013b). Internet-based initiatives now exist in England and Wales to keep track of these finds: the Corpus of Early Medieval Coin Finds (EMC) and the Portable Antiquities Scheme (PAS). Their records include many new hoards, but the largest and most challenging component of the new material consists of individual coins apparently lost separately (single-finds (q.v.)). Some occur in relative isolation, others in the context of so-called 'productive sites' (q.v.), a term created by numismatists to define small areas which have produced numerous single-finds (Pestell and Ulmschneider 2003). This body of material needs to be assessed carefully before arriving at conclusions about the nature of the early medieval monetary economy, for not all finds are reported, and some are only reported with partial information about their find-spot. Moreover, regional distribution of finds may be affected by relations between the major interested parties (detectorists, landowners and archaeologists), as well as by physical difficulties of present-day access, for instance in built-up areas (Chester-Kadwell 2009, 62–90; Richards *et al.* 2009; Bevan 2012; Robbins 2013). It remains the case, however, that metal-detected material as a whole has revolutionised the way in which early medieval coinage is studied: close comparison of the evidence of single-finds and hoards is now an integral part of early medieval numismatic research, and serves to highlight (for example) instances when the fortuitous preservation of one or more hoards gives a misleading impression of the original scale and distribution of a particular coinage.

(c) FROM LATE ANTIQUITY TO THE MIDDLE AGES: BRITISH COINAGE IN ITS EUROPEAN SETTING

Coinage in Britain and Ireland between the fifth and the eleventh century developed against the wider European backdrop of the transition from a recognisably Roman system to a characteristically 'medieval' one (cf. Spufford 1988). Britain in the decades before *c.* 400 remained part of a monetary system which was driven by a comparatively small number of large mints answering to the administrative and fiscal needs of the imperial government, shielded from the direct demands of coin producers by several layers of bureaucracy; these mints produced multiple denominations

in gold, silver and base metal, all naming and portraying the emperor, and between them supporting a complex monetary system which stretched across the whole empire (Hendy 1988; Grierson and Mays 1992; Kent 1994; Naismith 2014a). In the eleventh century, about one hundred mints operated within England alone, and although their products carried the name and image of the king and were used (in part) for payment of taxes and other royal dues, demand for production stemmed from direct interaction between customers and moneyers; in terms of denominations, there was effectively only one in regular production, the silver penny, and its circulation was tightly circumscribed within the borders of the kingdom.

The beginning of the transformation from the former system into the latter can be traced back to the era when native coinage first reappeared in England in *c.* 600. From what little can be discerned of the earliest English gold and silver coinage, it is likely that it followed the Merovingian model. Merovingian Gaul had maintained only the element of the late Roman currency most essential for taxation and prestigious, high-value transactions: gold *solidi* and *tremisses*. In spite of their high value, these coins probably continued to fulfil a range of purposes besides state taxing and spending, at a time when the taxation system of post-Roman Gaul was in a process of slow collapse. Minting in the Merovingian kingdom took place at a vast number of mostly small, rural locations, apparently answering to the demands of local elites with the wherewithal to deal in gold on a significant level. Industrial-scale late Roman mints – the products of which were carried across hundreds of miles by imperial functionaries for collection and distribution – had given way to a much more dispersed pattern in which sanctioned and skilled manufacturers instead gravitated towards customers (Hendy 1988; Carlà 2010; Naismith 2014a).

The transition from gold to silver developed out of debasement of the gold *tremissis* during the seventh century, and the first silver coins shared the size, weight and appearance of their gold predecessors. As with the earlier adoption of gold currency, there was a close correlation between developments in England and Francia, though in this case the exact progress and direction of influence is less clear. Adulteration of gold coins with silver had begun already in the early decades of the seventh century, but deepened thereafter, and could have served to broaden the economic role of the currency by diminishing the value of each individual coin (Naismith 2014a, 297). In England, it is possible to pinpoint the transition from pale gold to effectively pure silver in a cluster of specific coin types. The first silver pennies – *peningas* or *denarii* to contemporaries – appeared soon afterwards. They were made in voluminous quantity, at least compared with the earlier gold coinage and subsequent periods, and moved freely between England and Frisia, hinting at the importance of Anglo-Frisian trade in supporting the flowering of North Sea coinage in the late seventh and early eighth century.

Important refinements to the structure of the silver coinage came as the small, thick pennies began to diminish in number and quality during the middle third of the eighth century. Apparently in response to the challenges facing makers and users of coin, a string of rulers from Northumbria to Francia took a much more direct hand in policing the quality of the currency (Naismith 2012b). The first to do so was probably Eadberht, king of the Northumbrians, around 740; he was followed by Beonna in East Anglia and Pippin III (751–68) in Francia (who introduced the broad silver penny), both around 750–60, and finally in the 760s by Offa of Mercia and two local Kentish kings. Their efforts established the first explicit and large-scale royal coinages north of the Alps; they also resulted in the compartmentalisation of currency within the bounds of separate kingdoms as rulers stipulated that only their own issues would be acceptable in future (Naismith 2014g, 14–15).

Circulation, fineness, metrology and other dimensions of the coinage could henceforth diverge more sharply at political borders.

To a large extent, therefore, the groundwork for a coinage of silver pennies inscribed with the name of the king and limited in circulation to their kingdom of origin was laid in the eighth century. In England, the dominion of Offa over England south of the Humber at the time the new system was established gave rise to a zone of common currency between East Anglia, Kent, Mercia and Wessex which survived into the ninth century, even including times when the rulers of kingdoms within this area were at odds with one another. Wessex and Mercia eventually entered a monetary union in the 860s. Northumbria constituted a separate and distinct sphere of circulation, never having adopted the broad, thin pennies of southern England and Francia.

The Viking conquest and settlement of the later ninth century destabilised the Anglo-Saxon kingdoms, bringing an end to the distinct Northumbrian monetary tradition and introducing substantial modification to that of East Anglia. Scandinavian rulers instituted new coinages which blended elements of Anglo-Saxon and Frankish practice, with relatively little about them that was Scandinavian besides the names of the kings (and even these were not always placed on the coins). Anglo-Viking issues evolved swiftly, from imitations of Anglo-Saxon issues to new and meaningful designs which illustrate the Christianity and cultural diversity of the Danelaw. The campaigns launched by Edward the Elder and Æthelflæd led to the enforcement of a common coinage as one of the first tangible forms of Wessex and Mercia's impact in conquered areas. A single kingdom with a single coinage was created in England during the tenth century; the 'late Anglo-Saxon' monetary system in the 970s and after achieved the rationalisation and unification of existing mechanisms by looking back to West Saxon and Carolingian precedents of the ninth century. It was from these sources that Æthelred II and his advisers took the idea of frequent recoinage, and applied it more often and more effectively than it had been in England or Francia a century earlier. By these means one of the most influential coinages of the central Middle Ages took shape.

England's monetary system survived the Norman Conquest effectively intact, and remained firmly under the control of royal government. By this stage it was unique in northern Europe for its unity and close royal management across a comparatively large area, similar in scale to one of the stem-duchies of the Ottonian and Salian empire and much larger than the counties and duchies of contemporary France (Dumas 1991; Grierson 1991, 50–80). But in adherence to the silver penny originally instituted by Pippin III, England lay very much within the north-west European mainstream. Offa's and Charlemagne's (768–814) currency reforms took place almost simultaneously in the 790s, one presumably prompting the other, though their order is unclear (Naismith 2012c, 175–8; Garipzanov 2016). In the ninth century, debasement also took hold at approximately the same time on both sides of the Channel, implying a degree of co-ordination, and royal intervention restored high-quality silver currency in both regions in the 860s and 870s (see below pp. 13–15). But Anglo-Saxon and Frankish coinage had followed different trajectories in iconography and mint organisation since the 750s, and after the mid-ninth century parted ways in other respects. Mercia, Wessex and the Anglo-Scandinavian territories only gained a larger number of mint-places in the late ninth and early tenth century, long after a comparatively dense spread of mint-places had been established in the western and central parts of the Carolingian Empire. Recognition of royal authority remained a hallmark of the English coinage in the tenth century, whereas in the Frankish realms royal involvement in minting became attenuated: local magnates took a more overt part in the process, and sometimes their coins retained the name of a long-dead

king or even replaced the king's name with that of the relevant count, bishop or abbot. What had been a relatively coherent currency within each Frankish kingdom began to dissolve into more localised spheres of minting and/or circulation (Lafaurie 1970; Dumas 1973). This breakdown, it should be stressed, still reflected active engagement with the coinage by the ruling authorities (even if not by the king), and was not universal in late and post-Carolingian Europe (cf. Dumas 1991): Italy, for example, retained more or less the same few relatively large mints that had been active in the ninth century, which answered explicitly to royal authority throughout the tenth and eleventh centuries (see entries for Lucca, Pavia and Milan in Travaini 2011; *MEC* 12), while east of the Rhine mints only appeared in significant quantity in the course of the tenth and eleventh centuries, many with little or no royal involvement (Kamp 1982; Kluge 1991). A straightforward contrast between Mercian/West Saxon success and unity, as opposed to Frankish collapse, is therefore only one aspect of a much larger picture.

(d) moneyers and mint-places

In modern usage, the word 'mint' carries connotations of a substantial and concrete institution, such as the British Royal Mint. Because early medieval arrangements were more diverse (and probably often less formal), 'mint-place' is the preferred designation for places of production in this volume (following the precedent of Stenton 1970, 374–5; Stewart 1978b, 98). This term can be understood as shorthand for a location where more personalised arrangements for coin production prevailed: who made a coin was just as important as where it was manufactured. The key individual in this process is known as the moneyer: a man (no female moneyers are recorded (cf. Colman 2014, 11–18)) who took responsibility for minting and moneychanging, and who often placed his name on his coins as a guarantee of reliability. This duty was not undertaken lightly. Law-codes from tenth- and eleventh-century England lay down mutilation as the typical punishment for a moneyer caught issuing defective coin (Screen 2007; O'Gorman 2014).

It is likely that moneyers always constituted an important part of the infrastructure of minting in England. Anglo-Saxon coins regularly carried moneyers' names from the mid-eighth century onwards, and had sporadically done so from as early as the first half of the seventh century. The practice of emphasising the moneyer's role probably grew out of the Merovingian coinage that early Anglo-Saxon authorities imitated, and was carried into royal coinage in mid-eighth-century East Anglia (Naismith 2012c, 142–9). The latest early pennies of Series R bore moneyers' names, as did the coins of Beonna. Strikingly, pennies of Offa and the early Kentish kings also named the moneyer, even though they followed the precedent of Pippin III's coinage in many other respects (Naismith 2012c, 142–9.). The new Carolingian coinage adopted a quite different organisational scheme: it gave solely the mint name, as a proxy for the local count or other potentate who was responsible for its oversight (Lafaurie 1980; Naismith 2012b, 314–16). This structure prevailed in the Carolingian Empire throughout the eighth and ninth centuries, and in its successor kingdoms thereafter. In contrast, the moneyer remained the primary point of reference in England for two centuries: mint names appeared only sporadically on coins in the ninth century, and did not become a regular part of coin design until the 970s. The moneyer's name continued to be placed on English coinage until the thirteenth century.

Despite their importance to the monetary system, relatively little is known about Anglo-Saxon moneyers, and still less about those of Dublin. Very few of them appear in written records, and