

**The Economic History of Anglian  
Deira, 700 – 870**

**Volume 1 of 2**

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# 1: Abstract

The kingdom of Deira united with its northern neighbour Bernicia, to form the Anglian kingdom of Northumbria in the seventh century,<sup>1</sup> and remained part of that polity until the Scandinavian conquest of York in 866/7.<sup>2</sup> Its economy has not previously been the focus of economic study as few contemporary textual sources survive, and none of the documentary type usually used to investigate economic activity. However, much archaeological evidence is available, including detailed finds assemblages from several excavated sites. An increasing body of numismatic evidence has also become available in recent years through the activity of metal-detecting enthusiasts. This material is readily accessible in a digital format,<sup>3</sup> and this project has explored the potential of a variety of statistical analyses for economic research.

The economy that emerges seems sometimes contradictory: in some ways more complex, and perhaps more developed, than is usually assumed, but driven by production ultimately based on subsistence. A deeper irony emerges from such contradictions: the micro-regionalized and constantly evolving nature of the economy of Anglian Deira puts it firmly in the mainstream of the contemporary European West. The political and ecclesiastical history of Deira has always

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<sup>1</sup> See section on 'The establishment of the Study Area', p. 53 below, for more discussion of the boundaries of Deira. Illustration 1, originally published as Illustration 50 in J. Campbell (ed.), *The Anglo-Saxons* (Harmondsworth, 1982), p. 52, presents the location of Deira, and Illustration 2, produced for this project, shows significant places mentioned in the text.

<sup>2</sup> See n. 134, '2: General Introduction' below.

<sup>3</sup> See p. 197 below.

stimulated scholarly debate. This study aims to set its economic history in its rightful place in that discussion, while exploring and developing a methodological model for the examination of regional economies in early mediaeval Europe.

## 2: General Introduction

### *Introduction*

This section introduces some of the core issues relating to the economic history of Anglian Deira. The second section of this chapter explores the fundamental concept of economic history, and the wider regional context in which Anglian Deira was located. The next section introduces the interdisciplinary approach that will be used in this project, presents the sources available, and considers some important methodological issues, concluding with a summary of the structure of the thesis.<sup>1</sup> The fourth and final section provides a brief introduction to the geographical and political history of Anglian Deira, explaining the choice of 700–870 as the study period for this project and providing a general context for the following chapters.

### *Economic History*

#### Conceptualizing Economic History

The Oxford English Dictionary defines one sense of the word ‘economic’ as ‘practical or utilitarian in application or use’, illustrated by a quotation defining of economic history as ‘not so much the study of a special class of facts as the study of all the facts of a nation’s history from a special point of view’.<sup>2</sup> It is this understanding of economic history that inspired the research on which this thesis is based: the study of the practicalities of everyday life for the whole mediaeval population, through the study of ‘all the facts’ of Anglian Deiran history.

The economic historian Carlo Cipolla has proposed a definition of his subject which explores the ‘special point of view’ of the previous quotation. He suggests:

The discipline known as economic history ... is the history of facts and of economic events as they relate to individuals, firms and communities. ... ‘economic history’ is to be taken as meaning the economic history of people. ... This point, which at first seems trite means that economic history must take account of the physiological and psychological characteristics

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<sup>1</sup> This section will include a discussion of the structure of this thesis.

<sup>2</sup> W. Cunningham, *The Growth of English Industry and Commerce* (Cambridge, 1882), p. 5

specific to humans, of their rationality and irrationality, and of their mental, social and cultural characteristics, as these appear in both individuals and communities.<sup>3</sup>

This definition helpfully places the focus of economic history on mediaeval people.

The abstractions of economic models are thus reduced to the level of tools with which the economic historian attempts to understand the activity revealed in the sources studied. Refining the methodological tools which are used to investigate the early mediaeval economy is an important aim of this project, but it is ultimately secondary to a more fundamental aim: understanding the variety of *people's* experiences of the early mediaeval economy.

However, mediaeval people are not the only ones who influence our view of the mediaeval economy. Modern economic historians are not privileged with an academic ideal of neutral isolation: they have a 'mental, social and cultural' context of their own. The view-point of the modern observer is defined by global capitalism, defined by the principles of the free market. The *formalist* school of thought would argue that many of these principles are universal truths, applicable to any human society. The *substantivists*, on the other hand, would argue that the modern economy is entirely a function of the current 'mental, social and cultural' context, so the economic theory which describes it cannot be used as a basis for the discussion of historical economies which functioned in very different contexts.<sup>4</sup>

Rigid application of either of these approaches can become dogmatic. Extreme formalism risks characterizing the economy of the past as an under-developed version of the economy of the observer's own experience. Substantivist positions seem by definition separated from their observer's experience, but in practice they run the risk of defining the economic past as the diametric opposite of the observer's economic present.

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<sup>3</sup> C.M. Cipolla, *Between History and Economics: An Introduction to Economic History* (Oxford, 1991), p. 3.

<sup>4</sup> For more discussion of formalism and substantivism, see M. Johnson, *Archaeological Theory: An Introduction* (Oxford, 1999), p. 147.

An awareness of the ‘mental, social and cultural’ context of the present is therefore essential when approaching economic history.<sup>5</sup> For this discussion, there is clearly a danger of characterizing early mediaeval economies as poorly developed capitalist marketplaces. Equally important, however, is vigilance against romanticism of the historical economies studied. As John Moreland notes:

The problem with this “ideology of primitivism” is that the societies which are constructed through it are “celebrated” not for what they are or were, but for what they mean to Us. ... In the past it was not only different, it was also better.<sup>6</sup>

Ultimately, however, the observer can never step out of their contemporary frame of reference: there is no way, for example, that the inherent tendency of human societies towards capitalism can be assessed from within a capitalist environment. Future researchers will always be able to identify the prisms through which we see the world much more clearly than we can ourselves. However, while a particular perspective may define the observer’s viewing angle, it does not necessarily inhibit their view. An early twenty-first-century perspective is as good a position as any other from which to view the mediaeval economy, and by maintaining a close, and primary, focus on mediaeval sources,<sup>7</sup> it is reasonable to hope for some insights, at least, into the reality of the mediaeval past.

### The Economic History of Early Mediaeval Europe

Having established the economic viewpoint of the modern observer, Cipolla’s definition would suggest that the next task for the economic historian is to establish the context of the subject, for this project, Deira, a region of southern Northumbria, in the eighth and ninth centuries. The economic context for this project is not limited by the borders of Deira, or even those of the Germanic area of Anglo-Saxon England, or the island of Britain itself. Deira shared much of its ‘mental, social and

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<sup>5</sup> See J. Moreland, ‘Concepts of the Early Medieval Economy’, in I. Lyse Hansen and C. Wickham (eds.), *The Long Eighth Century, Transformation of the Roman World 11* (2000), pp. 2–3.

<sup>6</sup> *Ibid.*, pp. 23 and 24.

<sup>7</sup> That is, ‘a movement of perspective from economic abstractions to historical forms’ (N. Thomas, *Entangled Objects: Exchange, Material Culture and Colonialism in the Pacific* (Cambridge, 1991), pp. 15–6 David Hill more prosaically comments: ‘Forget the Trobriand Islands, the Kula Ring and the potlatch, when good, sound and relevant evidence is at hand’: D. Hill, ‘End Piece: Definitions and Superficial Analysis’, in R. Cowie and D. Hill (eds.), *Wics: The Early Mediaeval Trading Centres of Northern Europe* (Sheffield, 2001), p. 77.



cultural' context with regions across western Europe, so this general introduction will consider scholarship from across this cultural area. Such a wide-ranging context is particularly important in the light of the historiographical traditions of 'difference' between England in general and the north of England in particular and contemporary activity in continental Europe. Much of this discussion below will focus on regionalism, a factor which has perhaps contributed to the impression of isolation that still haunts early mediaeval Northumbria:<sup>8</sup> much will be seen to be distinctive about Deira, but this puts it firmly within the mainstream of a European context characterized by distinctive regions.

This historiographical divide between rural and urban studies present in much academic literature has determined the structure of this section. The review will begin with a consideration of the rural economy, considering first the 'macro-context' of continental Europe during the study period of this project. Characterizations of the contemporary British economy will then be considered, including a consideration of the 'multiple estate' model that has dominated considerations of English tenurial structures. The scholarship of urban sites will then be discussed, including their role in what has become the dominant theme in early mediaeval economics: long-distance trading activity and its role in the early mediaeval economy.

## The Rural Economy

### The Carolingian Economy

The scholarship of Henri Pirenne looms large in the historiography of European economic history, and his uncompromisingly negative assessment of the economic infrastructure of the early mediaeval period lies at the root of traditional characterizations of the rural economy: closed and inward-looking, with economic activity predominantly at subsistence level.<sup>9</sup> This stagnation was thought to

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<sup>8</sup> See p. 191 below.

<sup>9</sup> H. Pirenne, *Medieval Cities: their Origins and the Revival of Trade* (Princeton, 1925); H. Pirenne, *The Economic and Social History of Medieval Europe* (New York, 1933) and H. Pirenne, *Mohammed and Charlemagne* (London, 1939) For discussion see papers in A.F. Havighurst (ed.), *The Pirenne Thesis: Analysis, Criticism, Revision*, 3rd edn (Lexington, 1976) Pirenne continues to

epitomize the dark ages, with individual settlements enduring a somewhat hand-to-mouth existence, and conducting their economic activity largely in isolation from others (apart from the unwelcome attention of parasitic elites, demanding a share of whatever meagre sustenance they had scraped from the soil) until the European economy was stimulated back into action in the later middle ages.<sup>10</sup>

The emergence of new evidence has undermined many aspects of the ‘Pirenne thesis’, but it is a new level of analysis of the textual corpus which formed his primary resource that is changing attitudes about the ‘dark age’ rural economy. In particular, the Belgian historian J. P. de Vroey has shown the polyptychs, estate management records of the great Carolingian abbeys, to have been normative, attempting to impose the classic manorial structure, rather than merely describing the static pattern of rural production derided by Pirenne. Adriaan Verhulst’s recent assessment of the Carolingian economy of the eighth and ninth centuries has shown that rural production was anything but standardised, with individual estates, sometimes individual settlements within estates, operating under highly individualised conditions.<sup>11</sup> Clearly it was in the administrative interests of great landowners to standardise their estate management strategies, and many made vigorous attempts to do so, administrative documents such as the polyptychs being one method by which this standardisation could be imposed.<sup>12</sup> However, such attempts, particularly perhaps in the short term, were not always successful; individual communities could, and did, fight back. The economic landscape of Carolingian Europe thus now appears to have been a highly regionalised patchwork,

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be a major focus for mediaeval scholarship, as seen in two important discussions published as recently as 1998: R. Hodges, ‘Henri Pirenne and the Question of Demand in the Sixth Century’, in W. Bowden and R. Hodges (eds.), *The Sixth Century: Production, Distribution and Demand, The Transformation of the Roman World Volume 3* (1998), pp. 3–14 and P. Delogu, ‘Reading Pirenne Again’, in Bowden and Hodges (eds.), *The Sixth Century*, pp. 15–40.

<sup>10</sup> For detailed discussion of the development of scholarship on the early mediaeval economy, see Moreland, ‘Concepts’, pp. 1–34 and J.D. Naylor, *An Archaeology of Trade in Middle Saxon England*, BAR British Series 376 (2004), pp. 3–14.

<sup>11</sup> A. Verhulst, *The Carolingian Economy* (Cambridge, 2002), pp. 50–7.

<sup>12</sup> Standardisation of state management may also have been stimulated by royal encouragement; see Verhulst, *The Carolingian Economy*, p. 39.

with a multitude of economic rights and obligations varying in kaleidoscopic patterns. Economic history as the economic history of people is at its most apparent: the intensely local circumstances were the most dominant factor in the rural economy, echoing an importance of personal networks that resonates through mediaeval society as a whole.<sup>13</sup>

If the Carolingian economy was not as standardised as written sources would suggest, neither does Verhulst's study find it as stagnant as Pirenne had maintained. His detailed examination of estate records has highlighted the expansion of cultivated area within estates, actively encouraged by landowners. This increase in the productive capacity of the land was echoed in demography; a steady expansion in the population increased the potential workforce, so further increasing productivity. Technological advances may have proceeded rather more slowly; where growth could be comfortably achieved with current technology, there may have been little incentive to improve. However devastating the collapse of the Roman economy had been after the state that maintained it withdrew, it was the end of a world rather than 'the end of the world';<sup>14</sup> time did not stand still, and the centuries in the middle of the first millennium seem to have witnessed a period of considerable economic growth.

### Economic History in Anglo-Saxon England

The detailed administrative documentation on which the scholarship of the economic history of continental Europe is based is largely absent from English archives of the early mediaeval period, although a considerable number of land-charters have been preserved, mainly in later copies. Recent positive re-assessments of economic activity in Carolingian Europe have been reflected in challenges to the concept of stagnation in the rural economy of England in important articles by

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<sup>13</sup> See for instance, N. Gauthier, 'Le Reseau de Pouvoirs de L'évêque', in G.P. Brogiolo, N. Christie and N. Gauthier (eds.), *Towns and their Territories between Late Antiquity and the Early Middle Ages*, Transformation of the Roman World 9 (2000), pp. 173–207.

<sup>14</sup> A phrase used at the title for part one of M. McCormick, *Origins of the European Economy: Communications and Commerce AD 300–900* (Cambridge, 2001).

James Campbell and John Moreland.<sup>15</sup> More specific considerations of economic activity in England had been largely confined to interpretation of individual sites in archaeological excavation reports, until two major developments, one scholarly, the other social, focused more attention on the early mediaeval economy.

The first was the development of the ‘minster hypothesis’, a framework for ecclesiastical activity in Anglo-Saxon England which has enormous social and economic as well as religious implications. The second was the growth in metal-detecting activity, which has produced a previously unimaginable corpus of coins and metalwork. The activities of these hobbyists have not been without controversy and the artefacts themselves, the factors inherent in their recovery and the best way of managing the relationship between academics and metal-detectorists have generated a significant amount of scholarly interest in recent years. Both the ‘minsters’ and the advent of metal-detecting are clearly important for this project, and detailed consideration of these subjects is given in appropriate sections of this report.<sup>16</sup>

### Landscape and settlement organisation in England: the ‘Multiple Estate’ Model

Discussion of the nature of early mediaeval landholding in northern England in particular has centred around the ‘multiple estate’ model, developed over a series of articles from the 1960s by Prof. Glanville Jones. It is perhaps best described in his own words:<sup>17</sup>

The essential features of this multiple estate were that it was a territorial entity containing a hierarchy of settlements, settlements which were in part functionally differentiated and whose occupants, supervised by a ministerial aristocracy, owed rents and services for the support of a lord.

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<sup>15</sup> J. Campbell, ‘Production and Distribution in Early and Middle Anglo-Saxon England’, in T. Pestell and K. Ulmschneider (eds.), *Markets in Early Medieval Europe: Trading and "Productive" Sites, 650–850* (Macclesfield, 2003), pp. 12–9; J. Moreland, ‘The Significance of Production in Eighth-Century England’, in Lyse Hansen and Wickham (eds.), *The Long Eighth Century*, pp. 69–104.

<sup>16</sup> See ‘Metal Detected Evidence and Distribution in Anglo-Saxon England’, p.131 below.

<sup>17</sup> G.R.J. Jones, ‘Multiple Estates Perceived’, *Journal of Historical Geography* 11 (1985): 354.

The model has not been without its critics,<sup>18</sup> but has been widely used as a foundation for understanding English land-holding patterns in the early medieval period. Jones identified this basic ‘multiple estate’ pattern not just in charter material from Anglo-Saxon England, but in Welsh and Scottish land-holding as well, argued that its origins may pre-date Anglo-Saxon, or even Roman settlement. The development of estates has been extensively studied in the context of Carolingian Europe, and estates comprised of dispersed, sometimes specialised, settlements owing some form of tribute to an estate centre are regularly visible in the much greater body of documentary material that survives in continental archives.

Rosamond Faith’s analysis focused on the documentary evidence for the functioning of multiple estates in England. She identified core areas within multiple estates known as ‘inland’, devoted to the direct supply of the estate owners at a central settlement, and characterized by a largely dependent population, owing heavy obligations to the landowners. She termed non-‘inland’ settlements ‘outland’, or ‘warland’, and suggests that they came to be defined as settlements which rendered their own taxes to the king, and owed a varied, but generally less onerous, range of obligations to intermediate landowners.<sup>19</sup> Faith’s analysis implies that the basic patterns of ‘inland’ and ‘warland’ can be understood as characteristic of Anglo-Saxon England. Her primary interest is in the social, rather than the economic, implications of this system, and she goes on to suggest that these tenurial structures were crucial to the social fabric of Anglo-Saxon England. The residents of the ‘warland’ are characterized as largely independent, increasingly burdened by service obligations, but, nonetheless relatively free. She suggests that the residents of ‘inland’ on the other hand, led much more servile lives, heavily dependent on the lords whose lands they worked. This naturally raises issues of freedom and slavery: Faith suggests that it is likely that some level slavery was present in both: the heavily controlled lives of inland tenants are portrayed as often

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<sup>18</sup> In particular in an article by N. Gregson, N. Gregson, ‘The Multiple Estate Model: Some Critical Questions’, *Journal of Historical Geography* 14 (1985): 339–51.

<sup>19</sup> See chapters 3–5 of R.J. Faith, *The English Peasantry and the Growth of Lordship* (London, 1997).

little better than slavery, regardless of the nominal legal status of the individuals concerned, but 'warland' farms would also have housed slaves as independent tenants used slave labour to supplement that of their own families in cultivating their small-holdings.

Dr. Faith's detailed analysis of the development of tenurial systems across England largely focussed on southern England and was based primarily on documentation, such as West Saxon law-codes and, above all, Domesday Book. The estates she characterizes are highly reminiscent of the classic bipartite estate of continental scholarship.<sup>20</sup> Bipartite estates were comprised of two basic kinds of settlement: the *caput*, and dependent settlements inhabited by tenants of the estate owner. The estate centre would be supported by food rents from the tenants and the produce of a 'home farm', usually (but by no means necessarily) an area of land surrounding the settlement. The home farm, or demesne, was worked by service obligations, owed by the tenants in addition to any food rents (and potentially other services) in exchange for the right to work their rented farms to support themselves. However, as discussed above, continental scholarship has begun to characterize this classic estate as perhaps more idealistic than realistic in many regions, even in the heartlands of the Carolingian empire.<sup>21</sup> The realities on the ground varied according to regional conditions: some estate centres were supported entirely by produce rents from their tenant settlements, with little or no evidence of an area around the centre dedicated to its direct support. Other estates produce little evidence of tenant settlements at all, and were entirely supported by the land around them worked by slaves resident at settlements directly dependent on the estate centre.

The continental analogy would suggest that Faith's suggestion of a general 'inland'/'warland' tenurial structure throughout Anglo-Saxon England should be treated with some caution. Regional variation is likely to have had a major impact, even if such a pattern can be accepted as general. Significant differences in social organization have been observed between areas which became part of the 'Danelaw'

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<sup>20</sup> For a general introduction to this concept in Continental scholarship see Verhulst, *The Carolingian Economy*, pp. 33–6.

<sup>21</sup> See 'The Carolingian Economy', p. 17 above.

in the ninth century and those which did not. Although the impact of Scandinavian settlement has been the traditional focus of scholarly attention, modern research has begun to suggest that the distinctiveness of northern and eastern England in Domesday Book may be rooted in pre-Viking traditions.<sup>22</sup>

Temporal variation would also have been a factor, and each generation of lords and farmers would have determined the details of their tenurial agreements in response to changing economic, social and political circumstances. Faith notes:<sup>23</sup>

‘It is useful to see the multiple estate less as a relic of antique social organization – a fixed entity enduring over time, although some may have been just that – than as part of a process. ... as we can observe it in Anglo-Saxon England the multiple estate seems to represent a stage in the evolution of extensive lordship’.<sup>24</sup>

The organization of the early mediaeval landscape may have experienced particularly dramatic changes as the inhabitants of northern England responded to the rapidly developing political situations of the sub-Roman and Anglian periods. The possibility that particular areas, of the same kingdom, or even the same region, experienced economic developments that were part of wider patterns at different times must therefore always be a factor in the consideration of economic history.

The implications of the ‘inland’/ ‘warland’ distinction would have been significant for the economic history of a landscape organized according to these principles. However, in the absence of direct evidence of its existence in Anglian Deira, analysis of tenurial structures at this level of detail cannot be applied in this study. Nonetheless the basic premise of the multiple estate: landholding units based on dispersed settlements that formed part of a composite estate focused on an (economical and social, but not necessarily geographical) centre, seems to be widely applicable across western Europe, as well as more locally in the island of Britain. Despite (or perhaps, more accurately, because of) its essential vagueness, the multiple estate model seems to be the best currently available for understanding the tenurial infrastructure of Anglian Deira.

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<sup>22</sup> See, for examples, chapters 3 – 5 of D.M. Hadley, *The Northern Danelaw: Its Social Structure c. 800–1100*, Studies in the Early History of Britain (2000).

<sup>23</sup> Faith, *Lordship*, p. 12.

<sup>24</sup> For more discussion of these concepts, see ‘*Scirs* and the origins of Multiple Estates’ p. 171 below.

## Urban Economies

### Early Mediaeval Cities

Urban sites played a central role in the Roman economy, and, partly because of this, discussion of sites which have been characterized as urban has featured somewhat disproportionately to the relative number of such sites in the early middle ages. The mediaeval economies of modern cities have attracted particular attention due to the large amount of archaeological material often available as a result of rescue excavations funded by development work. York is among the modern cities that have come under close scrutiny in the last two decades as a wealth of information was revealed by research excavations at sites on Coppergate and Fishergate, the latter producing material from the Anglian study period of this project.<sup>25</sup>

As a result of all this activity, much is now known about mediaeval settlement in modern European cities. The theme of regionalism, familiar from the discussion of rural economies above, remains prominent, and different regions across the area that had been under Roman authority followed different paths into the early middle ages. However, some general themes do emerge. The Roman state played a crucial role in maintaining urban life, and the collapse of Roman rule in the west led to a general decline in urban life. Adriaan Verhulst's survey of cities across the whole of north-west Europe finds little evidence for continuity of urban function, except at a few centres such as Huy in the Meuse valley, and clear evidence even of continuity of occupation from the Roman period, as exists, for example, at Maastricht, is the exception rather than the rule.<sup>26</sup> Indeed, even in eastern areas which remained under Roman control, urban centres were becoming less functionally important by the seventh century.<sup>27</sup> The history of York, with an urban function under Roman rule, through a decline in the fifth and sixth centuries to some form of economic revival in the seventh and eighth centuries (as represented by the site at Fishergate) and continuing economic importance in the

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<sup>25</sup> These sites are introduced on p.42 and p.40 below.

<sup>26</sup> A. Verhulst, *The Rise of Cities in North-West Europe* (Cambridge, 1999).



ninth century (as represented by the site at Coppergate), thus appears fairly unremarkable in a European context, and certainly not as different or remote from Continental centres as its northerly, and apparently isolated, position might at first suggest.

### *Wics, Emporia and Long Distance Trade*

During the study period of this project, however, the economic role of Roman cities has been eclipsed, particularly in English scholarship, by that of a group of sites known as *wics* or *emporia*, after the work of Richard Hodges whose theoretical models have been extremely influential in the interpretation of these sites.<sup>28</sup> The basis of these theories is the remarkable appearance of a considerable number of sites, which excavations indicate to have been newly, and deliberately, founded on an impressively large scale, in the seventh or eighth centuries in many areas across north-western Europe.<sup>29</sup> The discovery of these sites has generated much academic debate, often focussing on attempts to generate a single typology for this kind of site. This has somewhat problematized the issue of what exactly should be considered a *wic* or *emporium* site. A rigorous definition was proposed by David Hill in his concluding article to the proceedings of a conference held in 1994 that focused on these sites. Hill identified seven relevant criteria, although he suggested that not all need to be present to define a site as a *wic*:<sup>30</sup>

#### 1. Commercial centre

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<sup>27</sup> W. Brandes and J. Haldon, 'Towns, Tax and Transformation: States, Cities and their Hinterlands in the East Roman World c.500-800', in Brogiolo, Christie and Gauthier (eds.), *Towns and their Territories*, pp. 148–50.

<sup>28</sup> See particularly R. Hodges, *Dark Age Economics: The Origins of Towns and Trade, A.D. 600–1000*, 2nd edn (London, 1989), and more recently, R. Hodges, *Towns and Trade in the Age of Charlemagne* (London, 2000).

<sup>29</sup> The economic history of southern Europe was distinct from that of the north-west, as demonstrated by Chris Wickham's work in northern Italy (notably C. Wickham, *The Mountains and the City: the Tuscan Apennines in the Early Middle Ages* (Oxford, 1988) and C. Wickham, *Land and Power: Studies in Italian and European Social History, 400–1200* (London, 1994)). Wickham has suggested in particular that continued activity in Roman towns in northern Italy may have fulfilled the economic need to which *wics* were a response in northern Europe.

<sup>30</sup> Hill, 'End Piece', pp. 75–6.

2. Harbour
3. Pre-Viking
4. Large occupied area (over 5ha (12 acres))
5. No defensive works before 850
6. Craft centre
7. Evidence of long-distance trade.

From these, the site at Fishergate, York, could be defined as a *wic* site, and it is classed as such in the appendix to the conference proceedings listing the known *wic* sites,<sup>31</sup> although some observers are still reluctant to accept the site as of the *wic* type.<sup>32</sup>

The term *emporium* is easier to define as it was introduced into common usage by the work of a single scholar. In his highly influential book, *Dark Age Economics*, Richard Hodges defined three major types of economically significant site in Western Europe in the early middle ages: Types A, B and C *emporia*. He later summarised the three types:

... I attempted to define a typology for the principal urban centres linked to this trade: class A *emporia* being periodic fairs; class B *emporia* being large monopolistic centres; class C *emporia* being solar central-places – regional centres.<sup>33</sup>

Hodges' definitions have attained reasonably wide usage in English scholarship, although Hill notes that, 'the archaeological evidence is too weak in most cases to be able to use the A/B typology'.<sup>34</sup>

In his analysis of early mediaeval *wics*, David Hill is careful to note:<sup>35</sup>

...one would always stress the uniqueness and individuality of each site but we are searching for patterns and attempting to identify groups.

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<sup>31</sup> R.L. Kemp, 'York', in Cowie and Hill (eds.), *Wics*, pp. 92–4.

<sup>32</sup> A. Vince, 'Saxon Urban Economics: An Archaeological Perspective', in D.J. Rackham (ed.), *Environment and Economy in Anglo-Saxon England*, Council for British Archaeology Research Report 89 (1994), p. 115.

<sup>33</sup> R. Hodges, 'Dark Age Economics Revisited: W. A. van Es and the End of the Mercantile Model in Early Medieval Europe', in H. Sarfartij, W.J.H. Verwers and P.J. Woltering (eds.), *In Discussion with the Past: Archaeological Studies Presented to W. A. van Es* (Amersfoort, 1999), p. 228.

<sup>34</sup> Hill, 'End Piece', p. 79.

<sup>35</sup> *Ibid.*

The appearance across a wide area of sites that share many of the criteria for *wic* status that Hill identified above, particularly the foundation around the same period of a considerable number of new sites that share these features (the earliest levels at *Hamwic*, Fishergate (York), Dorestad, Birka, Ipswich and *Quentovic*, for example, all date to within fifty years of each other), is of undeniable economic significance. The region in which they appear, Western Europe and Scandinavia, is loosely linked in cultural terms, the people who inhabited the sites either living within Germanic culture, or sharing a memory of a Germanic past. However, the looseness of the cultural links between a centre such as Birka, in a Swedish polity which was characterized neither by institutional Christianity nor institutional kingship as Charlemagne would have recognized it and Rouen, an ancient Christian centre in the heart of Charlemagne's empire, and with a long Roman tradition, caution against the assumption that the *wic* sites which have been suggested at both should be considered as identical economic responses to identical economic circumstances: broadly similar, certainly, and even comparable, but the identification of the *wic* type, however useful as an economic shorthand, should not be used complacently to fill in gaps in the history of one site by analogy with another.

Widespread usage of the terms, *wic* and *emporia*, grouping disparate sites together to imply a kind of general typology may, in fact, mask important regional differences in economic centres throughout western Europe. Clarke and Ambrosiani comment that:<sup>36</sup>

...although these two trading centres (Ipswich and *Hamwic*) of the eighth and ninth centuries are usually compared as if they were the same, they are appreciably different in several ways. Perhaps then there were a number of different types of English trading sites or emporia during the early middle ages, not a single basic form.

Numerous other authors make the same point, for example, Robert Cowie, who comments:<sup>37</sup>

Even though only small areas of the English *wics* have been excavated, differences between them are already apparent, and it is clearly an oversimplification to treat them as a single type of settlement.

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<sup>36</sup> B. Ambrosiani and H. Clarke, *Towns in the Viking Age* (Leicester, 1990), p. 36.

<sup>37</sup> R. Cowie, 'English Wics: Problems with Discovery and Interpretation', in Cowie and Hill (eds.), *Wics*, p. 17.

The scholarship concerning the end of the *wic* sites emphasises how the type is more of a useful shorthand than an economic reality. Hill lists four main ways in which the *wic* sites came to an end, along with examples of major *wic* sites in each category:<sup>38</sup>

1. Suburbs subsumed in their major site: London, Rouen, York.
2. Continuing occupation: Dunwich, Ipswich, Staraya Ladoga.
3. Totally abandoned: Åhus, Birka, Domburg, Dorestad, Loddekopinge.
4. Those that move a short way: *Hamwic*, Hedeby, *Quentovic*, Ribe.

It should be noted that 1,2 and 4 involve continuation of the site. This is perhaps the clearest indication of the abstract nature of the type. Hill comments further:<sup>39</sup>

The end of the *wics* comes about 850, in some cases physically ... but also by definition. Having defined these sites as 'pre-Viking', when Viking times arrive the definition becomes inoperative. Is this mere pedantry, or can a change be observed in the function of the sites? Probably the latter. Some acquire defences, but what else can be noted? The suggestion that Vikings, river course changes, silting of harbours and bays or the change in the design of ships is responsible is not capable of proof. One is certainly attracted by Hodges' systemic theories of their disappearance.

The desire to distinguish between pre- and post-Viking Age towns, implicit in a typology ending by definition as a result of Viking activity have put a 'Viking line' between the economies of on either side of the ninth century. Combined with Hodges ABC typology, this has led to a somewhat unhelpful characterization of 'towns' in pre-Viking Age Europe as the opposite of later Viking Age towns, for example:<sup>40</sup>

...there is a contrast between pre-Viking towns whose main purpose was international trade and the earliest post-Viking towns, which seem to have developed as towns (*sic*) first to serve a rural hinterland.'

Archaeological excavations do show clear differences between ninth-century and tenth-century sites, and indeed between ninth- and tenth-century levels of the same site. Viking activity was clearly a major factor in the economic history of later ninth- and tenth-century Europe. But the historiography of *wic* sites has created an academic environment in which their distinctiveness from later towns, in particular their independence from their local contexts, has perhaps been over-emphasised.

The documented appearance of the Vikings in the ninth century may too easily have been used to ascribe economic developments to Scandinavian military activity. It

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<sup>38</sup> Hill, 'End Piece', p. 84.

<sup>39</sup> *Ibid.*

<sup>40</sup> Vince, 'Saxon Urban Economies', p. 117.

is, of course, inconceivable that such activity would not have had economic consequences, but that does not mean that all the economic developments of the ninth and tenth centuries were ‘caused’ by the Vikings. In particular, it is important to avoid the characterization of pre-Viking towns as a kind of primitive ‘other’, as might be implied in the quote above.

Recent scholarship has attempted to correct this bias, with a much greater emphasis on the place of *wics* in their regional environments.<sup>41</sup> In those countries where it is legal, the increasing volume of coins and metalwork produced by metal-detecting enthusiasts has also stimulated a new scholarship on the regional economies of western Europe, again taking the focus off the international trade that has been the main focus of the *wic*-centred scholarship and emphasising the importance of local and regional activity in the early mediaeval economy, in the pre-Viking as well as the post-Viking era.

### Conclusion: An Economic Context for Early Mediaeval Deira

This discussion has introduced some of the important academic discussions relevant to the consideration of the economic history of Anglian Deira. Western Europe has emerged as an economic kaleidoscope, with economic circumstances in different regions highly localised to individual circumstances. However, the broad similarities that brought western Europe together as a reasonably coherent cultural area are manifested in general similarities in economic behaviour: the landscape was generally organised into units that in England have come to be known as ‘multiple estates’ (though the internal functioning of these units is subject to considerable variation), and some kind of economic need stimulated the deliberate foundation of a group of sites that have come to be known as *wics* (or *emporia*) across western Europe and Scandinavia in the seventh and eighth centuries. This analysis will provide a crucial context for the research presented in this project, and many of the issues raised here will be brought up again in the more specific consideration of Anglian Deira. However, this general introduction will now move on to consider

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<sup>41</sup> Although the use of the term ‘hinterland’ to describe the region around the *wics* may be an indication of continuing hierarchical attitudes.

the ways in which economic history can be studied, in general, and in the particular instance of the region of southern Northumbria which forms the study region of this project.

## ***A New Methodology: Interdisciplinary Economic History***

### **Traditional Sources For Economic History**

The classic sources from which economic history is written are documentary: charters, recording the transfer of land; law-codes describing, or defining, the framework within which economic activity took place (or at least a framework that particular authorities hoped to bring about), and above all surveys and administrative documentation from great estates such as the polyptychs from continental churches or, in England, the monumental Domesday survey. These documentary sources can provide information about demographics and economic infrastructure, and are often amenable to statistical analysis comparable to that undertaken by modern economists.

However, no such texts survive from northern England until the tenth century, and only a handful of charters and writs pre-date the Domesday record for Yorkshire.<sup>42</sup> It is not even clear how many such documents originally existed: incidental references in eighth-century texts make it clear that charters at least were probably known in seventh-century Northumbria in a form similar to those that survive from the south of England,<sup>43</sup> but there is no further evidence for how widespread the role of written documents may have been in Anglian Deira. It would therefore seem natural to use the 1086 Domesday survey as a basis for the economic study in northern England. Rosamond Faith, as discussed above, used this approach, and Dawn Hadley's discussion of the northern Danelaw (focussing on a

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<sup>42</sup> See C.N.J. Smith, 'The Endowments of York and Durham: Administrative and Political Authority in Late Anglo-Saxon Northumbria' (Undergraduate Dissertation, University of Cambridge, 2001) for more discussion.

<sup>43</sup> *Ibid.*

study period between c. 800 and 1100) also made heavy use of the Domesday survey to evaluate economic issues.<sup>44</sup>

However, the Domesday record has not been a major source for this project. The evidence of Domesday for northern England has been considered in detail by the authors mentioned above, but the early study period of this project precluded its use in this context. It is very unclear how much, if any, evidence relating to the economy of Anglian Deira (including the eighth- and ninth-century study period of this project) is preserved in the Yorkshire Domesday. There were major changes in the political administration of the region between the ninth century and the late eleventh, from the kings of Northumbria, through the various Viking Scandinavian rulers of Jorvik to the final Anglo-Saxon and English conquerors from the south. The English kings who eventually brought the region under their influence were themselves transformed into the Anglo-Danish rulers of the early eleventh century; the major political restructuring of the realm of England into earldoms under Cnut perhaps especially affected the apparently semi-autonomous polity of Northumbria. It is impossible to know how much of the pre-existing economic infrastructure survived these cataclysmic political changes, but the landscape and economy of the Yorkshire Domesday will certainly have been profoundly affected by events that post-date the end-date of this project in 870.

In an attempt to approach the Anglian period more reliably, this study will be primarily concerned with sources contemporary to the eighth and ninth centuries themselves. As noted above, this corpus does not include any significant documentary material. This project will therefore be approaching Anglian Deira as a case study for a new methodology, fundamentally different to traditional approaches to economic history, in that it is based on very different sources, but nonetheless attempting to answer the same kind of ‘practical, utilitarian’ questions.

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<sup>44</sup> Although it should be noted that both these works consider primarily social, rather than economic, history.

## The Methodology of this Project: An Interdisciplinary Approach

The dearth of economic documentation from the early mediaeval period is not limited to the north of England; although many more, and earlier, documents survive from southern England and continental Europe, their survival and contents are far from comprehensive or complete. Recent scholarship has begun to find alternative routes to explore economic activity in the middle ages, which focus on the wide range of sources that *are* available from the period. In addition to the limited numbers of documents, historical sources are available in the form of literary and hagiographical texts. The corpus of archaeological evidence is providing a growing, and increasingly detailed, body of information on the physical remains that early mediaeval society left in the ground and on the landscape. As well as the growing body of excavated sites, detailed specialist study and publication is making an increasingly large amount of evidence from artefacts as diverse as coins, glass, pottery and sculpture accessible to non-specialist researchers.

McCormick's magisterial survey on the *Origins of the European Economy: Communications and Commerce AD300–900* (2002) illustrated the potential of non-documentary textual material for the study of economic history. His pioneering historical approach examined contemporary textual sources for the fourth to tenth centuries from across the geographical breadth of continental Europe. He uses references to travellers, journeys and exotic goods in these texts to build up a picture of changing communications networks across the middle and later centuries of the first millennium, and in doing so provided a powerful insight into economic developments during and after the collapse of the Roman empire in western Europe.

## The Importance of Regionalism: Deira as an Economic Case-Study

The strength of McCormick's approach is best illustrated in a study area of considerable geographical breadth, such as the wide span across Europe he chose for his study. His results echoed the findings of the more traditional economic studies based on documentation discussed above, characterizing the networks of the middle and later centuries of the first millennium in Europe as becoming increasingly regionalized. The importance of regions has been a constant theme through this introduction to the economic history of early mediaeval Europe, and the study of



Anglian Deira seemed to have much potential, both for furthering the understand of its own economy and as a case study to experiment with a new methodology for economic history which does not rely on documentary sources.

However, McCormick's approach, focussing on the development of communications networks, would not be practical for a region as small as Deira: only a fraction of wide-scale networks he examined would be visible in such a limited area, and, in any case, limiting the field of study reduces the number of historical sources so much that very little can be said from historical sources alone. Previous scholarship has highlighted the potential of interdisciplinary approaches for historical study. Guy Halsall's research in Merovingian Gaul, for example, has demonstrated the value of burial evidence for exploring questions of identity and social relations.<sup>45</sup> In a consideration of the relationship between the disciplines of history and archaeology, Prof. Halsall highlights how a sensitive understanding of individual data sources is necessary for 'each body of data to question, as well as to confirm or complement, the others because once we have studied these bodies of data separately, we can and must merge the conclusions from each ... at a higher level'.<sup>46</sup> As detailed in the following section,<sup>47</sup> the time necessary to achieve this sensitivity to each data source has limited the scope of the project far more than the availability of source material. However, the more general aim, approaching an economic history, remained viable, and this project will explore the application of the kind of 'multidisciplinary' methodology advocated by Halsall for the study of the economies of early mediaeval regions. The practical issues raised that emerged from the use of a diverse body of source material will be considered after a brief general introduction to these sources.

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<sup>45</sup> G. Halsall, *Settlement and Social Organization: the Merovingian Region of Metz* (Cambridge, 1995).

<sup>46</sup> G. Halsall, 'Archaeology and Historiography', in M. Bentley (ed.), *The Routledge Companion to Historiography* (London, 1997), p. 823.

<sup>47</sup> See particularly 'Artefact Studies', p. 42 below.

## Sources Available for the Study of Anglian Deira

Anglian Deira emerges as a good regional case-study for this new approach to economic history because of the quality and breadth of non-documentary texts available from within the region. This section introduces the different types of evidence, and their potential for the study of economic history.

### Numismatic Evidence

The coins issued in Anglian Northumbria form the most striking different body available for economic history. Considerable analyses were undertaken on this material, and it proved impossible to integrate these into the thematic structure of the rest of this report.<sup>48</sup> The numismatic evidence is therefore introduced in the separate chapter of this report devoted to the presentation of these results.

### Archaeological Excavations

This section introduces the body of archaeological material available for the study of the economy of Anglian Deira. Many of these sites have been characterized as settlements; burial archaeology has been used for the study of economic activity in the fifth, sixth and seventh centuries, but cultural changes leading to the abandonment of burial with grave goods means that burials generally provide little evidence for economic activity in the Anglian period. Only those burial-sites which have provided significant economic evidence are listed below. The major research excavations relevant to this project are listed in alphabetical order, followed by a brief discussion of other sites which have informed analysis of the Deiran economy. The final sub-section considers the important evidence which can be revealed in specialist studies of specific artefact groups.

### Addingham

Documentary evidence suggests settlement, perhaps of an elite nature, in ninth-century Addingham, but the publication of excavations undertaken at Addingham from 1989–90 recovered little evidence for economic activity.<sup>49</sup> The only Anglian

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<sup>48</sup> For more on the thematic structure of the report see 'Dating and the Adoption of a Thematic Structure', p. 50 below.

<sup>49</sup> M. Adams, 'Excavation of a pre-Conquest Cemetery at Addingham, West Yorkshire', *Medieval Archaeology* 40 (1996): 151–91.

material, dated to the 8<sup>th</sup> to 10<sup>th</sup> centuries on the basis of radiocarbon analysis of bone samples, was from burials. The alignment of the graves was interpreted as suggesting a significant religious monument to the east of the excavation area, but it is unclear what form this might have taken. Excavations did reveal a corn-drier within the cemetery area which provided a useful cereal assemblage, and enabled the dating of a corn-drier from the more economically active site at Cottam.

### Beverley, Lurk Lane

Excavations in Beverley were undertaken at a site in the vicinity of minster in 1979, prior to residential redevelopment.<sup>50</sup> The main evidence for Anglian activity was a series of ditches, and environmental evidence from the first two phases of these ditches, datable between 680 and 885 on the basis of radiocarbon analysis, suggests they may have been some distance from contemporary settlement activity. The final series of Anglian ditches from the Lurk Lane site,<sup>51</sup> however, provide clearer evidence for settlement activity on the site. The finds assemblage suggests this activity should be dated to the ninth century, and a clear *terminus ante quem* of the 850s is provided by an undisturbed purse hoard containing 23 Northumbrian *stycas* sealing the upper levels of this activity.<sup>52</sup> Environmental evidence suggests the site was abandoned for a period of at least fifty years after the deposit of this hoard, and the next level of occupation, clearly associated with the construction of a major building in the tenth century, marks a clear break in settlement activity on the site.

Although the details of the settlement represented in the final phase of Anglian ditch activity at the Lurk Lane site are unclear (only the corner of one building was uncovered during the excavation), the scale of the remains deposited in the ditch fill suggest it was a community of some economic significance. A substantial zooarchaeological assemblage was recovered from these Anglian levels, implying domestic settlement, but there was also evidence for craft-working

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<sup>50</sup> P. Armstrong, D.H. Evans and D. Tomlinson (eds.), *Excavations at Lurk Lane Beverley, 1979 – 1982*, Sheffield Excavation Reports 1 (1991).

<sup>51</sup> Described as Phase 4 in the excavation report, *ibid.*

<sup>52</sup> For description of this find, see Armstrong, Evans and Tomlinson (eds.), *Lurk Lane*, pp. 13–4 and E.J.E. Pirie, ‘The Northumbrian Coins: Single Finds and the Purse-hoard’, in Armstrong, Evans and Tomlinson (eds.), *Lurk Lane*, pp. 164–7.

activities. Evidence of carpentry is echoed in the pollen analysis results which suggested wood-clearing during this period, and the recovery of an abandoned store of charcoal adds to the impression of industrial activity. Significant evidence from the pottery and glass assemblages complete the impression of a well-connected, and probably wealthy, settlement.

### Caythorpe Pipeline Excavations

The construction of gas pipeline along a 4.5km long corridor of the Yorkshire Wolds provided the opportunity for a kind of archaeological ‘cross-section’ to be taken across the landscape. The excavation report presents the totality of the archaeology recovered during excavations in 1992, including prehistoric and Romano-British features.<sup>53</sup> Two sites produced evidence of Anglian settlement: one associated with a stream known as the Gypsy Race and another in a field, on the edge of a settlement identified by geophysical survey.<sup>54</sup> The soil conditions in the vicinity of Gypsy Race were particularly good for the preservation of animal bone, and an important zooarchaeological assemblage was recovered from that site.<sup>55</sup>

### Cottam

The site chosen for excavation at Cottam was originally identified as a ‘productive site’ by metal-detecting enthusiasts; the results of research excavations in 1993 and 1995 have been fully published.<sup>56</sup> The first traces of settlement activity date from the Anglian period, and two phases of settlement have been identified: Phase A, in which two timber buildings were occupied, probably within a small fenced enclosure, and Phase B, where these buildings were demolished and the fence removed, and a substantial boundary ditch was cut through what had been the site of Building One. This ditch was re-cut several times during Phase B. Traces of what may have been a timber building with several associated features, including a corn-

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<sup>53</sup> P. Abramson, ‘Excavations Along the Caythorpe Gas Pipeline North Humberside’, *Yorkshire Archaeological Journal* 68 (1996): 1–88.

<sup>54</sup> Around which the pipeline route was diverted; Abramson, ‘Caythorpe Gas Pipeline’, p. 26.

<sup>55</sup> Few finds were recovered from the other Anglian site, although traces of a sunken-featured building were recorded.

<sup>56</sup> J.D. Richards, ‘Cottam: An Anglian and Anglo-Scandinavian Settlement on the Yorkshire Wolds’, *Archaeological Journal* 156 (1999): 1–110.

drier were also associated with Phase B. Phase B ended with the backfilling of its characteristic boundary ditch; from associated finds this would appear to have taken place in the second half of the ninth century.<sup>57</sup>

The Anglian dating of Phases A and B is suggested by the nature of the buildings discovered and confirmed by the abundant metalwork which originally identified the site:<sup>58</sup> objects datable to the eighth and ninth centuries clustered in the area of the buildings associated with Phases A and B described above, whilst those of the later ninth and tenth centuries were mostly recovered from an area to the north associated with Anglo-Scandinavian activity. In addition to the corpus of metalwork from the site, which has been interpreted as providing some circumstantial evidence for non-ferrous metal-working on the site,<sup>59</sup> important, if somewhat fragmentary, zooarchaeological, pottery and worked stone assemblages were recovered from the site.

### Ripon

A number of documentary sources provide evidence for the existence of a monastic community at Ripon in the seventh century, and a recent survey by Richard Hall and Mark Whyman has brought together a collection of research on activity on the site in the pre-Norman period.<sup>60</sup> These include presentation of the 1986–7 excavations of an important cemetery site at Ailcy Hill, which was in use from the first half of the 7<sup>th</sup> until the 9<sup>th</sup> or 10<sup>th</sup> centuries. Other Anglian activity was noted at the Deanery Gardens, where excavations recovered the Ripon jewel, a gold roundel with inlaid garnets and amber which was interpreted as a decoration for some

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<sup>57</sup> Settlement continued on the site at Cottam through the Anglo-Scandinavian period, after which the site seems to have been abandoned, probably in association with the foundation of the modern village of Cowlam.

<sup>58</sup> Richards, 'Cottam', p. 9.

<sup>59</sup> The term 'non-ferrous' refers to metals apart from iron.

<sup>60</sup> R.A. Hall and M. Whyman, 'Settlement and Monasticism at Ripon, North Yorkshire, from the 7th to 11th Centuries AD', *Medieval Archaeology* 40 (1996): 62–150 See also R.A. Hall, 'Antiquaries and Archaeology in and around Ripon Minster', in L.R. Hoey (ed.), *Yorkshire Monasticism: Archaeology, Art and Architecture from the 7th to the 16th Centuries*, The British Archaeological Association Conference Transactions XVI (1995), pp. 12–30.

liturgical item such as a book-binding, reliquary or cross.<sup>61</sup> It is suggested that the Ripon jewel was produced in the seventh century,<sup>62</sup> but the total finds assemblage from Ripon, including the metalwork from Ailcy Hill described above and several *styca* coins recovered from an area referred to as ‘Scott’s Monument Yard’,<sup>63</sup> and therefore the economic activity associated with it, continued into the eighth and ninth centuries. A combination of archaeological and antiquarian sources are used to suggest a that this activity was generally dispersed within the area of modern Ripon, implying the community of Saint Wilfrid occupied a polyfocal settlement within the area encompassed by the modern town.

### Wharram Percy

Several excavations at the site of the deserted mediaeval village of Wharram Percy in the Yorkshire Wolds have produced evidence of Anglian activity. The most important for this project are those from sites 39, 94/5 and the South Manor site.<sup>64</sup>

The excavations at sites 39 and 94/5 took place in 1975–6 and 1989–90. They revealed traces of a sunken-featured building at site 39, which was deliberately dismantled and filled with the contents of a single midden at some point in the mid/late eighth century. The only zooarchaeological assemblage datable to the Anglian period came from the fill of this abandoned building, which has been interpreted as an outhouse or workshop rather than a dwelling as it provided no trace of a hearth. The building revealed at sites 94/5 is of considerable importance for this discussion as there is a significant body of evidence to suggest that it functioned as a non-ferrous metal-workshop. Preservation conditions for zooarchaeological

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<sup>61</sup> Hall and Whyman, ‘Ripon’, pp. 134–6.

<sup>62</sup> Although metallurgical analysis of the gold only confirmed a date *after* the 7<sup>th</sup> century.

<sup>63</sup> See Hall and Whyman, ‘Ripon’, p. 140 The *stycas* are reported in J. Walbran, *Guide to Ripon*, 8th edn (Ripon, 1862).

<sup>64</sup> G. Milne and J.D. Richards (eds.), *Two Anglo-Saxon Buildings and Associated Finds*, Wharram: A Study of Settlement on the Yorkshire Wolds Volume VII (1992) and R.A. Croft and P.A. Stamper (eds.), *The South Manor Area*, Wharram: A Study of Settlement on the Yorkshire Wolds Volume VIII (2000).

material at sites 94/5 were good, and a considerable assemblage was recovered.<sup>65</sup> Important assemblages of pottery and worked stone were also recovered from this excavation.

Anglian levels from the South Manor site at Wharram are also of considerable significance to this project. Traces of a domestic building and oven were recovered, but the most dramatic result was the evidence for iron-smithing activity. This could not be associated with any surviving structural remains, but the important finds assemblage recovered provides extremely valuable insights into the production and working of iron. The rich zooarchaeological assemblage from the South Manor is another particularly useful source for this project; significant pottery, worked stone and glass assemblages were also recovered from the site.

### Whitby

Although the identification has, on occasion, been challenged, it seems likely that Whitby is the location of the east coast monastic community established by Saint Hild, at a place named by Bede as *Streoneshalch*.<sup>66</sup> The site of the mediaeval abbey has been considered a probable focus for activity in the Anglian period, and this area has long been the focus of archaeological attention, with the first major excavations taking place in the 1920s.<sup>67</sup> The report of these excavations presents a significant finds assemblage, although the interpretation of the contexts from which they were recovered has been extensively challenged.<sup>68</sup> Inevitably, the confusion over the nature of Anglian activity at the site has meant that interpretation of the rich finds

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<sup>65</sup> S. Pinter-Bellows, 'The Vertebrate Remains from Sites 94 and 95', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, pp. 69–79.

<sup>66</sup> For further discussion of this issue see: P. Rahtz, 'Anglo-Saxon and Later Whitby', in Hoey (ed.), *Yorkshire Monasticism*, pp. 1–11 and J. Stopford, 'The Case for Archaeological Research at Whitby', in H. Geake and J. Kenny (eds.), *Early Deira: Archaeological studies of the East Riding in the fourth to ninth centuries AD* (Oxford, 2000), pp. 99–107.

<sup>67</sup> Published in 1943: C. Peers and C.A.R. Radford, 'The Saxon Monastery of Whitby', *Archaeologia* 89 (1943): 27–88.

<sup>68</sup> P. Rahtz, 'Appendix C: The Building Plan of the Anglo-Saxon Monastery of Whitby Abbey', in D.M. Wilson (ed.), *The Archaeology of Anglo-Saxon England* (London, 1976), pp. 459–62 and R.J. Cramp, 'Appendix B: Analysis of the finds register and location plan of Whitby Abbey', in Wilson (ed.), *Archaeology*, pp. 453–7.

assemblages recovered on various occasions, from the 1920s onwards,<sup>69</sup> has been incomplete, although they have still proved a valuable resource for this project. Ongoing excavation at the abbey site will hopefully provide a more secure context for consideration of this obviously important Anglian centre.<sup>70</sup>

### York, Fishergate

Approximately 2,500m<sup>2</sup> of a site at 46–54 Fishergate, York, was investigated through excavations of two adjacent open areas and a series of narrow trenches in 1985–6. Activity in the Roman period seems to have been largely agricultural, but in the eighth century a group of buildings, within ditched enclosures, were constructed on the site. Two clear phases can be identified in Anglian activity on the Fishergate site, as the original settlement was deliberately demolished, and covered with a layer of charcoal, in the later eighth century.<sup>71</sup> Evidence of a major ditch and associated features suggests that the site was re-occupied, apparently on a smaller scale, in the ninth century, although the absence of distinctive later ninth-century coinage and pottery suggests that this re-occupation did not continue long after the 850s. Preservation conditions on the site were good for many kinds of evidence, and important zooarchaeological, pottery, metalwork and glass assemblages were recovered.<sup>72</sup>

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<sup>69</sup> P. Rahtz, 'Whitby 1958', *The Yorkshire Archaeological Journal* 40 (1959–62): 604–18; P. Rahtz, 'Whitby 1958 Site Two', *The Yorkshire Archaeological Journal* 42 (1967–70): 72–3; A. White, 'Finds from the Anglian Monastery at Whitby', *The Yorkshire Archaeological Journal* 56 (1984): 33–40; M. Johnson, 'The Saxon Monastery at Whitby: Past, Present, Future', in M.O.H. Carver (ed.), *In Search of Cult: Archaeological Investigations in Honour of Phillip Rahtz* (Woodbridge, 1993), pp. 85–9 For a summary of these investigations, see Stopford, 'Case for Archaeological Research at Whitby', pp. 99–107.

<sup>70</sup> For further discussion see R.J. Cramp, 'A Reconsideration of the Monastic Site of Whitby', in J. Higgitt and R.M. Spearman (eds.), *The Age of Migrating Ideas: Early Medieval Art in Northern Britain and Ireland* (Edinburgh, 1993), pp. 64–73.

<sup>71</sup> R.L. Kemp, *Anglian Settlement at 46 – 54 Fishergate*, *The Archaeology of York Volume 7: Anglian York, Fascicule 1* (1996), pp. 54–9 Anglian levels were assigned to phase 3 of the site, with the first Anglian occupation at level 3a, and the second at 3c, with the charcoal-rich layer dividing the two categorized as 3b.

<sup>72</sup> T.P. O'Connor, *Bones from 46 – 54 Fishergate*, *The Archaeology of York Volume 15: The Animal Bones, Fascicule 4* (1991); A. Mainman, *Pottery from Fishergate*, *The Archaeology of York Volume*



## Other sites

The findings of modern research excavations at sites in Deira, most notably at Kirkdale and Thwing in the north York Moors and West Heslerton in the Yorkshire Wolds, are not yet available in dedicated excavation reports; from the material hinted at in interim publications,<sup>73</sup> these forthcoming studies will offer important new evidence for understanding life in Anglian Deira. Other large-scale modern excavations which have offered evidence useful to this project, although not directly relating to Anglian Deira, include:

### *Flixborough*

Like a number of important sites within Deira itself, the excavations at the site of Flixborough, a site in modern Lincolnshire, but only 8 miles south of the river Humber,<sup>74</sup> await full publication in a forthcoming report. Nonetheless, the site has already been the subject of scholarly disagreement, as its rich finds assemblage has inspired both ecclesiastical and secular characterizations of the site.<sup>75</sup>

### *Otley*

The material record of the West Yorkshire site of Otley establishes Anglian activity in the area, which is particularly interesting in the light of the later documentary

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16: The Pottery, Fascicule 5 (1993); N.S.H. Rogers (ed.), *Anglian and Other Finds from Fishergate*, The Archaeology of York Volume 17: The Small Finds, Fascicule 9 (1993).

<sup>73</sup> Notably P. Rahtz, *Living Archaeology* (Stroud, 2001), pp. 220–4; T. Manby, ‘Excavation and Field Archaeology in Eastern Yorkshire: the Thwing project 1973 – 1987’, *CBA Forum* (1988): 16–8; D. Powlesland, ‘The Anglo-Saxon Settlement at West Heslerton, North Yorkshire’, in J. Hawkes and S. Mills (eds.), *Northumbria’s Golden Age* (Stroud, 1999), pp. 19–26 and D. Powlesland, ‘The West Heslerton Assessment’, *Internet Archaeology* 5 (1998): <http://intarch.ac.uk/journal/issue5/westhes>.

<sup>74</sup> For the importance of the river Humber as a boundary see ‘The Establishment of the Study Area’, p.53 below.

<sup>75</sup> See C.P. Loveluck, ‘A High Status Anglo-Saxon Settlement at Flixborough, Lincolnshire’, *Antiquity* 72 (1998): 146–61 and K. Leahy, ‘Middle Saxon Site at Flixborough, North Lincolnshire’, in Hawkes and Mills (eds.), *Northumbria’s Golden Age*, pp. 87–94.

record.<sup>76</sup> A series of crosses, the earliest dating from the eighth century, have been found in and around the parish church,<sup>77</sup> but excavations at a nearby site in 1968–9 failed to recover any trace of Anglian settlement.<sup>78</sup> A small pottery assemblage from the site was, however, dated to the Anglian period, although as the dating relies on fairly broad typological similarities, it cannot be defined more closely than *c.* 650–850.

### *York, Coppergate*

Heavily waterlogged ground conditions at the site at 16–22 Coppergate, York preserved a wide range of delicate archaeological material, and an intensive program of research excavation recovered an extraordinary finds assemblage from the site.<sup>79</sup> As the site does not seem to have been in the vicinity of a settlement until the later ninth century, this corpus is not directly relevant to this project, but the detail that has emerged from specialist research into the Coppergate finds, particularly the environmental evidence which is unparalleled from Anglian sites in the region, has been used to inform discussion of the earlier period that is the focus of study in this project.

### Artefact Studies

The potential of artefact studies as a source for historical analysis is considerable, particular as continued research produces every-growing corpus to consider. However, they have often been under-used, particularly for economic history. One reason for this is undoubtedly that detailed discussion of particular artefact types is

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<sup>76</sup> See ‘Otley: An Archiepiscopal Estate’, p.55 below.

<sup>77</sup> For discussion of these see: R.J. Cramp, ‘The Position of the Otley Crosses in English Sculpture of the Eighth to Ninth Centuries’, in R.J. Cramp (ed.), *Studies in Anglo-Saxon Sculpture* (London, 1992), pp. 55–63 and I.N. Wood, ‘Anglo-Saxon Otley: An Archiepiscopal estate and its Crosses in a Northumbrian Context’, *Northern History* 23 (1987): 20–38.

<sup>78</sup> The earliest building recovered was a late Saxon or early Norman church: H.E.J. Le Patourel and P. Wood, ‘Excavation at the Archbishop of York’s Manor House at Otley’, *Yorkshire Archaeological Journal* 45 (1973): 115–41.

<sup>79</sup> For a general overview of the Coppergate excavations see R.A. Hall, *The Viking Dig: the Excavations at York* (London, 1984).

often highly technical, and sometimes confined to specialist publications. This project has attempted to bring the insights available from the analysis of two artefact groups from corpus Anglian Deira into a more general context: environmental evidence in general, and animal bones in particular, and the much smaller corpus of articles made from glass.

It was originally intended that a study of stone sculpture would be undertaken in this project. The ready availability of material from Deira in two volumes in the Corpus of Anglo-Saxon Stone Sculpture series,<sup>80</sup> and the superlative detail and scholarship of that series, makes it all the more regrettable that time constraints prevented any detailed analysis of this material.

The economic implications of the metalwork recovered from across Anglo-Saxon and Viking-Age England is currently under detailed study in the context of the VASLE project, led by Prof. Julian Richards at the University of York.<sup>81</sup> Important general issues, particularly relating to the production of metalwork and the distribution of the raw materials are considered in this report,<sup>82</sup> but more detailed consideration of the artefacts themselves has been left to the greater resources available within the VASLE project.

Many more artefact-types are available for study, even within the extant archaeological corpus for Anglian Deira,<sup>83</sup> and scientific developments are likely to improve the technology available for archaeological study, opening even more, novel, sources for economic history.<sup>84</sup>

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<sup>80</sup> J. Lang, *York and Eastern Yorkshire*, Corpus of Anglo-Saxon Sculpture Volume III (1991) and J. Lang, *Northern Yorkshire*, Corpus of Anglo-Saxon Sculpture Volume VI (2001).

<sup>81</sup> Close contact has been maintained with the VASLE project throughout the course of this project, which has benefited greatly from this support.

<sup>82</sup> See 'Iron Smelting', 'Metalworking' and 'Iron', p.114, p.116 and p.146 below.

<sup>83</sup> See D. Perring, *Town and Country in England: Frameworks for Archaeological Research*, CBA Research Report 134 (2002).

<sup>84</sup> Recent developments in genetic analysis, for instance, may eventually assist demographic analysis.

## Textual Sources

The writings of two eighth-century authors, Bede and Alcuin, dominate the corpus of textual sources available for the study of Anglian Deira. A number of other works make important contributions, however, particularly the well-studied body of hagiography from eighth-century Northumbria, Æthelwulf's poem celebrating the history of the his monastic institution, and the much lower-profile *Dialogus* of Archbishop Egberht of York, written to provide guidance to his diocesans on various practical matters of considerable economic interest. This section introduces these texts, and a number of others which provide useful insights into, if not direct evidence of, economic activity in Anglian Deira.

### Bede, *Historia Ecclesiastica* and other works

The works of the Venerable Bede, a Northumbrian monk whose extraordinary scholarship earned him a place among the Fathers of the Catholic church, are some of the most valuable sources for the whole of Anglo-Saxon history. Bede is thought to have been born around 673 and lived, from the age of seven until his death in 735 in the monastery of Jarrow, in Tyne and Wear. The work for which he is best known, the *Historia Ecclesiastica Gentis Anglorum* (hereafter *HE*),<sup>85</sup> is thought to have been 'published' in 731, and so is an important textual source for this project. Bede's aims and motivations in this historical text have been the subject of intense academic debate, and a full consideration of the proper context in which it should be used is far beyond the scope of this introduction.<sup>86</sup> A few important points must, however, be noted. Firstly, the text must be considered on its own terms, in the context of the cultural milieu in which it was produced; its intended audience was a mediaeval one, and would probably have picked up on themes and references in the text that are invisible to even the most well-informed modern scholar.

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<sup>85</sup> Bede, *Bede's Ecclesiastical History of the English People*, ed. B. Colgrave and R.A.B. Mynors (Oxford, 1969).

<sup>86</sup> For more discussion, see the introduction to Bede, *HE*; P. Hunter Blair, 'The Historical Writings of Bede', *Settimane di studio del Centro italiano di studi sull'alto medioevo* 17 (1970): 197–221; J. Davidse, 'On Bede as Christian Historian', in L.A.J.R. Houwen and A.A. MacDonald (eds.), *Beda Venerabilis: Historian, Monk and Northumbrian* (Groningen, 1996), pp. 1–15; R. Ray, 'Bede's Vera Lex Historiae', *Speculum* 55 (1980): 1–21.

A second, crucial, point is that the text was almost certainly intended as edificatory, explaining secular history as a working through of God's plan for Mankind. This necessitated the accurate presentation of that history: to misrepresent the events that made up the history becomes almost a form of blasphemy, as it misleads the reader as to the working-out of the Divine Will. However, the presentation of history as a model also means that every account is presented from a particular point of view, intended to serve the reader as an exemplar or a caution. While the facts presented in Bede's history are therefore likely to be reliable, at least to the extent of his own knowledge, the way in which he presents them should be considered interpretative. Identifying his edificatory bias, and the particular virtues which he sought to extol, has allowed greater insight into the text, but the emphasis, and, in particular, the omission, of material in the *HE* means that it cannot be used in a simplistic way for the study of early mediaeval history.

A letter written by Bede to Archbishop Ecgberht of York in 734 provides a very different kind of historical evidence for this project.<sup>87</sup> Early mediaeval letters are never likely to have been private correspondence, but this letter does seem to have been an exposition of Bede's personal views on the problems that needed to be addressed in the spiritual life of northern England and the best ways of implementing solutions. Bede's contributions to the hagiographical corpus of early mediaeval Northumbria are considered in the following sub-section; little use has been made in this project of his other writings, which are primarily theological studies and offer fewer direct insights into the economic history of the world in which he lived.

### Hagiography

A considerable body of hagiographical literature has survived from eighth-century Northumbria. This includes the anonymous and Bedan *Lives* of Saint Cuthbert,<sup>88</sup>

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<sup>87</sup> A.W. Haddan and W. Stubbs (eds.), *Councils and Ecclesiastical Documents Relating to Great Britain and Ireland* (Oxford, 1871), 3: 314–26; translation and introductory comments in: D. Whitelock (ed.), *English Historical Documents Volume I: c. 500 – 1042* (London, 1955), pp. 735–45.

<sup>88</sup> B. Colgrave (ed.), *Two Lives of St Cuthbert* (Cambridge, 1940).

the *Life of Saint Wilfrid* by Stephen of Ripon,<sup>89</sup> Bede's *Lives of the abbots of Monkwearmouth and Jarrow*, and the anonymous *Life of Ceolfrith*.<sup>90</sup>

The value of this material for historical research depends on the appreciation of the social and cultural context in which it was produced, but, if approached sensitively, it has much to reveal about the early middle ages, as it was the most popular genre of contemporary western literature. The highly derivative nature of the hagiographical genre means that detailed examination of the information presented is only possible in the context of close textual analysis, and this has not proved possible within the time-constraints of this project. Nonetheless, particularly distinctive references within hagiographical texts have proved valuable in the discussions below.

#### Alcuin, Letters and *York Poem*

The second dominant figure in Northumbrian scholarship of the early middle ages, Alcuin, was probably born in York around 735.<sup>91</sup> Little is known of his background or early life, but he studied at the archiepiscopal school from an early age, and, although he remained a deacon until he became abbot of Tours late in his life, he clearly became an important member of the cathedral community during his time in York. However, the majority of Alcuin's known scholarship dates from the second phase of his career, which was mainly conducted in continental Europe, first within the scholarly circle of the Carolingian court, then at Tours, after he was given the abbacy of that foundation as a reward by Charlemagne for his intellectual services. The circumstances of Alcuin's invitation to the Frankish court are unclear, but are

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<sup>89</sup> Stephen of Ripon, *Eddius Stephanus, Life of Bishop Wilfrid*, ed. B. Colgrave (Cambridge, 1927) See D.P. Kirby, 'Bede, Eddius Stephanus and the Life of Wilfrid', *English Historical Review* (1983): 101–14 for the disassociation of Stephen of Ripon, the hagiographer, from Aedde ('Eddius') mentioned in chapter 14 of the *Life of Wilfrid*.

<sup>90</sup> For the texts of these works see Bede, *Venerabilis Bedae Opera Historica*, ed. C. Plummer (Oxford, 1896), 1: 364–404 Translations are available in D.H. Harmer (ed.), *The Age of Bede* (Harmondsworth, 1965).

<sup>91</sup> For a detailed discussion of Alcuin's career see D.A. Bullough, *Alcuin: Achievement and Reputation: Being Part of the Ford Lectures Delivered in Oxford in Hilary Term 1980* (Leiden, 2004).

suggestive both of the nobility of Alcuin's ancestry, and the international reputation of Northumbria as a centre of learning. The large surviving volume of Alcuin's correspondence,<sup>92</sup> and his poem, *The Bishops, Kings and Saints of York*, celebrating the church of York (hereafter *York Poem*) have proved valuable to this study.<sup>93</sup>

### Æthelwulf, *De Abbatibus*

This 819 line poem is the only witness to the work of its author, and the existence of the small monastic foundation he celebrates. The poem has been dated to the early ninth century on the basis of a dedication to Ecgberht, bishop of Lindisfarne, who ruled between 803 and 821. The monastery over which the abbots of the poem's title presided is not clearly identified within the text, but the nature of the dedication to Ecgberht suggests that it was a dependent foundation of the monastic centre of Lindisfarne. As such, it was probably within Northumbria, but in the absence of confirmed evidence it is treated as 'unidentified' below; a specific location for the monastery at Crayke has been suggested on the basis of linguistic analysis.<sup>94</sup>

### Ecgberht, *Dialogus*

This text has received little modern scholarly attention; the most recent edition was published in 1871.<sup>95</sup> The attribution to Archbishop Ecgberht, however, is considered secure, and it is thought to have been written in the middle decades of the eighth century.<sup>96</sup> It takes the form of a series of questions and answers,<sup>97</sup> with a general practical focus. Detailed textual study was not possible within the restraints of this project, but the text nonetheless offers useful insights into the society of Anglian Northumbria.

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<sup>92</sup> E. Dümmler (ed.), *Epistolae Karolini Aevi II*, Monumenta Germaniae Historica Epistolae 4 (1895).

<sup>93</sup> Alcuin, *Alcuin: the Bishops, Kings and Saints of York*, ed. P. Godman, Oxford Medieval Texts (1982).

<sup>94</sup> M. Lapidge, 'Aediluulf and the School of York', in M. Lapidge (ed.), *Anglo-Latin Literature 600-899* (London, 1996), pp. 381–98.

<sup>95</sup> Haddan and Stubbs (eds.), *Councils and Ecclesiastical Documents*, 3: 403–13.

<sup>96</sup> M. Lapidge, 'Ecgberht', in J. Blair, S. Keynes, M. Lapidge and D. Scragg (eds.), *The Blackwell Encyclopaedia of Anglo-Saxon England* (Oxford, 1999), p. 157.

<sup>97</sup> Perhaps modelled on *HE* i. 27.

## Other Texts

Some of the texts in this group have been used, with Bede's *HE*, as basic sources for the history of Anglian Northumbria, although the witness they provide is often confusing and sometimes downright contradictory. Nonetheless, they are often all that is available from which to derive dates, or in some cases any record at all, of events in Northumbria after Bede's detailed account ends in the 730s, and have formed the basis of much previous scholarship.

### *Ninth-Century West Saxon sources*

Many important texts emerged from the intellectual activity at the court of King Alfred of Wessex, including a *Life of the king*, written by the Welsh priest Asser,<sup>98</sup> and the texts now generally known as the *Anglo-Saxon Chronicle*.<sup>99</sup> Textual analysis has revealed that sections of the *Anglo-Saxon Chronicle* were based upon an otherwise unknown series of 'Northern Annals' that are likely to have been composed in Northumbria, some time before the mid-ninth century.<sup>100</sup> The information related in these annals is a somewhat laconic group of notes on the accession and demise of kings and archbishops, and provides little evidence of obvious economic significance, but the negative view of Northumbrian governance in the ninth century presented in these texts has probably been influential in creating the negative bias in the historiography of the region.

### *Eleventh-Century Durham texts*

Some of the most controversial information about the history of Anglian Northumbria comes from a group of texts written within a period of intense historical scholarship in eleventh-century Durham. Prominent amongst these are works commonly attributed to a renowned scholar known as Simeon of Durham,

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<sup>98</sup> Asser, *Asser's Life of King Alfred*, ed. W.H. Stevenson (Oxford, 1904); translated in S. Keynes and M. Lapidge (eds.), *Alfred the Great: Asser's "Life of King Alfred", and Other Contemporary Sources* (Harmondsworth, 1983).

<sup>99</sup> For an introduction to this complex source, and a translation of the various manuscript texts which make up the ASC, see Whitelock (ed.), *EHD*.



including the *Libellus de Exordio* and the *Historia Regum*. Simeon's authorship of the first of these has been demonstrated,<sup>101</sup> but the second is now thought to have been a composite work, involving a number of unidentified scholars.<sup>102</sup> A related text is the *Historia de Sancto Cuthberto*, dated by its most recent editor to the eleventh century.<sup>103</sup> The Durham origins of these texts is reflected in a focus on Bernician affairs, but they have featured little in this project for more fundamental reasons. Firstly, the eleventh-century date of their composition, and the lack of clear evidence within them for what, if any, earlier sources on which they were based, makes their evidence extremely difficult to use without a lengthy examination of their textual contexts, and it was not considered appropriate to use the limited resources available to this project on such study. More positively, the amount of contemporary material available for the study of Anglian Deira was, in itself, eventually overwhelming,<sup>104</sup> and a focus on these contemporary sources seemed more appropriate to the aims of this project.

### Interdisciplinarity: Theoretical and Practical Problems and Responses

An interdisciplinary approach, combining evidence from across these different fields of study, would seem to have much potential for the investigation of economic history where documentary sources are limited. However, this potential is not always easy to realise. This section will discuss the difficulties with combining the testimony of sources from different disciplines to produce a coherent piece of economic history and introduce the approaches that have been used in this project to address these issues.

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<sup>100</sup> D.W. Rollason, 'Northern Annals', in Blair, Keynes, Lapidge and Scragg (eds.), *Blackwell Encyclopaedia of Anglo-Saxon England*, pp. 333–4.

<sup>101</sup> Symeon of Durham, *Symeon of Durham: Libellus de Exordio atque Procursu istius, hoc est Dunhelmensis, Ecclesie / Tract on the Origins and Progress of this the Church of Durham*, ed. D.W. Rollason, Oxford Medieval Texts (2000).

<sup>102</sup> For more discussion, see essays in D.W. Rollason (ed.), *Symeon of Durham: Historian of Durham and the North* (Stamford, 1998).

<sup>103</sup> T. Johnson-South (ed.), *Historia de Sancto Cuthberto: a History of Saint Cuthbert and a Record of his Patrimony* (Woodbridge, 2002).

<sup>104</sup> See discussion in 'Artefact Studies', p.42 above.

## **Dating and the Adoption of a Thematic Structure**

Different sources each come with their own interpretative context, and different types of evidence are often not immediately compatible. Within the context of Anglian Deira, a particular problem concerns the dating of different sources. Historical texts and events are often closely datable, and the coinage of Anglian Deira has been extensively studied and comparatively closed dated. However, the dating for other classes of artefacts, including pottery, sculpture, metalwork, and the buildings and other settlement activity at excavated sites, can only be given as a range, often up to a century, and sometimes several centuries wide. To gain full benefit from the interdisciplinary approach adopted here, however, it has been necessary to find a way to integrate the testimony of these different sources. The chronological incompatibility of the historical and archaeological evidence has been addressed by integrating the evidence of these sources within a thematic framework, using the major economic themes of production, distribution and consumption. Similar frameworks have been used before: Adriaan Verhulst considered production and distribution, though not consumption, in his discussion of the Carolingian Economy and the eleventh volume of the 'Transformation of the Roman world' series examined 'production, distribution and demand'.<sup>105</sup>

The use of a model based on economic principles which are essentially capitalist creates a somewhat formalist framework for the interpretation of the mediaeval economy. If a bias should be declared in this research, however, it is, perhaps, a substantivist one. Previous formalist approaches have attempted to understand the mediaeval economy by the application of concepts such as the laws of supply and demand or the calculation of balances of payments. Such approaches are generally avoided in this study: the cultural differences between the mediaeval past and the globalised present make the application of the details of modern economic theory to the mediaeval world extremely problematic. The laws of supply and demand, for instance, require a specific social framework allowing a level of liberty in economic expression that it is unwise to assume in any remote historical context. Assessment of the balance of payments requires a more detailed model of

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<sup>105</sup> Verhulst, *The Carolingian Economy*; C. Wickham, 'Introduction', in Lyse Hansen and Wickham (eds.), *The Long Eighth Century*, pp. 9–10.

the value of mediaeval commodities than can easily be reconstructed,<sup>106</sup> even where evidence on which such an assessment could be undertaken is available.

The approach of this project owes more to scholarship which has characterized the economies of western Europe in the early middle ages as *socially embedded*, that is, that economic activity was conducted according to social customs and norms of each society. This terminology derives from the work of the Karl Polanyi, and was associated with value judgements on the merits of different economic systems.<sup>107</sup> Although these are avoided here, the basic principle of social embeddedness, echoing Cipolla's definition of a 'mental, social and cultural' context is fundamental to this research.<sup>108</sup> In the remote and unfamiliar context in which the early mediaeval economy operated, even basic terminology may be implicitly anachronistic. 'Merchants' and 'trade', for instance, are closely bound up with profit-making enterprise in modern usage, but, as Adriaan Verhulst has discussed, mediaeval 'trade' may have been much more concerned with acquiring commodities not available locally, or even distributing the produce of dispersed estates to a distant centre, than with making profit.<sup>109</sup>

The position of the current observer of the mediaeval economy in a globalised capitalist age is inescapable, and it is, ultimately, impossible to declare all the assumptions which lie behind any piece of research. It is hoped that by recognising the modern perspective in the use of the economic themes of production, consumption and distribution, they will provide a useful framework within which to interpret the mediaeval evidence for a modern observer.

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<sup>106</sup> It is likely, for instance, that a considerable proportion of the wealth of the mediaeval church lay in its relics, whose monetary value is hard to estimate.

<sup>107</sup> His economic theories are laid out in his 1945 monograph: K. Polanyi, *Origins of Our Time: The Great Transformation* (London, 1945).

<sup>108</sup> See p.14 above.

<sup>109</sup> Verhulst, *The Carolingian Economy*, Chapter 6, esp. pp. 87–8 and 95–6.

## **Presenting the Research**

The thematic structure adopted here raised several other issues in addition to these theoretical considerations. The first was in the selection of evidence to discuss particular themes. This was, inevitably, highly subjective. For the sake of the clarity, it proved necessary to discuss some evidence in detail on the first occasion it was mentioned, so earlier chapters are perhaps artificially lengthened. Particular attention has therefore been made to cross-referencing the report (as may have already become apparent from this introduction), and to organizing it within clearly structured sections and sub-sections, in order to help the reader navigate the research.

Another practical point that may already have become apparent from this introduction is the issue of where to present discussion of previous scholarship. The nature of interdisciplinary research means that if a traditional presentation of previous scholarship in the first chapter had been maintained, the resulting introduction would have been overwhelmingly lengthy and rather erratic. Instead, this general introduction has been confined to issues that affect every section of the report, while issues that are specific to individual themes are discussed in the appropriate sections, even where they are important in the economic scholarship of early mediaeval Europe.

Structuring the discussion of the hugely significant body of Northumbrian coinage also proved a difficult issue for the structure of this report. It has been presented separately from the thematic chapters on production, distribution and consumption, largely because the level of original analysis that has been done on the data within this project is significantly greater than for other types of evidence. The separate presentation of this material allows a more logical context for detailed discussion of these new analyses, and has been placed after the thematic chapters so the new evidence presented can be considered in the context of the conclusions of those discussions.

## **Summary Thesis Structure**

The structure of the thesis can thus be summarized as follows:

1. General introduction examining: the aims of this economic history; the economic context of Anglian Deira; the opportunity the region provides for the development of a new, interdisciplinary, approach to economic history (including a discussion of the sources used in this project) and a general geographical and historical introduction to Anglian Deira
2. Consideration of production in the economy of Anglian Deira:
3. Consideration of distribution in the economy of Anglian Deira:
4. Consideration of consumption in the economy of Anglian Deira:
5. Analysis of the numismatic record of Anglian Deira: summarizing the numismatic history of the region; presenting the analyses undertaken for this project and the results produced and interpreting the results in the context of the thematic discussion already undertaken (with particular attention to any evidence for change in the Deiran economy within the study period).
6. A general conclusion, reflecting on the previous four chapters and suggesting opportunities for further research.

## *Introduction to Anglian Deira*

### Geography

#### **The Establishment of the Study Area**

The basic location of Anglian Deira is identified in Illustration 1. Deira's eastern edge was defined by the North Sea coast, and its position as the southern of the two kingdoms of early mediaeval Northumbria means that its southern boundary along the river Humber can be identified with some certainty: the importance of the river in the political landscape is highlighted by its use in the name of the northern kingdom.<sup>110</sup> The northern boundary of Deira also seems to have followed a major river, this time the River Tees.<sup>111</sup>

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<sup>110</sup> *HE* i. 27.

<sup>111</sup> Boundaries in Anglian Northumbria are the subject of ongoing doctoral study by Felicity Clark at Queen's College, Oxford, and have long been the subject of scholarly attention. See: P. Hunter Blair, 'The Boundary between Bernicia and Deira', in Hunter Blair and Lapidge (eds.), *Anglo-Saxon Northumbria*, pp. 46–59.

The route of the northern and southern boundaries beyond these rivers, and the location of the western boundary of Deira, is less clear. In part this is due to the usual problem of a lack of documentary evidence, but the difficulty in pinning down a clear border may also be a reflection of real territorial instability in the early mediaeval period, particularly in the west. Northumbrian influence extended in some capacity to the western coast of Britain. Both the *Historia de Sancto Cuthberto* and the earlier Bedan and anonymous *Vitae* of St Cuthbert suggest links between Lindisfarne and Carlisle,<sup>112</sup> and Northumbrian influence at Whithorn, in Galloway, can be seen in both the historical and archaeological record.<sup>113</sup> Indeed, Bede praises the strength of Edwin, a king of Northumbria derived from the Deiran dynasty, by observing that even an undefended mother and child could safely walk across his kingdom, from sea to sea. However, even if, and it is far from certain, western Britain was securely within the territory of the kingdom of Northumbria, this does not mean that territories west of the Pennines were necessarily incorporated into the region of Deira itself; the imposition of overlordship seems perhaps more likely than direct rule. If Deira's territory did not extend to the western coast, it is likely to have run fully as far as the Pennine Hills, from the evidence of early archiepiscopal estates at Otley,<sup>114</sup> and Edwin of Deira's royal centre at *Campodonum*, near modern Leeds.<sup>115</sup> It is inherently likely that the dominant topographical feature formed by this range would have been used as an early mediaeval boundary, and this study will treat it as the western boundary of Deira.

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<sup>112</sup> See above, 'Textual Sources', p.44 for references to these texts.

<sup>113</sup> P.H. Hill, *Whithorn and St Ninian: the Excavation of a Monastic Town* (Stroud, 1997) For more discussion, see M. McCarthy, 'Carlisle and St Cuthbert', *Durham Archaeological Journal* 14/15 (1999): 59–67 and J. Story, "'Concerning the Bishops of Whithorn and their Subjection to the Archbishops of York": Some Observations on the Manuscript Evidence and its Links with Durham', *Durham Archaeological Journal* 14/15 (1999): 77–83.

<sup>114</sup> See below, 'Otley: An Archiepiscopal Estate', p.55 for discussion.

<sup>115</sup> *HE* ii. 14.

The political geography of the kingdom of Deira has recently been considered by David Rollason from the textual sources available for the region.<sup>116</sup> He produced a map showing three ‘heartlands’ in the region (reproduced as Illustration 3 in this project), one around York, possibly extending into the second in the North York moors and a third in the Yorkshire Wolds. Rollason did not make much use of numismatic evidence, so it is particularly striking that these regions emerge as centres in the distribution of single coin-find data.<sup>117</sup>

### Landholding patterns

This region covers a wide range of environments and landscapes, from the heights of the Pennines themselves and the North York Moors to the low, fertile plains of the Vale of York; the principal geographical regions are illustrated in Illustration 4, reproduced from the excavation report on the site at Cottam.<sup>118</sup> Only two ‘estate’ structures have been suggested for this region during the Anglian period. These will feature in the following chapters, so are briefly introduced in this section.

### Otley: An Archiepiscopal Estate

There is, some unique documentary evidence for pre-Norman landholding in Deira relating to a group of settlements around Otley, in modern West Yorkshire, associated with the diocese of York (which provided an archival context to preserve these records, though presumably many others were lost). The documentary history of this estate starts in the tenth century, with a copy of a memorandum of Archbishop Oswald of York (971–92) describing settlements that had been unjustly taken from the church. This was entered into leaves inserted into the back of an existing manuscript, BL Harley 55, fol. 4v, that contains later annotations in the

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<sup>116</sup> D.W. Rollason, *Northumbria, 500 – 1100: The Creation and Destruction of a Kingdom* (Cambridge, 2003), pp. 45–8.

<sup>117</sup> As can be seen from a comparison of Rollason’s map, Illustration 3, with Illustrations 15 and 16, the simple distribution maps of the silver and *styca* coins issued in Anglian Northumbria (see ‘Group Analyses’, p. 208 below, for definition of what the ‘silver’ and ‘*styca*’ coin-groups include).

<sup>118</sup> The map shown as Illustration 4 was originally published as Figure 1 in Armstrong, Evans and Tomlinson (eds.), *Lurk Lane*, p. 2. The Vale of York is the low-lying area to the east of the

hand of Archbishop Wulfstan of York (1002–1023), including the attribution to Archbishop Oswald. Wulfstan seems to have later recovered some of the lost parts of the estates in Oswald's memorandum, and entered the new tenorial details into one of the church's gospel-books (York, Minster Library, Add. 1).<sup>119</sup>

However additional evidence regarding the Otley estate brings it more clearly within the timeframe of this project. Archbishop Wulfhere is recorded as fleeing to Addingham at the time of the Viking attack on York c. 867,<sup>120</sup> and as Addingham is named as one of the associated settlements lost from the estate of Otley in the Oswald memorandum, it has been understood that it was a possession of the church at York from at least some point before 867 until the later tenth century. More tenuously, the inclusion of *Ingaedyne*, possibly Yeadon, a settlement adjacent to Otley, among the list of estates proclaimed as his possessions by Saint Wilfrid at the foundation of his church at Ripon has been accepted as a possible context for the acquisition of the Otley estate by the church of York. Ian Wood has discussed the problems with many of these traditional assumptions about the history of the Otley estate in considerable depth: there is no evidence, for instance, that Yeadon was ever part of the Otley estate, and, in any case, the circumstances of Wilfrid's proclamation would suggest that the estates concerned had been granted to the foundation at Ripon rather than the church of York. In addition, Addingham's later history shows that it could be disassociated from the Otley estate, so joining the dots in the tenorial history of this group of settlements may be misleading for understanding the development of the estate.<sup>121</sup>

However, consideration of the remarkable group of eighth- and ninth-century stone crosses recovered from the church at Otley, whose typology may suggest a pastoral function, have led Wood to conclude that, although the

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Yorkshire Wolds. For a detailed introduction to the topography of the region, see Naylor, *Archaeology of Trade*, pp. 25–6.

<sup>119</sup> For discussion of these texts see S. Keynes, 'The Additions in Old English', in N. Barker (ed.), *The York Gospels* (London, 1986), pp. 81–99.

<sup>120</sup> For discussion of this episode see Adams, 'Addingham', pp. 184–5.

<sup>121</sup> Wood, 'Otley', pp. 23–4.



documentary evidence should not be regarded as conclusive, the estate is probably best regarded as an archiepiscopal possession. Different use of settlements within the estate is implied, with the sculptural assemblage suggesting a possible community (perhaps of priests) established at a *caput* settlement at Otley to carry out pastoral duties,<sup>122</sup> while the archbishops retained a vill at Addingham as a private residence.<sup>123</sup> Limited archaeological excavation at these centres has provided more context for these suggestions, including evidence of a possibly pre-(Norman)-Conquest stone apsidal church at Otley.<sup>124</sup> The discovery of a tenth-century stone cross may corroborate a religious context for the Addingham settlement, and excavation of a mixed Anglian cemetery at the site confirmed an important religious presence in the vicinity.<sup>125</sup>

#### *On Driffelda: A royal estate with specialist producer settlements*

It should be emphasised that much of the reconstruction of the Otley estate suggested above is speculative, and the archaeological research characterizing a royal estate in eastern Deira around a centre at Driffield is similarly conjectural. The most secure suggestion that this site formed an estate centre in Anglian Deira is a reference in the Anglo-Saxon Chronicle, which records the death of Aldfrith, king of Northumbria (685–705), ‘on Driffield’. Loveluck suggests Aldfrith’s presence in Driffield should be understood in the context of the Domesday record of a large composite estate centred on Driffield in the possession of the Earls of Northumbria.<sup>126</sup> He proposes that the Driffield estate be seen as part of the endowments of the Northumbrian royal dynasty, which passed to the Earls of Northumbria. Loveluck’s analysis has suggested that the wealth of the estate was due, at least in part, to specialist production in some of its component settlements.

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<sup>122</sup> See ‘Bishops, Minsters and Tithes: the Economics of Pastoral Care’, p. 178 below, for more discussion of archiepiscopal priests and pastoral care.

<sup>123</sup> Wood, ‘Otley’, p. 36.

<sup>124</sup> Le Patourel and Wood, ‘Otley’, pp. 132–3.

<sup>125</sup> See ‘Addingham’, p. 34 above.

<sup>126</sup> C.P. Loveluck, ‘The Development of the Anglo-Saxon Landscape, Economy and Society, “On Driffield”, East Yorkshire, 400 – 750 AD’, *Anglo-Saxon Studies in Archaeology and History* 9 (1996): 25.

In particular, he suggested that iron-production and fishing resources may have been found within the estate, and these have proved useful as case-studies for specialist production in the early middle ages.<sup>127</sup>

### Landscape Studies

If the documentary record of Anglian Deira has proved somewhat sparse, the evidence preserved in the palimpsest of its modern landscapes is perhaps equally overwhelming. Recent landscape studies have provided a new alternative to contemporary documentation for approaching the kind of micro-regional history that is so characteristic of the early mediaeval period in Europe. In particular, Andrew Fleming's pioneering landscape history of Swaledale,<sup>128</sup> a river valley high in the Yorkshire dales, has demonstrated the potential of detailed, highly local, analysis of landscape features, boundaries and communications routes and place-names through a combination of examination of later documentary records and meticulous survey of the land itself. It will be many years before every micro-region in Britain can boast such a dedicated researcher, but Fleming's results are an emphatic vindication of the value of such painstaking work. Collaborative studies of larger geographical areas (the Yorkshire Dales and the North York Moors)<sup>129</sup> have also proved valuable sources for this project.

### The Establishment of the Study Period

The early political history of Northumbria has long attracted scholarly attention because of the detail available in the works of Bede, and has recently been the subject of a major study by David Rollason,<sup>130</sup> who examines the entire span of the kingdom's history from its creation through the union of Deira and Bernicia in the

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<sup>127</sup> 'Fish' and 'Iron Smelting', below pp. 104 and 114.

<sup>128</sup> A. Fleming, *Swaledale: Valley of the Wild River* (Edinburgh, 1998).

<sup>129</sup> R. White, *English Heritage book of the Yorkshire Dales: Landscapes through Time* (London, 1997) and B.J.D. Harrison and D.A. Spratt (eds.), *The North York Moors: Landscape Heritage* (Newton Abbot, 1989).

<sup>130</sup> Rollason, *Northumbria*.

seventh century, through its 'Golden Age' in the time of Bede,<sup>131</sup> through to its eventual annihilation in a series of conquests through the tenth and eleventh centuries.<sup>132</sup> This historical narrative provides the basis for the selection of the start and end-dates of this project. The start of the eighth century was selected as historical sources would suggest that Northumbria, at this date, had a relatively secure identity as a unified, Christian kingdom. Detailed archaeological evidence from settlement sites was also emerges around this time, so it seemed a useful start date for the project.

The choice of an end-date for the project was less straightforward. The date 920 was initially chosen, to allow an evaluation of the economic impact of the first Scandinavian settlements in Deira in the later eighth and early ninth centuries, but avoid the complications of English involvement in, and eventual conquest of, Northumbria.<sup>133</sup> Preliminary research suggested the Anglo-Scandinavian period was one of particularly significant economic change. It became evident that a full consideration of this would be beyond the scope of this project, so the end date was moved back to 870, reflecting the traditional date of the Viking conquest of York in 866/7.<sup>134</sup>

### The Northumbrian Church

Given the emphasis on asceticism in the presentation of the church in Northumbria by its greatest historian, the Venerable Bede, it may seem odd to devote a whole section to introducing the church in a study focusing on economic history.

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<sup>131</sup> Although the analysis in '5: Consumption', below, may suggest that this 'Golden Age' continued well into the ninth century.

<sup>132</sup> See also Bullough, *Alcuin* for a recent consideration of the political history of Northumbria in the study period of this project.

<sup>133</sup> As discussed in D. Whitelock, 'The Dealings of the Kings of England with Northumbria in the Tenth and Eleventh Centuries', in P. Clemoes (ed.), *The Anglo-Saxons: Studies in Some Aspects of their History and Culture Presented to Bruce Dickins* (London, 1959), pp. 70–88.

<sup>134</sup> For a traditional presentation of events, see F.M. Stenton, *Anglo-Saxon England*, 3rd edn (Oxford, 1971), pp. 247–8.

However, like their missionary Pope Gregory the Great,<sup>135</sup> the ideal of spiritual isolation was probably denied the church men and women of Anglian Deira. This is partly due to themes in modern academic research, but, more appropriately perhaps, mainly due to the important economic role which these ecclesiastics took upon themselves. This section will consider: the evidence for the political role of the church; the evidence for the existence of the church as an institutional body, distinct from the rest of contemporary society and, finally, the economic impact of the Roman cultural traditions that eventually accompanied the Anglo-Saxon conversion to Christianity.

### **The Church and Political Authority**

The influence of ecclesiastics and religious dogma on contemporary society is deeply relevant to an economic history because of the potential influence of such ideas on political policy. These issues have been brought into even sharper focus for the present study by David Rollason's recent characterization of political authority in Northumbria as essentially theocratic. Such profound church influence in government administration would naturally have an impact on the nature of the Deiran economy in the Anglian period, and so could be an important theme in this report. However, a re-consideration of contemporary Northumbrian sources in this section questions Rollason's thesis that the church in Northumbria played a dominant role in secular government, suggesting that, as in contemporary Francia, church leaders played an integral role in supporting the Northumbrian government, chastising secular elites for immorality, certainly, but never seeking to challenge their right to political authority.

The primary evidence for this revision is perhaps a particularly economic one: the immense body of coinage from Anglian Northumbria.<sup>136</sup> It is true that, like the archbishops of Canterbury, the archbishops of York issued their own coins in the

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<sup>135</sup> *HE* ii. 1.

<sup>136</sup> This evidence is not rated highly by Rollason who comments: "The numismatic evidence, that of coins in other words, is not comparably [to the sculpture] important for Northumbria, but does offer significant insights into the history of that area in the ninth century, and above all in the period of the Viking kings from the late ninth to the mid-tenth centuries." Rollason, *Northumbria*, p. 19.

eighth and ninth centuries. However, as discussed below,<sup>137</sup> the volume of the archbishop's coins was far fewer than that of the kings, and they shared the same general circulation patterns. This kind of distribution implies that the minting of coinage was a profitable right given by kings to archbishops as an act of piety, similar to the gift of an estate by charter,<sup>138</sup> rather than a privilege demanded by archbishops as an expression of their authority.

Rollason suggests that the apparent dominance of York as a mint-site for the Northumbrian coinage may suggest that archbishops' primacy in the minting of coin. Even if they were profiting from the minting in this way, the dominance of the kings' names on the actual coins is a clear statement of rulership. The issuing of coins as a mark of political prestige was a tradition that stretched back to Roman rule in Europe. Indeed, it appears that the right to be named on coins was an accepted right of kingship, and, throughout the Anglo-Saxon period, only the names of kings and archbishops,<sup>139</sup> appear on coinage. This may have been more practical than a matter of etiquette; the issuing authority was a guarantee of the fineness of the coin and a coin may have been more functional as currency with a divine patron than a little-known or accepted ruler. Whether the naming of kings on coins was a matter of tradition or *Realpolitik*, however, the point is the same: the ruler on the coin was the ruler in charge,<sup>140</sup> and probably a recognised political authority. Rollason does not address the appearance of Anglian kings on the vast majority of the Anglian coinage, but that fact, along with the apparently sub-ordinate position of the archbishops of York in the issue of coin is a serious challenge to his argument of the political impotence of the secular leaders of Northumbria.

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<sup>137</sup> 'Archbishops', p. 245.

<sup>138</sup> For a discussion of documented examples of these in southern England see S. Kelly, 'Trading Privileges from Eighth-Century England', *Early Medieval Europe* 1 (1992): 3–28.

<sup>139</sup> There are examples of coins issued by the wife and son of Offa of Mercia, but these are extremely rare, and are probably related to that monarch's imperial aspirations, as also expressed in his anointing of his son Ecgrith as successor.

<sup>140</sup> With the exception of the 'irregular' coinage of ninth-century Northumbria; see below p. 240 for more discussion of these coins.

The administrative history of the Northumbrian church poses another problem to the idea of an Anglian theocracy. Far from being sub-ordinate to church leaders, early Anglo-Saxon kings, including kings of Northumbria, seem to have regarded bishoprics as a royal resource for patronage or sale,<sup>141</sup> and did not hesitate to curb domineering clerics; when Wilfrid's position in Northumbria faltered, not even the direct judgement of the pope himself was enough to restore his ecclesiastical position. Kings on the eve of the eighth century seemed no less interested in the affairs of the church than those who had opposed Wilfrid's increasing stature; Ecgfrith was among the supplicants pleading with Saint Cuthbert to accept the mantle of episcopal authority, a pious act of humility, but one which emphasised the continued importance of royal assent in the appointment of bishops.<sup>142</sup>

Wilfrid's deathbed gifts of money to his foundations to ensure they could buy the support of powerful patrons further highlights the importance of secular support to churchmen in the late seventh century.<sup>143</sup> Later, and in the study period of this project, Bede's advice in chapter 11 of his letter to Archbishop Ecgberht to seek the support of the king for his suggested reforms gives little reason to suggest ecclesiastics had more freedom to act independently of royal approval in eighth-century Northumbria than they had in Wilfrid's day.<sup>144</sup> Cubitt's study of Anglo-Saxon church councils has highlighted the role of the vigorous papal appointee to the Archbishopric of Canterbury, Theodore, in the establishment of some measure of independence for the Anglo-Saxon church.<sup>145</sup> As Cubitt has shown, the extent of Theodore's success in southern England can be seen in the primacy of ecclesiastical allegiance to Canterbury over political allegiance to a local secular lord expressed in the letter of Bishop Wealdhere of London to Archbishop Theodore of Canterbury. In northern England, however, the situation is less clear. The northern

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<sup>141</sup> C. Cubitt, 'Wilfrid's "Usurping Bishops": Episcopal Elections in Anglo-Saxon England c. 600–c. 800', *Northern History* 25 (1989): 18–38.

<sup>142</sup> This episode is in chapter 24 of Bede's *Life of Cuthbert*, edited in Colgrave (ed.), *Two Lives*

<sup>143</sup> *LW*, chapter 63.

<sup>144</sup> Haddan and Stubbs (eds.), *Councils and Ecclesiastical Documents*, 3: 314–26, translated in Whitelock (ed.), *EHD*, pp. 735–45.

<sup>145</sup> C. Cubitt, *Anglo-Saxon Church Councils c. 650–c. 850* (Leicester, 1995).

archbishopric, established in 735, never reached the 'canonical' 12 suffragans intended by Pope Gregory, and rapidly achieved in southern England. Although Theodore started the process of diocesan reforms north of the Humber, and it was enthusiastically advocated by Bede in his letter to Ecgberht, there seems to have been little appetite in any period for dividing the massive archdiocese of York. Cubitt notes that the coincidence of the ecclesiastical and political boundaries north of the Humber would have made the logistics of church councils more convenient; it is at least possible that this convenience was a result of greater political influence over church life in the northern archdiocese.

If historical events suggest that secular rulers played more of a role in church government than ecclesiastics did in secular government, this is what might be expected from contemporary theological positions on relations between the church and royal authority. The role of the institutional church in this worldview was to support the monarch in his secular leadership, while taking responsibility for the salvation of both the king and his subjects.<sup>146</sup> The ultimate source of these ideas was the bible itself, with the Old Testament presentation of David in particular being a major influence on early mediaeval kingship. Kings were therefore divinely appointed, God's secular and military representatives. There is nothing in this doctrine to support the church challenging secular leaders for secular authority; chastising, exhorting, and even condemning (in moral terms), certainly, but churchmen are never actually encouraged to seize control.

A role might be expected for the church, however, in the selection of the new ruler, especially, perhaps, when the choice was not an obvious one. In the charged political atmosphere of the eighth and ninth centuries in Northumbria, where dynastic tensions seem to have accompanied every succession,<sup>147</sup> and, on occasion, continued throughout the reign, the opinion of the archbishops of York, who would presumably have been called upon to perform the coronation, would

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<sup>146</sup> For more discussion of Anglo-Saxon kingship see J. Nelson, 'Kingship and Royal Government', in R. McKitterick (ed.), *The New Cambridge Medieval History II, c. 700 – c. 900* (Cambridge, 1995), pp. 383–430.

<sup>147</sup> See discussions of individual reigns in 'Individual Ruler Coin-Series', p.218 below.

have carried particular political significance. With all due respect to their high spiritual office, there is no reason to think that the archbishops of York were always proved right in their choice of which candidate to hail as the legitimate king in a contested succession. The path to kingship was rarely smooth: Eardwulf, for example, rose to the kingship only after a miraculous revival from not just dynastic misfortune, but execution. Alcuin suggests that such divine providence marked him out as an obvious successor to the Northumbrian king who had attempted to end his life.<sup>148</sup> Such conclusions may have been considerably more obvious in hindsight than they might have been at the time. Successful candidates for the kingship who had not received the unequivocal support of the archbishop might be hostile once their position was secure, and this kind of political subtext may lie behind Archbishop Eanbald II's problems with King Eardwulf, and his apparently rather controversial decision to surround himself with an armed militia.<sup>149</sup>

### Anglian York: a "City of the Church"?

Much historical scholarship has assumed that York was the 'capital' of the kingdom of Northumbria, and there is general, if not entirely complete, numismatic agreement that it was the site of the only mint in the kingdom.<sup>150</sup> This role as a political centre has been paralleled by archaeological characterizations of the settlement at the Fishergate site as a *wic* site, a kind of economic capital for the kingdom. However, David Rollason's theocratic re-appraisal of the kingdom of Northumbria has suggested a somewhat different role for York, with a purely ceremonial role as a political centre, and a basically ecclesiastical character:<sup>151</sup>

At the heart of Northumbria, then, was a city of the church, comparable to Metz with its complex of churches, or perhaps to Trier with its cathedral dominating the life of the city. Kings no doubt came there, but the evidence suggests that they came on the church's terms. It is noticeable that after the time of Oswald they were not even involved in the building and endowment of churches. In York, the bishops and then the archbishops were the patrons.

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<sup>148</sup> Dümmler (ed.), *Epistolae*, p. 108, translated in Alcuin, *Alcuin of York: his Life and Letters*, ed. S. Allott (York, 1974), number 16.

<sup>149</sup> Dümmler (ed.), *Epistolae*, pp. 378–9, translated in Alcuin, *Alcuin of York*, number 21.

<sup>150</sup> Elizabeth Pirie has suggested that there may have been multiple mints, on the basis of her typological approach discussed below, 'The Numismatic Historiography of Anglian Deira', p. 193.

<sup>151</sup> Rollason, *Northumbria*, pp. 207–8.



The city's character may have reflected that of Northumbria at large in so (p. 208) far as we have seen evidence for a preponderant role of the church in that kingdom. As with Northumbria's cultural identity, the kingdom's political identity may have owed more to the church than to the king or even to the powerful and apparently ubiquitous aristocracy. Rollason's case rests on two basic foundations: the apparent absence of Northumbrian kings from the city, and the apparently anomalous power of the archbishops of York in historical sources. Rollason in particular suggests that Archbishop Eanbald II would not have been able to keep a military body in York,<sup>152</sup> if the king were a serious authority in the city. The situation could be read differently: the Archbishop of York would have been a figure with considerable moral authority in the city, and if relations between the incumbent pontiff and the king were tense, the archbishop might be powerful enough to retain an armed guard. To say that the Archbishop had authority in York is not, however, to disprove the authority of the king, as highlighted by the history of the arch-diocese of Canterbury, where Archbishop Jaenberht maintained his authority, however tenuously at times, against the undeniably powerful King Offa of Mercia.<sup>153</sup> In any case, Alcuin's letter suggests that the archbishop's aggressive stance had caused him considerable trouble, which Alcuin's intervention was, in part, intended to ease.<sup>154</sup> As noted above, the eventual winner of dynastic struggles for the Northumbrian throne may not have been obvious to even the divinely-inspired leaders of the church, and support of a dynastic contender who eventually lost may have been the source of Eanbald's problems.<sup>155</sup>

Eanbald's army could therefore be interpreted as suggesting that the rulers of the world were ultimately more powerful than those of the church, rather than the other way around. The Coppergate helmet is perhaps even less convincing as a reflection of archiepiscopal power.<sup>156</sup> In the heavily Christianized atmosphere of early mediaeval Europe the inscription:

In the name of our Lord Jesus Christ and of the Spirit of God, let us offer up Oshere to All Saints. Amen.

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<sup>152</sup> See reference in n.149 above, this chapter.

<sup>153</sup> N. Brooks, *The Early History of the Church of Canterbury: Christ Church from 597 to 1066* (Leicester, 1984), pp. 111–20.

<sup>154</sup> Dümmler (ed.), *Epistolae*, pp. 376–8, translated in Alcuin, *Alcuin of York*, number 20.

<sup>155</sup> See p. 64 above.

<sup>156</sup> Cited by Rollason at Rollason, *Northumbria*, pp. 205–7.

could be no more indicative of the authority of the church than the singing of *Jerusalem* at the last night of the Proms: an expression of cultural identity rather than a marker of ecclesiastical control.<sup>157</sup>

Another point that Rollason makes in his conclusion on this issue quoted above is the lack of evidence for royal building works in Anglian York, particularly in comparison to the documented evidence for the major archiepiscopal project of the construction of the church of the Alma Sophia. The cathedral complex of the archbishops of York would certainly have been a powerful physical presence on the site. It is certainly not impossible that a comparable secular palace was present within the city walls, although no evidence of it has so far been recovered.<sup>158</sup> However, in order to prove that this diminished the authority of the kings of Northumbria in York, it would have to be shown that such buildings were a necessary expression of power, rather than a specifically ecclesiastical expression of *Romanitas*. Catherine Cubitt's analysis of the location of church councils suggests that they were held in locations chosen for their political significance rather than the facilities available: she suggests that meetings might have been held in the open air, and that the attending dignitaries might have been accommodated in temporary structures.

Poetic accounts might lead us to expect an elite lifestyle centred on solid timber mead-halls, but they also appear to record a reverence towards Roman ruins,<sup>159</sup> which would have been abundant in York, at least in the early Anglian period. If Roman buildings were usable, they might have been preferred to new timber constructions. Alternatively, kings might have simply had their travelling accommodation set up at appropriate sites, and held their courts in the imposing

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<sup>157</sup> For full discussion of the helmet see D. Tweddle, *The Anglian Helmet from 16 – 22 Coppergate*, 2 vols, *The Archaeology of York Volume 17: The Small Finds, Fascicule 8* (1992).

<sup>158</sup> Although one interpretation of the settlements recovered during the excavations under York minster did suggest occupation into the ninth century; see M.O.H. Carver, 'Roman to Norman at York Minster', in B. Heywood and D. Phillips (eds.), *Excavations at York Minster Volume 1: From Roman Fortress to Norman Cathedral, Part 2 – The Finds* (London, 1995), pp. 177–95.

<sup>159</sup> As expressed in the Old English poem 'The Ruin'; for the text see E.V.K. Dobbie and G.P. Krapp (eds.), *The Anglo-Saxon Poetic Records*, 6 vols (New York, 1931–42)iii, pp. 227–9.

atmosphere of the Roman ruins. Too little is known of the itineraries of Northumbrian kings to make definitive comments on how often they were in the city, and their choice to be buried at monastic foundations might as easily testify to a generally uncomfortable relationships between kings and archbishops as to a lack of royal interest in the city.

Positive evidence for the nature of royal activity in Anglian York, however, is, as Rollason convincingly demonstrates, conspicuous by its absence. Nonetheless, absence of evidence is not evidence of absence. As the ultimate protector of foreigners, the Northumbrian kings are likely to have taken an interest in whatever activities brought such a quantity of foreign pottery to the Fishergate site,<sup>160</sup> and in the Frisian merchants recorded in Alfrid's *Life of Liudger*.<sup>161</sup> If they were entitled to the first selection of mercantile goods, as kings were elsewhere in Britain,<sup>162</sup> the rulers of Anglian Northumbria or their representatives would have been frequent visitors to York to exercise the privilege. Such analogies may or may not be relevant to Anglian York. However, this discussion suggests that the case for the dominance of the site by ecclesiastical authorities is not secure. This project will therefore treat York as most cities in north-western Europe have been characterized, that is, as a focus for royal, as well as ecclesiastical, elites and a centre of economic and political, as well as ritual, activity.

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<sup>160</sup> See p.129 below.

<sup>161</sup> For the full text, see G.H. Pertz (ed.), *Scriptorium Tomus II*, Monumenta Germaniae Historica (1829), pp. 403–25. Translated extracts, with commentaries, are available in S. Lebecq, *Marchands et Navigateurs Frisons du Haut Moyen Age*, 2 vols (Lille, 1983) volume II, pp. 103–4, and Whitelock (ed.), *EHD*, number 160. The relevant section is reprinted in D.W. Rollason (ed.), *Sources for York History to AD 1100* (York, 1999), p. 131.

<sup>162</sup> For examples and discussion of these privileges, see N. Middleton, 'Early Medieval Port Customs, Tolls and Controls on Foreign Trade', *Early Medieval Europe* 13 (2005): 313–58.

## The Church in Anglian Society

### The Church as an Institutional Body

Catherine Cubitt's survey of Anglo-Saxon church councils produced abundant evidence for the vitality of ecclesiastical life in eighth- and, perhaps to a lesser extent, ninth-century England.<sup>163</sup> The English church developed a coherent administrative structure, with two metropolitan dioceses and a tier of sub-ordinate suffragans, which expressed its clear fidelity to the authority of St Peter's successor in the papal see. Although there certainly were major councils at which kings were present, there also seem to have been regular councils dedicated to church business. The sparse records that exist for these diocesan councils suggest that they were chaired by the reigning archbishop, emphasizing the ecclesiastical authority of the metropolitan. The *Dialogus* of Ecgberht demonstrates that Northumbrian ecclesiastics were subject to church law for ecclesiastical offences, and provides some evidence for a church court where such cases could be tried.<sup>164</sup>

However, the development of an ecclesiastical infrastructure does not seem to have united all the institutions which belonged to the Northumbrian church. Analysis of hagiographical literature of the early eighth century has suggested, for example, that there was a serious, and probably damaging, rivalry between the communities associated with Saint Wilfrid and Saint Cuthbert.<sup>165</sup> Whether these rivalries were inspired by religious differences, or more secular concerns, they suggest that it might be unwise to look for corporate behaviour, or even similar approaches, across the whole of the Northumbrian church. Reflecting the regionalism which has been identified above throughout contemporary society, it seems more likely that individual religious institutions managed their economic affairs independently, and highly unlikely that some kind of semi-autonomous 'church economy' should be sought within Anglian Deira.

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<sup>163</sup> Cubitt, *Church Councils*.

<sup>164</sup> See 'Ecgberht, *Dialogus*', above, p.47 for references to this text.

The relative independence of religious institutions within ecclesiastical infrastructures is highlighted by references in contemporary sources that suggest that what would now be seen as ‘church’ property was regarded as the personal property of individual churchmen. Wilfrid’s personal bequests of his substantial fortune could be seen as exceptional, given the rather extraordinary circumstances of the career in which he acquired it.<sup>166</sup> However, Bede’s account of the wishes of the dying Benedict Biscop are less easily dismissed.<sup>167</sup> His emphasis that the abbacy should not go to a particularly unworthy relative somewhat highlights the fact that an analysis of the lineage of Biscop’s successors uncovers family relationships to the founder over several generations, despite the emphasis in Bede’s writings on the corporate choice of abbots for the monasteries established at Monkwearmouth-Jarrow. This is not necessarily a slur on the personal piety of the foundations’ abbots: particularly religious members of Benedict Biscop’s family may well have felt a deep vocation to serve the community in this way. However, it does suggest that the leadership of a monastery, even one of unimpeachable character, would be expected to pass down the family of the founder. Perhaps even more surprising is Alcuin’s attitude towards the library of the church at York. This great collection was presumably central to the scholarly work of the community, but, despite his obvious affection for them, Alcuin clearly regarded the books as his own personal possessions through the bequest of his teacher, Archbishop Ælberht, and was vigorous in his attempts to have them delivered to him once he settled into his position as abbot of St Martins at Tours.<sup>168</sup>

It is possible, of course, that these cases were isolated examples. However, in the context of the importance of personal relationships across the mediaeval church, and indeed in mediaeval life in general, this discussion provides little

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<sup>165</sup> D.P. Kirby, ‘The Genesis of a Cult: Cuthbert of Farne and Ecclesiastical Politics in Northumbria in the Late Seventh and Early Eighth Centuries’, *Journal of Ecclesiastical History* 46 (1995): 383–97.

<sup>166</sup> *LW*, chapter 63.

<sup>167</sup> The account is in chapter 11 of Bede’s *Historia Abbatum* Bede, *Venerabilis Bedae Opera Historica*, 1: 364–87).

<sup>168</sup> For more discussion, see Bullough, *Alcuin*.

evidence that any kind of ‘corporate’ identity or strategy should be seen in the economic history of the church in Anglian Deira.

### The Distinctiveness of Church Activity

The lack of a corporate culture in the Anglian church does not preclude the possibility that, while different from each other, the economic activity of religious institutions could be characterized as distinctive from the economic activities of secular sites. Indeed, Rosamond Faith has suggested that the differing needs of religious institutions, which she envisages as settled communities in contrast to the itinerant lifestyle of the secular elite, may have stimulated the development of the inland/warland system discussed above, as itinerant elites would have needed irregular tributes as they circuted their territories, while settled communities would need more regular supplies.

However, the material culture of the Anglian period, particularly from the elite sites which might be identified as monasteries is highly ambiguous. The characterization of the ‘religious’ (even ‘monastic’) or ‘secular’ nature of archaeological sites has been a source of considerable debate in northern England. The most prominent illustration of this is the interpretation at the site of Flixborough, just south of the river Humber.<sup>169</sup> Although not yet fully published, the rich finds assemblage of this obviously high-status site has inspired impassioned debate over whether it should be understood as a undocumented monastic centre, or as a primarily secular site which went through a period of religious occupation.<sup>170</sup>

Even direct evidence of religious activity at a site may be inadequate as evidence that the site was ever primarily ecclesiastical. A certain level of religious activity could, in fact, be predicted at most Anglo-Saxon sites from the seventh century on. Sites that were occupied by secular elites would have attracted high-

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<sup>169</sup> See ‘Flixborough’, p. 41 above; The religious/secular character of Wharram and Beverley has also attracted some discussion: see J.D. Richards, ‘The Anglo-Saxon and Anglo-Scandinavian Evidence’, in Croft and Stamper (eds.), *South Manor*, p. 200 and Naylor, *Archaeology of Trade*, pp. 30–1 respectively.

<sup>170</sup> As proposed by Chris Loveluck (Loveluck, ‘Flixborough’, pp. 146–61) and Kevin Leahy (Leahy, ‘Flixborough’, pp. 87–94) respectively.

level ecclesiastical visitors, who could have left material evidence of their visits. More fundamentally, high-status laypeople would have participated in regular religious activity, assisted by their own literate religious personnel.<sup>171</sup> Bede presents Northumbrian kings as taking a particular interest in matters of the church,<sup>172</sup> and it would be expected that the interests of the aristocracy would be similar to those who rose to the dignity of the Northumbrian throne.

Ambiguity in the archaeological record might not be restricted to high-status sites. In the Christianized environment of Anglian Northumbria, most settlements will have considered themselves Christian, and their material culture will have expressed this identity. In Bede's opinion they should even have been receiving pastoral visits from their local bishop who may conceivably have left evidence of his high-status presence at even the most humble and remote of settlements.

If it is unreasonable to characterize a site as primarily religious because of evidence for the practice of religion at the site, it is at least as unfair to question the sincerity of religious activity on a site on the basis of the recovery of a rich finds assemblage. Although some groups of early mediaeval Christians vehemently rejected the comforts of the temporal world, early mediaeval religious institutions in general do not seem to have been particularly ascetic.<sup>173</sup> Within Northumbria, even the most respected churches seem to have enjoyed an affluent lifestyle: the artefacts seen in the archaeological record from Bede's exemplary monastery at Jarrow, for example, must have put it among the richest consumers in its local area,<sup>174</sup> and the saintly disdain for material possessions ascribed to Saint Cuthbert during his life is certainly not reflected in the richness of the objects deposited with his relics.<sup>175</sup> The individuals who became leaders of the church (and assumed control of the church's estates) were drawn from the same ranks as the lay aristocracy; a simple swineherd

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<sup>171</sup> Bede, for example, records the presence of priests in the Northumbrian court in the late seventh century: *HE* iii. 25.

<sup>172</sup> See p. 167 below.

<sup>173</sup> See 'Anglo-Saxon Elites and Religion', p. 166 below.

<sup>174</sup> See the finds assemblage reported in R.J. Cramp (ed.), *Wearmouth and Jarrow Monastic Sites* (Swindon, 2005).

<sup>175</sup> See n. 7, '5: Consumption' below.

could be praised as a poet, but the abbots and bishops in Bede's texts were all as noble in birth as they were in character. They are therefore likely to have had personal experience of the lifestyle of the secular elites, and it seems that conspicuous consumption was as appropriate to the glory of the King of Heaven as it was to His earthly counterparts.

The documentary archives of religious houses in continental Europe record the management of massive economic resources; evidence from Northumbria suggests that religious organizations in Anglian Deira had similarly impressive economic power.<sup>176</sup> However, there is no reason to think that the economic activities of religious individuals and institutions were not fully integrated within the secular economy. That is not to say that ecclesiastical sites might not be distinctive; the Jarrow excavations, for example, recovered the remains of buildings with obvious monastic functions that are not paralleled in the secular world.<sup>177</sup> From an economic perspective, however, the distinction may be largely irrelevant: the economy of every settlement site, whether primarily religious or secular, is probably best treated as unique, since there is little evidence for any overriding economic imperatives that would have had standardizing effects across either category.

### The Economic Impact of Christian Culture

This final section will consider the economic impact of two innovations which are likely to have been introduced with the Latin culture associated with the Anglo-Saxon church: the use of literacy and its impact on the nature of land tenure and the minting of coin in northern England.

It is generally accepted that the introduction of land tenure by charter was introduced into England by the Augustinian missions.<sup>178</sup> However, the nature of the tenure by which *folcland*, the term used for land held by ancient tradition rather than the new royal charters, was held, and the extent to which *bocland* (land held by

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<sup>176</sup> See 'Anglo-Saxon Elites and Religion', p. 166 below.

<sup>177</sup> See above, this chapter, n. 174.

<sup>178</sup> For discussion see P. Chaplais, 'Who Introduced Charters into England? The Case for Augustine', *Journal of the Society of Archivists*, iii 10 (1969): 526–42.



charter) replaced *folcland* as the dominant form of tenure in Anglo-Saxon England remain the subject of heated academic debate, as, indeed does the role of the church in administering the charter system.<sup>179</sup> There are suggestions in contemporary sources which suggest that something very similar to the charters that survive from southern England were issued in Anglian Deira.<sup>180</sup> The implementation of this system seems to have caused substantial change in the tenurial practices of Anglian Deira, as famously documented in Bede's letter to Archbishop Ecgberht.<sup>181</sup> Many scholars have taken this letter as evidence for administrative recklessness on the part of the Northumbrian kings, which was in some way responsible for the dynastic instability of the later eighth and ninth centuries, and ultimately weakened it to such an extent that it was particularly vulnerable to Viking attack. Such assessments might be overly trusting of Bede's scholarly perspective. There was over a century between Bede's letter and the Viking conquest of York in 866/7; if the developments Bede describes did weaken the kingdom, they did so exceedingly slowly. In fact, it has been suggested that Northumbria's defeat is more likely to reflect the strength of its Scandinavian enemy than its own military weakness, and many other kings and kingdoms fell before the ferocity of such formidable foes. Indeed, Bede's primary concern appears to be the quality of the religious life at what have been termed 'family-' or 'pseudo-monasteries', and it is perhaps more likely that he is recording an important, and far-reaching, change in elite lifestyle than the seeds of the destruction of the Northumbrian kingdom. In any case, the absence of any contemporary documentation puts a detailed study of the changes in land tenure beyond the scope of this study: we can see that it happened, and it is likely that it was related to the introduction of Christian culture, but beyond that, little can really be said about the impact of charters and documentary land tenure in Anglian Deira.

The economic impact of the introduction of coinage, on the other hand, will be a major focus of this project, as literally thousands of the coins themselves survive to bear witness to their contemporary importance. The introduction of coinage to Anglo-Saxon England has not stimulated as much debate as the

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<sup>179</sup> For an introduction to *bocland* and *folcland* see Stenton, *Anglo-Saxon England*, pp. 309–13.

<sup>180</sup> See Smith, 'The Endowments of York and Durham' for more discussion of these.

<sup>181</sup> See p. 175 below.

introduction of the charter, but a similar case can be made for its association with Roman Christian culture. Prestigious issues could be statements of kingship, and it seems likely that this was one factor motivating their production, particularly as Northumbrian coins are the first in Anglo-Saxon England to bear the name of the king who issued them.<sup>182</sup> Given the coincidence of timing between the first Anglo-Saxon coinage issues and the first Anglo-Saxon charters, a case analogous to that which has been made for the introduction of the charter could also be made for Anglo-Saxon coinage: that it was suggested by missionary churchmen as a Roman form for the proper expression of Christian kingship, and perhaps a material benefit to the church as well;<sup>183</sup> religious institutions would have needed certain imports for their ritual practice, and the availability of local coin might have facilitated their acquisition of these.

### **The Economic Role of the Church in Northumbria**

This section has considered the role of ecclesiastical institutions and individuals in Anglian Deira in some depth, perhaps an apparently excessive depth considering the uniformity of the basic conclusions that have come out of the discussion: religious activity seems to have been completely integrated within the society and economy of Anglian Northumbria, and no more uniformity should be expected from the economic activity of religious individuals and institutions than the heavily regionalised nature of the early mediaeval Europe would imply was the case for secular ones. These points will be a fundamental basis for the discussion that follows: sites that have characterized as religious and those which have been characterized as 'secular' will be considered on equal terms in the following chapters. The detail of this discussion is intended to justify this position in the light of the often contrary assumptions of previous scholarship.<sup>184</sup>

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<sup>182</sup> See p. 220 below.

<sup>183</sup> As the introduction of charters had benefited the church, allowing it land tenure in perpetuity, and offering the possibility of defending its endowments through written archives.

<sup>184</sup> Particularly that which has placed 'minsters' at the heart of every aspect of mediaeval life; see discussion in 'Metal Detected Evidence and Distribution in Anglo-Saxon England', p. 131 below.

## ***Conclusion***

This introduction has introduced the economic, historical and geographical context of Anglian Deira and the methodological approach that this project will use to examine its economic history. Other areas of scholarship remain to be introduced, and will be discussed in the context of the sections to which they are most directly relevant. However, the basic framework for the consideration of economic activity – production, distribution and consumption – has been identified, and the rich potential of sources from Anglian Deira to answer those questions presented. The following chapter will begin this investigation with a consideration of the first of the three themes raised above: production.

## 3: Production

### *Introduction*

In pre-industrial societies, subsistence is economically dominant: the provision of the basic essentials of food and shelter will be the primary economic activity of most of the population, for most of their time. Even considering the relatively comfortable availability of resources that it will be suggested was available to the population of Anglian Deira, there is no reason to think that they enjoyed such a surplus that subsistence production was not their primary economic activity, although the discussion below will suggest that there is also evidence of more specialist production in the economy of Deira in the Anglian period. This chapter will begin by considering the evidence for the demography of Anglian Deira, then move on to an examination of subsistence and specialist production of foodstuffs. Finally, craft-working will be considered, considering first the production of the subsistence crafts necessary for the provision of shelter, clothing and agricultural tools, and concluding with a brief consideration of specialist craft-working.

### *Demographics and Production*

Discussion in the General Introduction underlined the regionalism of economic activity in the Europe of the early middle ages. Profound regional variation in British demography is documented by the eleventh-century Domesday survey, and would have been at least as important a factor in Anglian Northumbria. However, a basic pattern emerges across Europe as a whole in that the early mediaeval population was generally lower than the population of the Roman period or the later mediaeval period.<sup>1</sup> The level of population relative to the productive capacity of the land is of considerable economic significance, and in the case of a low population, the effects are perhaps most marked when considering production. An 'under-populated' landscape will be easily able to provide the subsistence needs of those people working it, so there would be little incentive for innovation to increase

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<sup>1</sup> See Verhulst, *The Carolingian Economy*, pp. 23–8 for a detailed consideration of Carolingian demography.

productive capacity. A relatively low population should also led to land being treated as less valuable a resource than labour; the land is only economically useful, after all, if it can be worked to produce useful resources.<sup>2</sup>

This would suggest that there was little purpose in individuals ‘owning’ more land than they had the disposable labour to cultivate. The concept of ‘ownership’ of land is a complex one for the early mediaeval period, and is more fully discussed in the consideration of ‘Consumption’.<sup>3</sup> Nonetheless, it is worth noting here James Campbell’s suggestion that a close analysis of documentary and literary evidence from Anglo-Saxon England does reveal a level of flexibility towards landed endowments. This stands in stark contrast to the highly land-focused attitudes seen in the later mediaeval period, and indeed, Campbell argues, is also at variance with the high regard in which the ownership of treasure was held in the Anglo-Saxon period.<sup>4</sup>

Treasure was undoubtedly of significance for its bullion value, but in this context it is worth considering the value of its workmanship. Dodwell’s discussion of Anglo-Saxon art observes that literary sources do not pay much attention to carving, painted decoration or embroidery in their descriptions of fine objects.<sup>5</sup> He also notes, however, that minimalist restraint is not a feature of Anglo-Saxon art.<sup>6</sup> The detailed decoration that Dodwell’s survey suggests was favoured in the Anglo-Saxon period would have required considerable investment of time and resources in its production. The surviving objects therefore contradict the evidence of contemporary texts, suggesting that elaborate workmanship was a valued commodity in Anglo-Saxon England. It is surely possible that the labour involved in producing treasured items was an economically significant component of their

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<sup>2</sup> Although estates, such as Otley with major communications routes running through them may also have been particularly valuable; for more discussion of Otley’s position see Adams, ‘Addingham’, p. 185.

<sup>3</sup> ‘The ‘Ownership’ of Land and the Support of Elites’, p. 174.

<sup>4</sup> J. Campbell, ‘The Sale of Land and the Economics of Power in Early England: Problems and Possibilities’, *Haskins Society Journal* 1 (1989): 23–37.

<sup>5</sup> C.R. Dodwell, *Anglo-Saxon Art: a new perspective* (Manchester, 1982), pp. 91–3.

<sup>6</sup> Dodwell, *Anglo-Saxon Art*, p. 38.

value. This might go some way towards explaining the fine detail often seen on copper-alloy and gilded items in the period. It may not have been so much that these were low-value objects as that their value lay in their labour-intensive decoration rather than their metal content.

There is no reason to think that Anglian Deira defied the generally low demographic trend seen in other regions of early mediaeval Europe, but in the absence of documentary evidence, it is difficult to investigate the specifics of the region's demography. However, recent research has suggested it might not be impossible. Andrew Fleming's pioneering landscape history of Swaledale included careful analysis of settlement patterns in the valley. He has been able to provide substantive evidence to confirm the assumption that the landscape was less intensively exploited from the sub-Roman period until well after the Norman conquest than it was in the Roman or later mediaeval eras. Indeed, Fleming concludes that Swaledale should be characterized as a 'wildscape' rather than an agricultural landscape for much of the early mediaeval period: he suggests the primary human features were clearings in an otherwise ubiquitous forest and notes that the wolves and wildcats after which settlements were named further emphasize the wilderness environment.<sup>7</sup> However, Fleming's work suggests that this 'wildscape' period should not be seen as economically moribund. Rather, as in many areas of continental Europe,<sup>8</sup> he suggests that land was being brought into cultivation throughout the period.<sup>9</sup>

This expansion in occupied land can be seen directly in pollen analyses from Anglian levels at the Lurk Lane site in Beverley. Samples from two different levels in the fill of a ditch which could be confidently dated to the ninth century,<sup>10</sup> produced strikingly different species ratios. The primary fill suggested:<sup>11</sup>

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<sup>7</sup> Fleming, *Swaledale*, pp. 160–1.

<sup>8</sup> Verhulst, *The Carolingian Economy*, pp. 41–2.

<sup>9</sup> Fleming, *Swaledale*, pp. 44–8.

<sup>10</sup> It was sealed by a ninth-century purse-hoard; see n. 52 above, '2: General Introduction', for references.

<sup>11</sup> P. Armstrong and D.H. Evans, 'The Excavation Report', in Armstrong, Evans and Tomlinson (eds.), *Lurk Lane*, pp. 9–10.

... an intermittent flow of water through an essentially natural woodland ... [including] oak (the predominant species), willow, hazel, maple, alder, ash, birch and poplar. In contrast the secondary and heavily organic material indicates that clearance had taken place by this time; weeds of cultivation were present and fouler conditions obtained as the ditch dried up.

Settlement activity at the Beverley site may also suggest a growing population.

Although the area was enclosed with ditches, the site of the Lurk Lane excavations seems to have been a considerable distance from settlement activity in the centuries before this wood-clearing activity. Growth, or at least movement, into the area is suggested by fills of the same ditch which suggested ninth-century deforestation in the area, as they also provided direct evidence for new domestic and industrial activity nearby.<sup>12</sup>

It is likely that this expansion in cultivated land was associated with stabilization of the political climate in Deira, following the confusion of the sub-Roman period and the creation of Anglian Northumbria. However, population growth is not the only explanation for the phenomenon; certainly, a lower level of military activity might have allowed a level of population growth which demanded the cultivation of new land; but elites may also have become more efficient in demanding tribute, or perhaps, as in areas of Carolingian Europe, cultural factors such as tax incentives to bring land into cultivation played their part.

The specific nature of settlement at an individual site such as Beverley, and the intensely local research of Fleming's landscape study, means that their conclusions cannot be applied generally throughout Anglian Deira. Fleming's careful work, in fact, highlights the often micro-regional nature of economic history; where adjacent settlements can be seen to have experienced different economic circumstances, applying conclusions from one area to another is speculative at best. Detailed landscape study is beyond the scope of this investigation, but it is to be hoped that future studies may allow more consideration of demography, and other economic issues, in early mediaeval Northumbria. As the foundation of much

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<sup>12</sup> It is possible that this reflected movement of the settlement, but the enclosure ditch is a constant feature throughout the Anglian period, so it is perhaps more likely that it was growing.

economic study of later periods,<sup>13</sup> a more detailed knowledge of Northumbrian demography would obviously have profound implications for our understanding of the Anglian economy. However, in the meantime, other approaches can make use of the archaeological and historical evidence already available to explore early mediaeval economic activity.

### ***Food Production***

Anglo-Saxon diet has been a focus of some scholarly attention, with two authors examining the subject in the recent years.<sup>14</sup> As sources from within Anglian Deira are rather abundant for the nature of food production, however, this discussion will be closely focused on the region itself. The picture that emerges will be the already familiar one of variety: even within the relatively small study area of Deira, physical and human geography created micro-regions whose subsistence could be profoundly different.

### **Subsistence Food Production**

Anglian Deira is particularly rich in archaeological evidence for subsistence food production. Several large-scale, modern research excavations in the region have produced a number of important environmental assemblages, and pioneering fieldwork has been undertaken in the course of these excavations, particularly at the Fishergate site in York. Although inevitably some methodological issues remain unresolved, the results already published indicate the enormous potential these assemblages have for the study of economic history.

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<sup>13</sup> Indeed, many economic studies of later mediaeval England are heavily based on demographics; for an introduction to such techniques see M. Bailey and J. Hatcher, *Modelling the Middle Ages: the History and Theory of England's Economic Development* (Oxford, 2001).

<sup>14</sup> See D. Banham, *Food and Drink in Anglo-Saxon England* (Stroud, 2004) and A. Hagen, *A Handbook of Anglo-Saxon Food: Processing and Consumption* (Pinner, 1994) and A. Hagen, *A Second Handbook of Anglo-Saxon Food and Drink: Production and Distribution* (Hockwold cum Wilton, 1995).



## Zooarchaeological and Archaeobotanical Evidence

As much of the following discussion will be based on the evidence of environmental archaeology, this is an appropriate point for a general discussion of this important source material. The remains of historic animals and plants form the two major sub-categories of environmental evidence: the zooarchaeological material is the assemblage of recovered animal bones, while the archaeobotanical material comprises any plant remains from a site. Invertebrate macrofossils make up another sub-category of environmental evidence, although the waterlogged circumstances essential for their preservation are not present on any site from Anglian Deira.<sup>15</sup>

Methodological issues are particularly acute in the study of environmental remains. The importance of sampling techniques is discussed in appropriate contexts below, but an understanding of preservation conditions is of particular importance to all environmental assemblages. Waterlogged conditions, which are, as already mentioned, necessary for the preservation of insect remains, are also ideal for other types of environmental evidence, as they create an environment where decay is severely inhibited. By contrast, at a free-draining site such as Cottam,<sup>16</sup> the effect is similar to placing the remains in a well-managed compost heap: organic material is decomposed, and even bone is vulnerable to decay.<sup>17</sup> As waterlogged conditions are relatively rare, many environmental assemblages are recovered from less than ideal preservation conditions. However, analysis of even the most fragmentary environmental assemblages can provide valuable insights into economic activity on a site. Some plant macrofossils are considerably more robust than typical vegetable matter, and the presence of remains such as *Prunus* species (plum or sloe) stones and hazelnut (*Corylus avellana*) shell can be particularly useful.<sup>18</sup> Where animal bones are carefully recovered, even a poorly preserved

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<sup>15</sup> A large waterlogged assemblage was recovered from the Coppergate site in York from levels dated to the late ninth or tenth centuries; see A.R. Hall and H. Kenward, *Biological Evidence from Anglo-Scandinavian deposits at 16–22 Coppergate*, The Archaeology of York Volume 14: The Past Environment of York, Fascicule 7 (1995).

<sup>16</sup> For discussion of soil conditions at the site, see Richards, 'Cottam', p. 84.

<sup>17</sup> The collagen component of bone is vulnerable to decay through hydrolysis; minerals within the bone can also decompose through leaching.

<sup>18</sup> See p. 97 below.

assemblage can be informative. The well-drained conditions at Cottam, for example, produced a zooarchaeological assemblage heavily dominated by isolated teeth, the most robust of the skeletal elements. However, specialist analysis showed that a significant proportion of those teeth were likely to have come from sheep.<sup>19</sup> The larger and more robust teeth of horse and cattle would have been more likely to survive the difficult soil conditions, so the zooarchaeological assemblage is convincing evidence for the dominance of sheep in the early mediaeval husbandry of the site.<sup>20</sup>

More detailed environmental information is available from assemblages from other sites in Deira where preservation conditions were more favourable for animal bone, notably the Fishergate site in York and sites at Wharram Percy.<sup>21</sup> This allowed the survival of small, delicate bones, which had several benefits for the zooarchaeological analysis. For the domestic mammal species, a much greater proportion of the skeleton was preserved, providing more reliable evidence for the abundance of species within the assemblages, evidence for the age at death of the animals whose remains were recovered and indications of butchery practice. The preservation of smaller bones also made a much wider range of species visible on the site, including fish and birds which may have been consumed, and, particularly at Fishergate, wild animals which gave important information about the environment in the immediate vicinity of the site.

Environmental assemblages should not be treated as the total food waste remains from a site. Many foodstuffs would not even enter the archaeological record, so an assessment of the nutritional importance of particular foods even from

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<sup>19</sup> Richards, 'Cottam', pp. 84–6.

<sup>20</sup> Richards, 'Cottam', p. 86.

<sup>21</sup> Preliminary analysis of the environmental assemblage from West Heslerton was presented in Powlesland, 'The West Heslerton Assessment'. A zooarchaeological analysis was also published from Beverley (S. Scott, 'The Animal Bones', in Armstrong, Evans and Tomlinson (eds.), *Lurk Lane*, pp. 216–33), but the results could not be used in detail in this report as detailed zooarchaeological discussion did not distinguish clearly between bones from different chronological phases of the site. The zooarchaeological assemblages recovered from the excavations under York Minster are considered below, 'Pigs', p. 105.

a well-excavated site with good preservation conditions is necessarily speculative. Like any other source for the mediaeval period, environmental archaeology must be used sensitively, with reference to its particular context and with a clear understanding of its limitations. Its potential, however, is great, and the following sections aim to show the value of this source for the study of the economy of Anglian Deira.

### **The Processing of Food**

Although we have no specific information on how the early mediaeval population of Deira cooked their food, it is inherently likely that this was done in the same settlements on which the food was consumed: most food is best consumed when freshly prepared. However, there is some evidence for other forms of food processing being undertaken as part of general domestic activity. In particular, zooarchaeological analysis from all Anglian sites in Deira suggests a perhaps surprising consistency in butchery practice. Whether the site was obviously rural or part of a larger settlement, and whether the status of the inhabitants was higher or lower, the processing of livestock for meat seems to have been the same: animals were brought in (presumably alive), slaughtered and butchered within the settlement, and their bones disposed of in the immediate vicinity.

The evidence for this interpretation comes from the ratio of surviving skeletal elements in the zooarchaeological assemblage: by comparing the frequency of individual anatomical elements recovered from a site with the frequency with which those elements occur in the skeleton (and adjusting for taphonomic factors)<sup>22</sup> zooarchaeologists can assess whether the assemblage represents the remains of whole animals or merely individual joints. Certain skeletal elements are particularly helpful: for example, there is relatively little nutritional value in the head or feet of any animal, so the absence, or particular concentration, of skull and foot bones can be particularly useful as indicators of centralized butchery.<sup>23</sup>

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<sup>22</sup> Smaller, more delicate, bones are less likely than large, robust ones, to survive in the ground, although elements attractive to scavenging dogs often survive poorly whatever the conditions.

<sup>23</sup> This is particularly useful as bones of the skull are among the most robust skeletal elements.

No anomalies in skeletal distributions have been recorded in zooarchaeological assemblages from Anglian settlement sites in Deira.<sup>24</sup> The presence of complete skeletons on the sites suggests that the animals they represent were butchered as well as eaten in the immediate vicinity. Where butchery marks are present,<sup>25</sup> they offer no indication of the consistency of butchery practice that might suggest the work of a specialized butcher, implying that ‘the role of butcher [was] taken by whomsoever in that particular neighbourhood had a sharp knife and a rough idea of how to use it.’<sup>26</sup> The butchery of the animals on site is usually taken to suggest their slaughter in the settlement: large domestic mammals would be easier to transport alive than dead, and preservation of the meat would have been a serious issue from the time of death, so it would be most convenient to slaughter the animal where it was to be eaten or preserved.

Further evidence for the processing of food within settlement sites comes from archaeological features relating to cereal-processing. Corn-driers have been identified from Anglian levels of two sites within Deira: at Cottam in the Yorkshire Wolds, and at the opposite end of the region, at Addingham in the Pennines.<sup>27</sup> The cereal assemblages preserved within these features will be discussed further below,<sup>28</sup> but the presence of the corn-drier implies the processing of the harvest in the immediate vicinity of the site, as drying would have been most beneficial before the grain had been stored.

It has been suggested that milling technology was widely known across the Roman empire, and that by the early middle ages, the distribution of mills was

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<sup>24</sup> With the exception of the analysis of the pig bones from the Fishergate site, discussed in more detail below, ‘Pigs’, p. 105.

<sup>25</sup> Butchery marks are far more common on cattle bones than sheep or pig remains as smaller livestock can be jointed by cutting through the meat, without necessarily marking the bone.

<sup>26</sup> T.P. O’Connor, *Bones from Anglo-Scandinavian levels at 16–22 Coppergate*, The Archaeology of York Volume 15: The Animal Bones, Fascicule 3 (1989), p. 159.

<sup>27</sup> See Adams, ‘Addingham’, p. 152 for a map showing Addingham’s topographical context.

<sup>28</sup> See p. 87 below.

closely related to the distribution of suitable water courses.<sup>29</sup> A water-controlling feature at Wharram has been interpreted as a possible mill, although it is also possible that it might have functioned as some kind of fish-trap.<sup>30</sup> The anonymous life of Ceolfrith, abbot of Monkwearmouth-Jarrow (688–716), records his time as miller-and-baker, suggesting that even well-heeled Northumbrian monasteries might have used hand-ground flour.<sup>31</sup> The combination of milling and baking in this text may suggest a cultural association between the processing and cooking of cereals.

Debby Banham has suggested that most of the early mediaeval population would have been too poor to afford the time to grind flour for bread.<sup>32</sup> However, finds of quernstone fragments have been made on all major excavations in Anglian settlements from Deira. It is striking how often these quernstones were made from stone not local to the site at which they were found.<sup>33</sup> However humble they may look, substantial stone artefacts which had travelled these kind of distances must have been valuable possessions. This is consistent with archaeological analysis of quernstones which suggests that they could be kept in use over several generations.<sup>34</sup> The lengths to which the Anglian population of Deira were prepared to go to acquire their quernstones, and the length of time for which they were used, are important indicators of the economic importance of the processing of cereals to produce flour.

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<sup>29</sup> O. Wikander, 'Water-Mills in Europe: Their Early Frequency and Diffusion', in Conference On Medieval Archaeology in Europe (ed.), *Medieval Europe 1992: a Conference on Medieval Archaeology in Europe, 21st – 24th September 1992 at the University of York* (York, 1992), 3:9–14

<sup>30</sup> See n. 117 and n. 118, below, this chapter.

<sup>31</sup> See chapter 4 of the anonymous *Life of Ceolfrid* (Bede, *Venerabilis Bedae Opera Historica*, 1: 388–404).

<sup>32</sup> Banham, *Food and Drink*, pp. 17–8; see 'Lifestyles of the Ordinary and Anonymous – Large-Scale Consumption in Anglian Deira', p. 179 below for more consideration of general living standards in Anglian Deira, with particular reference to diet.

<sup>33</sup> For more discussion of the use of imported stone see Naylor, *Archaeology of Trade*, pp. 68–75.

<sup>34</sup> S.R. Watts, 'Grinding Stones', in Croft and Stamper (eds.), *South Manor*, p. 112.

## The Importance of Geography in the Production of Food

Environmental reports from different sites show that, as in later periods,<sup>35</sup> significant variations in the assemblages can often be related to the topography of individual sites. The highly fragmentary Cottam assemblage mentioned above is a good example of this. Despite the fact that larger, more robust, cattle bones would survive better in the ground, it was the bones of sheep which dominated the Anglian zooarchaeological assemblage. It is thus likely that sheep dominated the animal husbandry of the site in the Anglian period,<sup>36</sup> which, as Julian Richards noted in the site report, is consistent with conditions 'ideally suited to pasturage' around the settlement at Cottam.<sup>37</sup> A similar result was reported from sites at the nearby settlement at Wharram Percy. The preservation conditions at this site were much more favourable to animal bone, so many more skeletal elements survive, and there is a significant majority of caprine bones in the assemblages, at both sites 94/5 and the south manor area.<sup>38</sup>

The results from Anglian levels at the Fishergate site at York were very different. There, cattle bones were overwhelmingly important in the assemblage.<sup>39</sup> The interpretation of the Fishergate assemblage been somewhat complicated by the suggestion that the cattle consumed on the site may represent animals rendered through taxation.<sup>40</sup> However, O'Connor's report notes that cattle are the dominant food animal in the majority zooarchaeological assemblages from York of any date.<sup>41</sup> This consistency suggests that, whatever the details of the sourcing of the

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<sup>35</sup> See G. Astill, *The Countryside of Medieval England* (Oxford, 1988), p. 224.

<sup>36</sup> Although, as a cow yields far more meat than a sheep, beef would still have been the dominant meat; for more discussion and references see S. Pinter-Bellows, 'The Animal Remains', in Croft and Stamper (eds.), *South Manor*, p. 168.

<sup>37</sup> Richards, 'Cottam', p. 90.

<sup>38</sup> The term caprine refers to sheep and goats. There are few skeletal elements that are distinct between the two. However, on sites from Anglian Deira, those elements which can be conclusively identified always show an overwhelming dominance of sheep, hence the caprine bones in these assemblages are identified as mostly sheep. Pinter-Bellows, 'Vertebrate Remains from Sites 94 and 95', p. 71 and Pinter-Bellows, 'Animal Remains', p. 169.

<sup>39</sup> O'Connor, *Fishergate*, pp. 236–40.

<sup>40</sup> For more discussion, see 'Nature of Renders', p. 177 below.

<sup>41</sup> O'Connor, *Fishergate*, p. 240.

cattle, the fact that the settlement at Fishergate was surrounded by prime cattle country was the most important factor in the meat consumption of Anglian Fishergate.

An emphasis on agricultural strategies adapted to local conditions can also be seen to some extent in the plants consumed in Anglian Northumbria. There is some historical evidence for such selection of plant crops in Bede's *Historia Ecclesiastica Gentis Anglorum*, where he describes Saint Cuthbert's miraculous success in growing barley after his wheat crop had failed.<sup>42</sup> The presentation of Bede's account suggests that the correct time for sowing wheat and barley was such commonplace knowledge that Cuthbert's anomalous agricultural experiences could be most easily explained as miraculous. However, it was the timing of Cuthbert's success that was the miracle, not his choice of crop: experimenting with grain types to find the one that best suited a farm may have been a familiar experience to the farmers of Anglian Northumbria.

Archaeological evidence may provide some evidence for these skills in matching crop choices to local conditions in Anglian Deira itself. Analysis of a charred assemblage from a corn-drier at Addingham in West Yorkshire showed it consisted overwhelmingly of oats,<sup>43</sup> a rather unusual result. Plant assemblages from the early mediaeval period are rarely available for detailed analysis, but where they are, they are usually dominated by various varieties of wheat, then barley, with oats a poor third where they are recorded at all.<sup>44</sup> However, oats would have been an ideal crop for the marginal agricultural conditions of the Addingham site: the modern environment at the site can be characterized as particularly cold and wet, and it is likely that such conditions also prevailed in the Anglian period.<sup>45</sup> The

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<sup>42</sup> *HE* iv. 28.

<sup>43</sup> Adams, 'Addingham', p. 180.

<sup>44</sup> A classic assemblage of this type was recovered from the Caythorpe Pipeline excavations: Abramson, 'Caythorpe Gas Pipeline', pp. 80–1.

<sup>45</sup> Tight growth rings observed in wood preserved as charcoal from the corn-drier were also interpreted as suggesting cold wet conditions (Adams, 'Addingham', p. 180), although Fleming notes (Fleming, *Swaledale*, p. 84) that tight growth rings can be used to suggest that wood came from coppiced trees.

cultivation of wheat would therefore have been extremely problematic as it needs a long dry summer to ripen properly, so it is likely that Addingham's topography was the primary factor determining the cereals grown, and presumably consumed, on the site.

### **The Production of Food in Anglian Deira: Mixed Strategies for Nutritional Security**

This section will discuss aspects of the environmental assemblages from Anglian Deira which suggest that, even if individual sites specialized in a particular product,<sup>46</sup> their subsistence base was much wider; there is no evidence for sites whose economy was dominated by a single activity. The practice of varied strategies would have been a pragmatic choice for early mediaeval farmers, maximising the chance of providing sufficient nutritional subsistence despite the challenges of an unpredictable climate and the effects of pestilence on their livestock and crops.

The most marked evidence for the practice of mixed agricultural and husbandry strategies comes from zooarchaeological analysis, particularly from the sites at Fishergate and Wharram Percy. Specialist analysis of the relatively well-preserved animal bones recovered from these sites has been able to provide estimates of the ages at which individuals died.<sup>47</sup> Occasionally, these age-at-death

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<sup>46</sup> See 'Specialist Food Production', and 'Specialist Craft Production' p. 103 and p. 113 below.

<sup>47</sup> Two analyses are used to assess the age at death of zooarchaeological assemblages: epiphysial fusion and mandibular eruption. Cartilaginous elements known as epiphyses surround young bones as they grow, eventually fusing with the bone when it is fully developed. Different bones reach their full length at different ages, so examining which epiphyses have fused can therefore give an indication of the age of the animal when it died. The emergence ('eruption') of teeth from the jaw (mandible) is also known to follow a regular pattern; dental data can also give age identifications by considering the wear on the fully erupted teeth. The ages at which these skeletal changes occur are calculated by reference to those modern livestock breeds which are considered to be closest to early mediaeval domestic mammals. See I.A. Silver, 'The Ageing of Domestic Animals', in D. Brothwell and E. Higgs (eds.), *Science in Archaeology* (London, 1969), pp. 283–302 and A. Grant, 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in C. Grigson, S. Payne and B. Wilson



analyses produce graphs showing a clear kill-off pattern, with a clear majority of the animals represented on a site having been slaughtered at a certain stage of maturity. Such results are often the result of specialist production, for example, an assemblage comprising the remains of a herd of cattle dedicated to dairy production might contain a large number of young individuals as few male calves would be needed to maintain the flock, and many would be slaughtered early. Such a clear kill-off pattern is only seen in analyses of the pigs of Anglian Deira, and these results are so striking as to suggest that the production of pigs may have been a specialist activity in Anglian Deira.<sup>48</sup> Otherwise, analyses of animal remains from sites at Wharram Percy and the Fishergate site in York suggest a more complex pattern of animal husbandry.

Zooarchaeological analyses often note that the most rational age at which to slaughter livestock kept for meat alone is just before maturity.<sup>49</sup> Animals of this age have gained the majority of their body weight, and, as they will not get much bigger, continuing to invest in their care, with fodder and pastoral attention, provides much less return in the form of meat. Many animals represented in zooarchaeological assemblages from Anglian Deira lived beyond adolescence (with the notable exception of pigs, as discussed below), suggesting little focus on the production of meat, although that is what most of the animals represented ultimately provided. Cultural factors might have been more important in the production of meat than strictly rationalist interpretations would suggest,<sup>50</sup> but the essential interpretation of the Deiran age-at-death data would be unaffected, as there is an almost even distribution of the bones across a wide range of ages from juvenile to elderly.<sup>51</sup> Some indistinct peaks in kill-off are discussed in more detail below, but overall, Anglian data suggests what O'Connor described in his report on the bones from

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(eds.), *Ageing and Sexing of Bones from Archaeological Sites*, BAR British Series 109 (1982), pp. 91–107.

<sup>48</sup> See 'Pigs', p. 105 below.

<sup>49</sup> See, for instance, Pinter-Bellows, 'Animal Remains', p. 177.

<sup>50</sup> In particular, the meat of older animals has often been considered better-tasting, particularly from the 'unimproved' breeds of the early mediaeval period; see Banham, *Food and Drink*, p. 55.

<sup>51</sup> O'Connor, *Fishergate*, pp. 248–54; Pinter-Bellows, 'Animal Remains', pp. 173–8 and Pinter-Bellows, 'Vertebrate Remains from Sites 94 and 95', pp. 73–6.

Fishergate as 'a rather relaxed selection of cattle and sheep for slaughter'.<sup>52</sup> This kind of assemblage suggests the decision to slaughter domestic livestock was based on individual circumstances rather than the constraints of a formal husbandry regime.

Some cattle would have been kept alive several years, providing several seasons of plough service, and, from the cows, multiple offspring and associated dairying. Others were surplus to these needs, or to the resources available to sustain the herd, and were killed fairly young for meat, and perhaps leather. The dominance of older cattle in Deiran assemblages suggests the importance of the resources available from more mature animals: dairying and plough service – and the cereal and vegetable crops which ploughing would have cultivated. An economy where cattle were exploited in many different ways seems likely, with the exact age at slaughter for any particular beast depending on the immediate needs of its owners: if meat or leather were required, or it was not possible to maintain the size of the herd, cattle might be slaughtered while young. If plough-service, dairying and offspring were more valuable, cattle might have been kept alive for several years, for valued animals maybe even into their elderly years.

The age-at-death results for Deiran sheep indicate a similarly mixed function for Anglian flocks. Some sheep were killed young, suggesting the importance of their meat value, although most were slaughtered only after they had produced their first, and finest, fleece of wool. However, many sheep were kept alive, producing more wool, offspring and milk. Leather, of course, could be produced from sheep as well as cow-hide, and may have been another factor affecting the husbandry of sheep.

These mixed livestock strategies suggest a picture of varied farming practices with a considerable flexibility to respond to immediate economic circumstances. This flexibility is seen to some extent in agricultural strategies, although most of the evidence for this comes from outside Deira itself. The implications of Saint Cuthbert's experimentation with cereal crops at his retreat on

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<sup>52</sup> O'Connor, *Fishergate*, p. 248.

Farne island has already been discussed above, and is echoed by Continental developments in the strains of what used for cultivation. Adriaan Verhulst has discussed the increasing importance in Carolingian Europe through the eighth and ninth centuries of new strains of cereal which could be sown at different times of year. The ability to sow different fields at different times, with the possibility of re-sowing a field in the same year if the original crop failed, provided some insurance against the catastrophic effects of unseasonal weather at vulnerable stages in a crop's life-cycle.<sup>53</sup> The presence of oat and barley, as well as various forms of wheat, in Anglian cereal samples suggests that similarly complex cereal strategies were employed in Anglian Deira. The general move away from the dominance of the spelt-type wheat favoured in the Roman period to the free-threshing varieties that characterized later mediaeval agriculture is seen at Wharram Percy and other sites in the region.<sup>54</sup> Although there is little direct evidence available, it is therefore not unreasonable to suggest that Deiran farmers were able to exploit the flexibility in agricultural opportunities available by different crop varieties in a similar way to their better-documented Continental contemporaries.

Although dietary variety did not generally extend to wild meat,<sup>55</sup> the presence at Wharram Percy and West Heslerton of fruit-stones and nut-shell (particularly hazelnut), perhaps from hedgerows or wasteland areas of scrub near the cultivated fields, may suggest the opportunistic exploitation of wild plant resources as a dietary supplement, although woodland fruits and nuts could also have been gathered from cultivated hedgerows, or managed woodland. Hazelnuts, in particular, would have kept well, and could have been a useful energy store through the winter. Few Anglian assemblages have produced firm evidence of goat, but it is present at a consistently low level at sites in Wharram Percy. Goats would have provided dairy products and meat, and may have been a useful insurance against any difficulties with other livestock. Domestic fowl are also present at low levels on most sites; a predominance of adult bones at Fishergate suggests that on that site at

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<sup>53</sup> Verhulst, *The Carolingian Economy*, pp. 61–2.

<sup>54</sup> See discussion in Abramson, 'Caythorpe Gas Pipeline', pp. 80–1.

<sup>55</sup> See discussion at p. 181 below.

least they may have been kept more for eggs than meat.<sup>56</sup> The small-scale husbandry of these minor livestock may reflect the extent to which farming activity was ‘spread out’ across as many different strategies as possible.<sup>57</sup>

This flexible approach fits in well with the regionalism that has already become an established theme in this study. Exactly what formed the nutritional base probably varied from settlement to settlement, according to topography, climate and more immediate weather conditions, and social status.<sup>58</sup> It is usually assumed that cereals formed the bulk of the early mediaeval diet, with vegetables of secondary importance and meat a rare luxury.<sup>59</sup> The relatively mature age-at-death of the cattle whose remains have been discovered in Anglian Deira certainly provides archaeological evidence for the importance of field crops,<sup>60</sup> which probably included vegetables as well as the cereals discussed above.<sup>61</sup> However, the presence of large numbers of butchered animal bones is also evidence for the importance of meat in the diet. There is no reliable way of determining what proportion of the diet of a site is represented in its corpus of animal bones, so there is little possibility of assessing whether the zooarchaeological assemblages from Deira represent irregular

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<sup>56</sup> O’Connor, *Fishergate*, p. 260 It is generally assumed that young chicken, such as that available in modern supermarkets, would have been preferable for meat, but older fowl has traditionally been regarded as more flavourful, particularly for boiling, which is likely to have been an important cooking method in the Anglo-Saxon period; Banham, *Food and Drink*, pp. 72–4.

<sup>57</sup> Although Hagen suggests that goats may have been associated with sheep husbandry, in that their consumption of weeds in the sheep pasture would provide better grazing for the sheep; Hagen, *A Second Handbook*, p. 97.

<sup>58</sup> For elites and wild meat see p. 183 below.

<sup>59</sup> See, for example, D. Banham, ‘Food and Drink’, in Blair, Keynes, Lapidge and Scragg (eds.), *Blackwell Encyclopaedia of Anglo-Saxon England*, pp. 190–1.

<sup>60</sup> See p. 90 above.

<sup>61</sup> While cereal remains can be preserved by charring, vegetable remains are destroyed by fire, so they are even more rarely recovered, although some evidence for the cultivation of peas and beans was recovered from the south manor site at Wharram Percy (W.J. Carruthers, ‘The Botanical Remains’, in Croft and Stamper (eds.), *South Manor*, p. 192) See Banham, *Food and Drink*, pp. 29–31 for more discussion of the importance of gardens and vegetables in the diet of Anglo-Saxon England.

festival roasts or, as is certainly possible, a more regular consumption of meat than has been hitherto supposed.

There is no way at all of assessing the importance of other foodstuffs that may have made an important contribution to diet: it is possible that dairy products, eggs, fish and honey could have provided significant,<sup>62</sup> perhaps seasonal,<sup>63</sup> nutritional support, while leaving very little trace. Alcoholic drinks may also have been an important source of nutrition in the Anglo-Saxon period, as they have been shown to be in later mediaeval England, although little evidence for their production in Anglian Deira survives. Whether powerful religious elites or ordinary peasants,<sup>64</sup> the supply of food for the table seems to have depended on the resources of each individual household, and Deiran farming strategies suggest that it may have been wise to provide as many safeguards as possible to ensure that sufficient was always available.

### **Anglian sites in Deira: Self-sufficient agricultural producers?**

The Fishergate site in York is so far unique in Deira in that it has been interpreted as an entirely consumer settlement: Terry O'Connor concluded the site was 'being provisioned with its subsistence needs, meat being supplied in the form of live animals derived, in all probability, from the regional food rent'.<sup>65</sup> The lucid publication of the zooarchaeological assemblage from the Fishergate site (and the pioneering methodology behind its recovery) allow this interpretation to be examined in detail. Analysis in this study will question O'Connor's interpretation of the food subsistence of the Fishergate site, which will, in turn, provide a new context for the interpretation of the other environmental assemblages from Anglian Deira.

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<sup>62</sup> For more on fish production see 'Fish', p. 104 below. Honey would have been particularly important for the production of mead.

<sup>63</sup> Both eggs and dairy products would have been seasonal commodities in the Anglo-Saxon period; see Banham, *Food and Drink*, pp. 71–2 for more discussion.

<sup>64</sup> See "'Market' forces', p. 134 below for a discussion of the nature of goods available for purchase at markets.

<sup>65</sup> O'Connor, *Fishergate*, p. 282.

The general archaeological context of the Fishergate site has been introduced above,<sup>66</sup> but as the interpretation of the zooarchaeological evidence is to be considered in some detail, it will be useful to begin with a short summary of the assemblage.<sup>67</sup> As noted above, new methodological approaches were used in its recovery. In O'Connor's words:<sup>68</sup>

'...the Fishergate project has marked something of a turning point in the study of bone assemblages from York excavations. Sieving became accepted as the main recovery technique, not merely as a valuable adjunct, and the principle of selecting material for study from an extensive archive was implemented in a sufficiently rigorous manner.'

The critical point about the use of sieving is that it ensures:<sup>69</sup>

'the size bias produced by the recovery method is consistent from one sample to the next, and not dependent upon excavators' good or bad eyesight, speed of excavation of a particular layer, or the clarity of the sunshine at the time of excavation. When comparing one ... sample with another, therefore, the *bête noire* of collection bias can largely be disregarded.'

The potential of an environmental assemblage is dependent in many ways on the conditions under which it was recovered. The careful observation (and publication) of the contexts from which the bones were recovered, and analysis of the animal bones in the context of the wider stratigraphy of the site makes the Fishergate results particularly valuable. The use of sieving further increased the potential of the material: many more species (particularly smaller ones) were encountered, allowing the environment of and around the site to be reconstructed in more detail. For the domestic mammals, the recovery of more skeletal elements allowed a greater level of specialist zooarchaeological analysis, and increased confidence in more common analyses such as species ratios.

In addition to the rigorous recovery techniques employed at the Fishergate site, analysis of the assemblage developed existing sampling techniques to maximise the accuracy and potential of the final database of results, and the preservation conditions at many contexts within the Fishergate site were favourable for the survival of animal bone.<sup>70</sup> The zooarchaeological assemblage from Fishergate can

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<sup>66</sup> See 'York, Fishergate', p. 40.

<sup>67</sup> Published in O'Connor, *Fishergate*.

<sup>68</sup> *Ibid.*, p. 287.

<sup>69</sup> *Ibid.*, p. 221.

<sup>70</sup> *Ibid.*, pp. 225-9.

therefore be considered a particularly reliable sample. The publication of the assemblage in a dedicated fascicule has also enabled the results of the specialist analyses to be presented in full, so the case for the ‘provisioning’ of the settlement is available for detailed scrutiny. It rests on two major foundations: the dominance of cattle over other domestic mammals and, crucially, the absence of any evidence for neonatal animals from the assemblage.<sup>71</sup>

The first of these points has been briefly discussed above; the undeniably heavy consumption of beef is too ambiguous on its own to be firm evidence that the citizens of Fishergate were provisioned from the profits of livestock renders. While cattle have long been thought to be the most likely of the livestock species to be rendered as payments,<sup>72</sup> the local geography of the Fishergate site confuses the issue.<sup>73</sup> The suitability of the region around York for cattle-rearing means that it is entirely possible that the dominance of bovine remains in zooarchaeological assemblages from the city is merely a reflection of the dominance of cattle in local pastoral regimes.

However, the other basis on which the Fishergate site has been characterized as an agricultural consumer is less ambiguous: the zooarchaeological analysis failed to identify neonatal bones of any of the major livestock species among the thousands of bone fragments recovered from the site. Although immature bones, being smaller, are particularly vulnerable to taphonomic factors, the recovery in significant numbers of other small and delicate bones (including species of rodent and fish) suggests that the low recovery of neonatal bones from the Fishergate site is a meaningful result. O’ Connor notes:<sup>74</sup>

‘On the premise that a livestock production site will tend to accumulate a death assemblage of very young individuals, through still-births, mortality in multiple births and deliberate culling as population management, the virtual absence of very young calves,

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<sup>71</sup> A third issue, the general lack of variety in food animals in the assemblage, was also used in O’Connor’s case, but has been explored in some detail below in the consideration of consumption in Anglian Deira: see ‘Species Diversity and Early Mediaeval Lifestyles’, p. 181 below.

<sup>72</sup> See ‘Nature of Renders’, p. 177 below.

<sup>73</sup> See more discussion, p. 86 above.

<sup>74</sup> O’Connor, *Fishergate*, p. 248.

lambs and piglets at Fishergate implies that the occupants of the site were, in all periods of the site's history, net consumers, with little or no stockbreeding undertaken around the site.'

However, the testimony of the absence of neonatal bones rests on the premise that the zooarchaeological assemblage recovered from Fishergate represents all the animals that were present on the site in the Anglian period. Several aspects of the archaeology of the site challenge this assumption. Most striking, perhaps, is the archaeological contexts from which the bones were recovered. O'Connor's detailed publication of these shows that the animal bones were generally recovered from the fills of features interpreted as pits or ditches. Individual contexts often have distinctive species compositions:<sup>75</sup> some were dominated by cattle,<sup>76</sup> while the percentages of sheep bones, antler working waste and fish bones was anomalously high in others.<sup>77</sup> This pattern of finds suggests that, at least on some occasions, waste pits were opened to dispose of particular kinds of waste, rather than everything being dumped in a large, long-term waste-pit or ditch.<sup>78</sup>

Other evidence from the Fishergate excavations reinforces the impression of considered waste disposal strategies on the site in the Anglian period. Analysis of the layer of charcoal-rich deposits that separated the first and second phase of Anglian activity at the site offers two valuable insights into waste disposal. The first is the remarkable fact that the bone fragments in these deposits were largely uncharred, 'despite the abundance of charcoal' in the layer from which they were recovered.<sup>79</sup> O'Connor observes that the general character of the bone assemblage

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<sup>75</sup> *Ibid.*, pp. 225-8.

<sup>76</sup> Such as context 10183 from period 3a, with a 'high proportion of cattle-sized rib fragments' (*ibid.* p.225) or contexts 5558 and 3364 from periods 3b and 3c respectively which were not only similar in the predominance of 'cattle vertebrae and limb bones', but in the heavily butchered state of the bones they contained. (*ibid.* p. 228).

<sup>77</sup> As in contexts 10168 and 10180 which included 'a large proportion of caprine rib fragments and eel and herring bones' (*ibid.* p. 226), context 4661 which had 'a high proportion of eel bones and caprine ribs' (*ibid.* p. 226) and contexts 4943, 4914, 4913 and 4911 which 'were all characterised by a high proportion of fish bones, mostly of eels, and abundant antler-working waste' (*ibid.* p. 227).

<sup>78</sup> Although this may not have applied to all periods of occupation at the site: several pits from the 3c layer of occupation contain relatively abundant remains of small vertebrates such as frogs and mice which suggested they lay open long enough to act as a pit-trap. (*ibid.* p. 228).

<sup>79</sup> O'Connor, *Fishergate*, p. 227.



is similar to that from the first phase of Anglian occupation of the Fishergate site and suggests that the material in the charcoal-rich layer should be interpreted as deriving from the preceding settlement activity. He goes on to suggest that, from the absence of particular species in the charcoal-rich deposits, the bone in the charcoal-rich layer 'was specifically debris from food preparation and consumption that was reworked, rather than more general occupation debris with its component of dead vermin and cats'.<sup>80</sup> The zooarchaeology of the charcoal-rich layer thus suggests organization in waste disposal twice over: firstly in the original collection of the bones, with the specific collection of the refuse of domestic occupation, and secondly in the apparently deliberate admixture of material from a domestic (?bone-)pit with charred material to seal the demolition of the first phase of the Anglian settlement.

The absence of plant remains from excavated contexts at Fishergate may also be significant. Although plant remains are only preserved in exceptional conditions, and such conditions were not present at the Fishergate site, there are, as noted above, a few plant macrofossils (such as fruit stones and hazelnut shell) which are comparably robust with animal bones.<sup>81</sup> O'Connor observes that the paucity of even these more robust plant remains is so striking as to suggest 'that there was some order to the disposal of waste, and some attempt to prevent the kind of build-up seen in some ninth- to eleventh-century deposits in central York'.<sup>82</sup> As he suggests, the difficult preservation conditions for environmental evidence from the Fishergate site may in itself be an indication of a developed waste disposal strategy: it was the apparent disposal of all waste within the limits of the site which created the waterlogged conditions, facilitating exceptional preservation of plant remains, at the Coppergate site. The 'missing rubbish' at Fishergate could have been tipped into the adjacent river Foss, an option not open to the residents of Anglo-Scandinavian Coppergate as the site does not seem to have had direct access to the river. The nature of the organic waste involved would have been particularly foul, so it may have been an obvious candidate for disposal in the river, which would

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<sup>80</sup> *Ibid.*

<sup>81</sup> Above, p. 81.

<sup>82</sup> O'Connor, *Fishergate*, p. 283.

rapidly carry the material away from the site. However, as O'Connor notes, such waste would also have been particularly suitable as manure,<sup>83</sup> a preliminary suggestion of a more direct link than generally supposed between the consumers at Fishergate and the producers of their food.

This evidence for organization of waste disposal at Fishergate undermines any argument based on the absence of particular remains, problematizing the interpretation of the absence of neonatal bones. The problem becomes more acute when other zooarchaeological assemblages from Deira are taken into consideration. Zooarchaeological assemblages have been recovered from Cottam, West Heslerton, several sites at Wharram Percy and the Caythorpe Pipeline excavations. Two of these assemblages have provided only summary detail. For Cottam, the problem was geological:<sup>84</sup> the assemblage preserved in the ground was extremely fragmentary, and the delicate nature of neonatal bones presupposes that they would not survive such hostile conditions. Preservation conditions seem to have been much more favourable at West Heslerton, but the zooarchaeological assemblage recovered from that site awaits full analysis for the ultimate site report.<sup>85</sup>

However, zooarchaeological assemblages from Anglian levels at sites at the deserted village of Wharram Percy have been published in detail,<sup>86</sup> and no neonatal remains were present in any of them. Sieving was only used in the recovery of remains from site 95,<sup>87</sup> and the routine recovery of animal bone by hand at Wharram

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<sup>83</sup> A full discussion of farming practice is beyond the scope of this report, but the value of manure was clearly appreciated in early mediaeval Britain: see Hagen, *A Second Handbook*, p. 15 and p. 35 for documentary references to manure.

<sup>84</sup> See p. 81 above.

<sup>85</sup> Although preliminary comments are presented in Powlesland, 'The West Heslerton Assessment'.

<sup>86</sup> P.M. Stevens, 'The Vertebrate Remains from Site 39', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, pp. 67–9; Pinter-Bellows, 'Vertebrate Remains from Sites 94 and 95', pp. 69–79; Pinter-Bellows, 'Animal Remains', pp. 167–84.

<sup>87</sup> Pinter-Bellows, 'Vertebrate Remains from Sites 94 and 95', p. 70 The mesh size used in the excavation of site 95 was 10mm. At Fishergate two mesh sizes were used, with larger samples (referred to in the report as DS samples) sieved on a 12mm mesh, to provide results comparable with hand recovery, and smaller samples (referred to as BS samples) passed through a 2mm mesh (O'Connor, *Fishergate*, pp. 221–2).

does differentiate it from the Fishergate sample. Nonetheless, the presence of small and delicate bones in the zooarchaeological assemblage from Wharram, suggests that the paucity of neonatal material from the assemblage is a significant result.<sup>88</sup>

As Pinters-Bellows comments:<sup>89</sup>

‘The greater taphonomic vulnerability of neonate bones and the problems associated with hand recovery of smaller elements, while contributing factors, cannot explain this virtual absence; both effects are found on other sites with larger representations of neonates.’

Nonetheless, she goes on to conclude:<sup>90</sup>

‘The evidence of animal husbandry from these bones points to this midden coming from an unspecialised agrarian community, a self-sufficient producer’.

Given that the Fishergate and Wharram assemblages essentially produced the same level – an almost complete absence – of neonatal bones, the radically different nature of the interpretation of this result is probably due to the different archaeological contexts of the sites as a whole. The Fishergate site was the first evidence for substantial Anglian activity in the vicinity of York, and the question of the ‘urbanity’ of the site was a major research question for the excavation. Wharram, on the other hand, was characterized from the start as a ‘rural’ site and so interpretation of the assemblage was focused more on the evidence for the animal husbandry which was expected in a rural context. A regional perspective prompts a different interpretation: from both sites, zooarchaeological evidence suggests neonatal animal bones may have been subject to differential waste disposal practice from the bones of animals consumed for meat. Cemetery excavations at Addingham suggested the remains of human neonatal fatalities were treated differently from those of adult individuals,<sup>91</sup> and it is possible that this was indicative of a more general cultural practice in separating the mortal remains of those who died while

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<sup>88</sup> Records of water vole were present in the fragmentary assemblage from site 39 and bird, albeit unidentifiable, from sites 94/5. Anglian levels from the south manor site produced a more extensive list of small vertebrate species, including records of rabbits, frogs and a few (unidentifiable) fish bones (Pinter-Bellows, ‘Animal Remains’, p. 169).

<sup>89</sup> Pinter-Bellows, ‘Animal Remains’, p. 177.

<sup>90</sup> Pinter-Bellows, ‘Vertebrate Remains from Sites 94 and 95’, p. 79 She reaches a similar conclusion for the South Manor assemblage: ‘It is suggested that what is being observed at the south Manor at Wharram Percy from Phases 2 to 5 is basically that of the self-sufficient economy model, though that is not to say that some animals were not being raised for trade or tithe.’ Pinter-Bellows, ‘Animal Remains’, p. 178.

<sup>91</sup> Adams, ‘Addingham’, p. 175.

very young. For livestock, separate burial of neonatal fatalities may have been a way of protecting the mother cows and sheep (who were, after all, vital to the subsistence of the settlements) from the potentially disturbed spirits of their perinatal mortalities.<sup>92</sup> In the context of the remains from Wharram, then, it may be unsafe to use the absence of neonatal animal bones to characterize the Fishergate site as a ‘consumer’ settlement.

### **The Organization of Livestock Production**

The implication of this is that the settlements at Wharram Percy, and even Fishergate, York, did produce an assemblage of neonatal mortalities through stockbreeding, but disposed of them in a different way from other animal bones. The evidence from the Caythorpe pipeline assemblage is particularly intriguing in this context. Although somewhat smaller than those assemblages,<sup>93</sup> and mostly recovered by hand-collection,<sup>94</sup> this assemblage forms a striking contrast to those discussed above in that ‘The presence of very young cattle and sheep implies that the site was a producer site, raising its own livestock’.<sup>95</sup> Regrettably, the detailed breakdown of the zooarchaeological analysis has not been published, but some general comments emphasize the distinctiveness of the assemblage, particularly with regard to the age at death of the sheep which probably dominated husbandry at the site:<sup>96</sup>

‘the epiphysial fusion evidence for the sheep indicates that ... the proportion at Caythorpe [of sheep bones deriving from fully mature animals] is 22%’<sup>97</sup>

‘percentages of Caythorpe sheep/goat mandibles (with a tiny sample of N=11) are 73% dying before 12 months and 82% dying before 24 months’<sup>98</sup>

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<sup>92</sup> J.D. Richards, ‘Sites 94 and 95’, in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, pp. 84–5.

<sup>93</sup> See Abramson, ‘Caythorpe Gas Pipeline’, p. 73 and 76 for discussion of the size of the assemblage; the location of the bones was published only as ‘contexts in the area of the “ladder” settlement close to the Gypsey race stream’ (*ibid.* p. 73).

<sup>94</sup> *ibid.*, p. 72.

<sup>95</sup> *ibid.*, p. 76.

<sup>96</sup> The fragment counts, from 448 fragments, were cattle: sheep: pigs, 37: 58: 8 (*ibid.*, p. 76).

<sup>97</sup> See n. 47 above, this chapter, for explanation of the technical data relating to age-at-death analysis.

'The bones of both cattle and sheep derive primarily from juveniles, emphasising the importance of meat production. The age ranges are not compatible with stock maintenance, and the remains of older animals must have been deposited elsewhere, possibly in an unexcavated portion of the site, possibly at other sites in the neighbourhood.'<sup>99</sup>

The Caythorpe pipeline assemblage thus complements the assemblages from Fishergate and Wharram, in that the age of the cattle from the South Manor site was interpreted as noticeably mature.<sup>100</sup> This suggests spatial patterns in the disposal of livestock: Wharram's South Manor site seems to have been used to dispose of the bones of relatively elderly livestock, while the Caythorpe pipeline assemblage may be an example of the 'missing neonates'.

Given the evidence for unspecialized, local, butchery as a general rule in Anglian Deira, these assemblages probably represent the animals that were killed, cooked and eaten in the immediate vicinity. The implications of this evidence for the organization of production are unclear. It could suggest specialist livestock husbandry at these sites. It is not, perhaps, inherently implausible that some inhabitants of the settlement at the south manor site in Wharram specialised in cereal production, generating a zooarchaeological assemblage of cattle which were consumed as beef when they were no longer fit for the plough-team.<sup>101</sup> Such a scenario would imply that the settlement was either dependent on or in alliance with another, stockbreeding, settlement, which raised the cattle used for traction at Wharram's south manor. Rosamond Faith noted that the care of plough animals could have been a specialist activity, and the other major economic activity at the south manor, blacksmithing,<sup>102</sup> also required specialist skills. Faith observes that skilled, specialist tasks such as these were ideal occupations for slaves, whose work in these areas would be valuable enough to repay their masters' investment of their

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<sup>98</sup> Abramson, 'Caythorpe Gas Pipeline', p. 77.

<sup>99</sup> *ibid.* p. 79.

<sup>100</sup> S. Pinters-Bellows noted: 'Compared to another area of occupation at Wharram Percy of a similar date (Sites 94 and 95) ... the South Manor has twice as many mature cattle...' (Pinter-Bellows, 'Animal Remains', pp. 181-4).

<sup>101</sup> As Pinters-Bellows suggests, *ibid.*

<sup>102</sup> See introduction to the archaeological evidence in 'Wharram Percy', p. 38 above.

original price and the resources it took to sustain them.<sup>103</sup> This does not necessarily imply that Wharram's south manor should be characterized as a community of slaves; in the later mediaeval period it was the site of a high-status manorial settlement, and certain high-status artefacts in the Anglian finds assemblage could suggest that it had also been a particularly high-status part of the site earlier as well. However, slaves on a small estate may have been accommodated in the higher-status buildings in which the estate owner resided, so it is possible that the contexts from which the Wharram south manor animal bones were recovered were originally used for the food waste of a community of slaves who may have worked the smithy as well as the plough-teams which ultimately provided the beef consumed.

Another explanation of the age distribution of animal bones seen at these sites might be a transhumant system of pastoralism.<sup>104</sup> There is considerable evidence for the practice of transhumance in southern England,<sup>105</sup> and it is possible that a site such as the settlement excavated along the Caythorpe pipeline associated with the distinctive animal bone assemblage discussed above may have been a settlement seasonally occupied during lambing and calving. It is tempting to see such communities as linked with communities such as that at Wharram south manor, keeping their young livestock until maturity, then handing them over to live out their days in the plough-team or wool-flock, with each settlement getting its meat from fatalities and surplus stock from their own specialism. There is, however, nothing to support such a hypothesis, and it is perhaps unwise to 'join the dots' between settlements in this way. However, the age-at-death analyses of zooarchaeological assemblages from these three sites in Deira would suggest a more complex pattern of livestock subsistence than the provisioning of 'urban' sites and self-sufficiency of rural ones hitherto envisaged.

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<sup>103</sup> Faith, *Lordship*, pp. 65–6.

<sup>104</sup> Definition of 'transhumance' from the Oxford English Dictionary: 'The seasonal transfer of grazing animals to different pastures, often over substantial distances'.

<sup>105</sup> For a recent discussion see H. Fox, 'Fragmented Manors and the Customs of the Anglo-Saxons', in S. Keynes and A.P. Smyth (eds.), *Anglo-Saxons: Studies Presented to Cyril Roy Hart* (Dublin, 2006), pp. 78–97.

## Specialist Food Production

### Evidence for specialist production of foodstuffs in Anglian Deira

The previous section established that farming strategies in Anglian Deira were usually mixed, but this does not necessarily suggest that every site engaged in every activity. Indeed, given the variety of environmental conditions across even a small area of landscape, and the evidence that subsistence strategies were tailored to local conditions, it is inherently likely that different settlements specialised in different production activities, to the extent that they could be regarded as ‘specialist producers’. Detailed consideration of place-name evidence might have considerable potential for the identification of such specialist sites, although it could not be explored within this study.<sup>106</sup> Environmental evidence can suggest some possible specialist activity. The zooarchaeology of the site at Cottam, for instance, could be interpreted as suggesting possible specialist activity at this site. Julian Richards has suggested that the recovery of bones of large domestic dogs could be interpreted, particularly in the context of the recovery of a fragment of deer bone from the site, as suggesting the practice of deer-hunting from the settlement.<sup>107</sup> In the light of the large number of sheep bones at Cottam, these dog-bones could perhaps also be interpreted as sheep-dogs.<sup>108</sup> These interpretations are not mutually exclusive, and both would suggest a particular specialism in the economic activity of the settlement.

However, with the exception of the evidence for fish and pigs, discussed in the following sections, little has been recovered in this project suggesting the specialist production of food in Anglian Deira. The lack of evidence for cereal production is particularly disappointing, as it was the major bulk commodity transported in both the Roman and later mediaeval economies, and there is evidence for the movement of grain in Carolingian Europe.<sup>109</sup> The publication of further

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<sup>106</sup> The fact that many place names are not recorded until Domesday Book, took this kind of survey outside the scope of this research. See above, p. 31.

<sup>107</sup> Richards, ‘Cottam’, p. 90.

<sup>108</sup> For the dominance of sheep see above, p. 86.

<sup>109</sup> McCormick, *Origins*, p. 699.

settlement excavations in the future will almost certainly improve the understanding of these activities, but the small amount of information relative to subsistence production may be a realistic reflection of the economic activity of producers: even specialists seem to have provided for their own subsistence, and doing so probably took much of their time.

## Fish

Christopher Loveluck's analysis of the Driffield estate proposed a specialist fish production site at Skerne to the south-east of modern Driffield.<sup>110</sup> A similar case could be made for the Fishergate site in York, where concentrations of fish bones could indicate processing at a level intended to supply more than just the inhabitants of the site.<sup>111</sup> The recovery of fishing tools from the Fishergate site suggest that the catching, as well as processing, of fish was undertaken by the inhabitants.<sup>112</sup> O'Connor has suggested that the appearance of smelt in the later Anglian (3c)<sup>113</sup> levels of the Fishergate site suggests the introduction of the fine drift nets necessary to catch this species,<sup>114</sup> which might even indicate that the fishermen of Anglian York were particularly progressive. The supply of deep-sea fish, as suggested from tenth- and eleventh-century levels of the Coppergate site,<sup>115</sup> demonstrates an interest in fishing in later centuries at York that may be part of the same tradition seen in fishing activity at Fishergate. The elite associations of both these sites form an interesting context for such specialist production of fish, as the postulated royal inhabitants of the estate at Driffield, and the royal and ecclesiastical elites who used York would have needed a regular supply of fish for ritual meat-avoidance on fast days.<sup>116</sup>

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<sup>110</sup> Loveluck, "On Driffield", p. 45.

<sup>111</sup> See n. 77 above, this chapter.

<sup>112</sup> N.S.H. Rogers, 'The Finds: Fishing', in Rogers (ed.), *Anglian Finds*, pp. 1317–21.

<sup>113</sup> See 'York, Fishergate', p. 40 above.

<sup>114</sup> O'Connor, *Fishergate*, pp. 264–7.

<sup>115</sup> Summary of developments and further references at O'Connor, *Fishergate*, p. 267.

<sup>116</sup> It is possible therefore that the processing seen at these sites may have just been preserving fish for local elite subsistence, and only the surplus was marketed; see "Market' forces", p. 134 below.



The understanding of fish assemblages is particularly difficult as their small and delicate bones are particularly vulnerable to destruction in the soil and being missed in archaeological excavations unless sieving is used in the recovery of finds. Fish bones may never even enter the archaeological record in the first place as they are more likely than the bones of domestic mammals to have been ingested, and not guaranteed to survive the process. However, the fact that fish are particularly suitable for preservation to help alleviate the seasonality of other food production, as well as their ritual functions mentioned above, imply that they could have been a significant economic resource. Some water control measures have survived at both Wharram Percy and Beverley which may represent fish-weirs,<sup>117</sup> although in both cases other uses are also possible for these features.<sup>118</sup>

### Pigs

Pigs feature prominently in documentary sources from southern England.<sup>119</sup> In Northumbria, the issue of the role of pigs in the diet has been raised in a somewhat dramatic fashion by the zooarchaeological assemblages recovered from excavations under the current minster. Most of the archaeological contexts produced unremarkable groups of pig bones, but analysis of one group, from the basilica, revealed an extremely distinctive assemblage, dominated by bones of pig and sheep and with a high percentage of young pig bones.<sup>120</sup> The presence of such quantities of piglets in this assemblage has been linked to high-status activity on the minster site. However, a key issue with this assemblage, as with the whole of the minster site, is dating. Consumption of 'suckling pig' was a feature of Roman elite feasting,

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<sup>117</sup> J.D. Richards, 'Anglo-Saxon Settlement at Wharram Percy: a General Introduction by J D Richards', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, p. 93 and Armstrong and Evans, 'Beverley Excavation Report', pp. 10–1.

<sup>118</sup> The Wharram feature has also been interpreted as a mill, while a facility for the retting of flax for linen production, a foul activity that would have precluded the rearing of fish, has been suggested for the Beverley feature; these interpretations are discussed further in the site reports cited in the previous note.

<sup>119</sup> For more discussion of the documentary references see J. Clutton-Brock, 'The Animal Resources', in Wilson (ed.), *Archaeology*, p. 378 and Hagen, *A Second Handbook*.

<sup>120</sup> D.J. Rackham, 'Animal Bone from Post-Roman Contexts, with a contribution from E P Allison', in Heywood and Phillips (eds.), *Excavations at York Minster 2*, pp. 539–43.

and has been observed in assemblages from other Roman sites.<sup>121</sup> While it is possible that this tradition continued into the Anglian period, the apparent consumption of young pigs could suggest that the late Roman or sub-Roman dating suggested as one of three possibilities for the Minster material might apply to the assemblage from the basilica at least.<sup>122</sup>

All the other zooarchaeological assemblages that have been recovered from excavations dated to the Anglian period in Deira include some representatives of pig among their bones. Most have been treated as unremarkable, with no neonatal bones to suggest breeding and all the pigs slaughtered at late adolescence, the most profitable age to achieve a maximum meat yield for minimum effort.<sup>123</sup> The one exception is the assemblage for the Fishergate site at York, where O'Connor's suggested that:<sup>124</sup>

a case can be argued for about half of the pig carcasses represented in Period 3 DS samples having come on to the site as whole, presumably live, pigs, and about half as dressed carcasses from which the trotters had been removed though the heads had not...

This conclusion has often been cited in discussions to support the idea that Fishergate was an economically controlled settlement. There were two main lines in O'Connor's argument. The first was a discrepancy in the numbers of two particular bones of the foot, the third and fourth metapodials.<sup>125</sup> O'Connor notes that the form of these bones facilitates their perforation and use as 'toggles', but he suggests that, although some bones converted into such artefacts were found on the Fishergate site, this was not enough to account for the bones missing from the assemblage.<sup>126</sup> This could be challenged: the toggles might have been used until they broke, or even incorporated into artefacts exported from the site, such as bags or sacks used to contain other products. Even if the toggle were a minor use for the bones, the whole trotter might have been used in other ways which destroyed the bones, perhaps, as

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<sup>121</sup> See, for example, A. King, 'Villas and Animal Bones', in K. Branigan and D. Miles (eds.), *The Economies of Romano-British villas* (Sheffield, 1988), pp. 52–3 for discussion of high-status consumption of pork in Roman Britain.

<sup>122</sup> See Carver, 'Roman to Norman', pp. 177–95 for the three possibilities for the dating of the site.

<sup>123</sup> See above p. 89.

<sup>124</sup> O'Connor, *Fishergate*, p. 246.

<sup>125</sup> *ibid.*, pp. 244–6.

<sup>126</sup> *ibid.*, p. 245.

today, as a dog treat, or possibly even boiled for glue: O'Connor's suggestion that the trotters were removed before the pigs arrived on the site already implies that they had some use at the site of butchery. Their absence could equally well be explained if they were removed to fulfil this function after butchery on the Fishergate site itself.

It could also be argued that the trotters were removed to make the carcass lighter to transport, but if ease of transportation were an issue, it might be expected that the head would also have been removed, and O'Connor's analysis, as he noted in the quote above, demonstrated that this was not the case. Brawn, a dish based on pig's cheeks, has recently been considered a delicacy, but so have dishes based on the cooking of trotters, and if transportation was a major issue the presence of pig skulls on the Fishergate is hard to explain on culinary grounds alone. The absence of the metapodial bones from the Fishergate site is thus an issue of considerable complexity, and not able to carry the case for the controlled supply of pig carcasses to the Fishergate site on its own.

The other line of O'Connor's argument rests on the age-at-death analysis of the Fishergate pig bones. This showed not the usual single peak, but two clear peaks in the age profile of the animals represented in the zooarchaeological assemblage: at just over one year (around 12 to 15 months) and just over two years (around 24 to 30 months). O'Connor argued the relatively sharp definition in the pig age profile from the Fishergate site implies the involvement of a specialist in the supply of pork to Fishergate, with the two peaks possibly representing different breeds of pig, or different uses for the meat (for instance a distinction between fresh pork and bacon).<sup>127</sup>

However, it has not been widely recognised that the 'unremarkable' data from other Anglian sites also implies the involvement of a middleman. The slaughter of the vast majority of pigs on the site at late adolescence, as seen in, for example, the Wharram assemblages, is, as noted in the site report, consistent with meat being the only economic resource available from pigs – that is, these pigs were

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<sup>127</sup> *Ibid.* p. 251.

killed *before* they would have been old enough to produce offspring. Apart from the Fishergate assemblage, the age profiles of the pigs are relatively diffuse, indicating they were reared on a household basis and slaughtered when convenient. However, the lack of breeding sows implies they were imported into the settlements as piglets, probably acquired from a specialist breeder. No archaeological evidence has been found for these kind of pig-breeders, but there is significant documentary evidence from southern England associating them with woodland, where it appears they were fattened on beech-mast and acorns during autumn.<sup>128</sup> Pig-breeding could sometimes be on a considerable scale, as indicated by a tenth-century bequest of some thousands of the animals.<sup>129</sup>

It is noticeable that the proportion of pig in the assemblages is around 10% in all zooarchaeological assemblages from Anglian Deira, despite the wide variance in the numbers of cattle and sheep.<sup>130</sup> This, combined with the possibility of specialist supply of pigs to the settlement sites suggests, pigs may have been of greater cultural than subsistence importance, and it is possible that they were particularly associated with ritual religious feasting. As noted above,<sup>131</sup> there is evidence that pigs, particularly young pigs, were a feasting delicacy in Roman culture, and the Catholic church is known to have carried over many Roman customs into Christian tradition. However, in the case of the pig, there is an overlap between this Roman practice and Germanic culture, in that the boar was a widely admired symbol of warrior values. If the consumption of boar, or its domestic cousins (which may not have been as distinct as in modern perception if herds of

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<sup>128</sup> The laws of Ine (edited in F. Liebermann (ed.), *Die Gesetze der Angelsachsen* (Halle, 1903–16), pp. 88–123, translated in Whitelock (ed.), *EHD*, pp. 364–72) refer to these practices in the husbandry of pigs.

<sup>129</sup> See Clutton-Brock, 'The Animal Resources', p. 378.

<sup>130</sup> The details of the species distributions tables are presented in the individual site reports: Abramson, 'Caythorpe Gas Pipeline', p. 73, Table 3; Stevens, 'Site 39', p. 67; Pinter-Bellows, 'Vertebrate Remains from Sites 94 and 95', p. 71, Table 9; Pinter-Bellows, 'Animal Remains', pp. 167–84 and O'Connor, *Fishergate*, p. 237, Table 60. A summary, including the relative % values (which are not always given in the site reports), is given in the Microsoft Excel spreadsheet 'Relative Species Distributions.xls' in the Appendix.

<sup>131</sup> P. 105 above.

pigs roamed semi-wild)<sup>132</sup> had been particularly associated with feasting in celebration of warrior culture, Anglian church leaders might have followed the advice of Gregory the Great,<sup>133</sup> and christianized such feasts, changing the emphasis to the Warrior Christ, as presented in Old English poetry such as the *Dream of the Rood*. It is even possible that the church may have taken a direct role in the supply of pigs for such feasting.

A religious association might explain the early peak in pig-ages seen in Fishergate: it is possible that its proximity to the ecclesiastical centre at York allowed it access to Roman-style youthful pigs on some occasions. The consumption of pig can also be associated with some ecclesiastical sites outside Deira: an example is the East Anglian episcopal site at North Elmham, where the species ratios show that pig bones comprised over a quarter (28%) of the animal bone assemblage.<sup>134</sup> A wider survey of zooarchaeological assemblages might offer more insight into this question, although it is possible that any religious element in pig consumption might have been confined to Anglian Deira.

This interpretation is in direct contrast to the somewhat mundane role of pigs that previous commentators have suggested.<sup>135</sup> Even if the suggestion of church involvement is discounted however, the adolescent deaths of the overwhelming majority of the pigs consumed at excavated settlements in Anglian Deira, and in particular the clearly defined peaks in the age profile from the pigs from Anglian Fishergate, suggest that pig-breeding was not a regular activity on Anglian farms.<sup>136</sup> This evidence indicates a specialised supply of piglets, and perhaps in York,

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<sup>132</sup> As suggested in Clutton-Brock, 'The Animal Resources', p. 378.

<sup>133</sup> *HE* i. 30.

<sup>134</sup> Clutton-Brock, 'The Animal Resources', p. 377.

<sup>135</sup> For example: 'For the rest [non-elite] of the population, the pig was the only mammal consumed regularly, usually in preserved form such as bacon or possibly sausage...' (Banham, 'Food and Drink', pp. 190–1), although this author notes elsewhere that sheep bones are more common on Anglo-Saxon sites than pig, and there is very little clear evidence for sausage: Banham, *Food and Drink*, pp. 58–9.

<sup>136</sup> Verhulst suggests that pigs were more common on Carolingian farms: Verhulst, *The Carolingian Economy*, p. 66.

slaughtered carcasses, to Anglian consumers, and is therefore of considerable economic importance.

### ***Craft Production***

The consideration of evidence for the production of craft items in this project has unfortunately been considerably more restricted than that for foodstuffs due to the limited time available after the analyses discussed in the coinage section had been completed; the relative brevity of the following sections is much more a reflection of these practical matters than the availability of evidence. As with the previous consideration of food production, this section will begin with a consideration of the evidence for subsistence craft-working and move on to examine specialist craft production, although this latter discussion will be confined to an examination of the evidence for metal-working.

#### **Subsistence Craft work**

A wide variety of subsistence craft working has been shown to have been undertaken on settlement sites. Construction and maintenance of the buildings themselves was obviously important, but evidence for pottery production, smithing (at least to repair essential tools) and textile production is widespread throughout the Anglo-Saxon period.

No specialist pottery production is known from Anglian Deira, but a small amount of pottery thrown on a slow wheel and relatively hard-fired is known from the region, from excavations at both Whitby and Otley.<sup>137</sup> Whether this was superior subsistence production or the result of more specialist activity remains unclear, and the detailed analysis necessary to investigate these issues proved beyond the scope of this project.

Considerable evidence for smithing has been recovered from Anglian Deira from the Fishergate and Wharram Percy sites. However, it is unclear whether either of these assemblages represent subsistence smithing activity, as both sites may have

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<sup>137</sup> Peers and Radford, 'Whitby', pp. 80–2 and Le Patourel and Wood, 'Otley', pp. 134–6.

been engaged in specialist metal-working activity. While finds suggest that both of these settlements were engaged in the production of iron objects from raw metal,<sup>138</sup> and probably in the recycling of iron scrap as well, it is not clear whether most smithing activity in most settlements would have extended to the production, or been limited to the repair, of agricultural and personal tools.

### **Textile Production**

There is considerably more evidence, however, for subsistence textile production, and every excavation from Deira has some kind of evidence for the production of cloth. Finds of spindle whorls are common on settlement sites, and have been recovered from most excavations in Anglian Deira. The materials used to make these spindle whorls are perhaps particularly indicative of their everyday nature: they are typically crudely made, often from materials that would have been available to collect casually around settlement areas, such as sherds of Roman pottery or off-cuts of craft-working materials such as antler.<sup>139</sup> Some spindle-whorls, including four examples from Wharram,<sup>140</sup> were specially made from clay, but these are finished very roughly, and seen to have been fired with minimum effort, probably in a domestic bonfire. Loomweights, which provided tension on the warp (vertical) threads of the simple warp-weighted looms that would have been used in the study period, have also been found in this material from Deiran settlement sites.<sup>141</sup> Although perfectly functional for their intended use, with their rough finish and soft, friable fabrics, these pottery artefacts could never have been considered high-quality products. The almost disposable nature of these textile processing tools, combined with the frequency with which they are found on settlement sites, suggests textile processing for subsistence use was a local craft that was undertaken in most Deiran households during the study period.

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<sup>138</sup> See 'Iron Smelting', p. 114 below.

<sup>139</sup> Such as the examples described in A. MacGregor, 'Bone and Antler Objects', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, p. 58.

<sup>140</sup> E.A. Clark, 'Fired Clay Objects', in Croft and Stamper (eds.), *South Manor*, p. 119; includes brief discussion of and references to other spindles whorls from Wharram made of re-used Roman pottery and stone.

<sup>141</sup> *Ibid.*, p. 117-8.

In addition to these textile-processing tools, evidence for the raw materials needed to make cloth is also available from many settlement sites. The zooarchaeological evidence discussed above suggested that wool was an important product of many of the sheep represented in animal bone assemblages from Anglian Deira. Linen has traditionally been seen as a luxury fabric in the Anglo-Saxon period, although it may have been more widely used than is generally appreciated. The best archaeological evidence for the production of linen in Deira comes from just after this study period of this project, from the waterlogged Anglo-Scandinavian levels of the Coppergate site, which preserved the flax fibres needed to prove that it was used for linen production. Although flax seeds have been recovered from Anglian levels of excavations at Beverley, Cottam and West Heslerton, the presence of the seed alone is not enough to prove linen production at these sites as flax seed, also known as linseed, can be used as a foodstuff.

G. Owen-Crocker has suggested that linen was widely used in Anglo-Saxon clothing, particularly perhaps as the fabric for a visible, undyed, undergarment.<sup>142</sup> Linen does feature in Bede's *Historia Ecclesiastica Gentis Anglorum*, which is particularly relevant for this study for its Northumbrian perspective. There is a description of a linen head-dress worn by a girl, whose status was not obviously noble, cured at the site of St. Oswald's death.<sup>143</sup> The fact that linen could be woven into a very fine and thin cloth, would have made it a natural choice for such garments.<sup>144</sup> Bede also notes among the virtues of Saint Æthelthryth:<sup>145</sup>

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<sup>142</sup> G.R. Owen-Crocker, *Dress in Anglo-Saxon England* (Manchester, 1986), p. 102 and p. 123. However, the manuscript-art evidence she cites for the garment worn under woollen tunics being linen is not conclusive; the white colour depicted in these illustrations could, as Owen-Crocker notes, indicate a linen fabric, but it could also have represented undyed wool as Anglo-Saxon sheep seem to often have been white; see Walton Rogers, P., *Textile Production at 16–22 Coppergate*, *The Archaeology of York: The Small Finds 17/11* (York, 1997), p. 1715.

<sup>143</sup> *HE* iii. 9.

<sup>144</sup> See E.W. Heckett, *Viking Age Headcoverings from Dublin* (Dublin, 2003) for a detailed consideration of head-dresses.

<sup>145</sup> *HE* iv. 19. Quotation from Colgrave, B. and R. A. B. Mynors, *Bede's Ecclesiastical History of the English People* (Oxford, 1969), pp. 392–3: *De qua ferunt quia, ex quo monasterium petiit, nunquam lineis sed solum laneis vesimentis uti voluerit.*



It is related of her that, from the time she entered the monastery, she would never wear linen but only woollen garments

It is possible that since Æthelthryth had been a queen, the linen garments which she put aside may have been a marker of status and her renunciation of them a mark of humility. However, Bede's initial description of her virtues does not make any other references to Æthelthryth's renunciation of royal glory;<sup>146</sup> it is, rather, her moderation in worldly comforts that is emphasised: Bede also comments on her moderation in food, her enthusiasm for prayer and the infrequency of her taking a hot bath. Owen-Crocker suggests that Æthelthryth's clothing could be considered an expression of her asceticism, commenting 'that it was usual to wear linen, while to wear wool (next to the skin, presumably) was the custom only of the very ascetic...'.<sup>147</sup> The flax found at the three sites in Deira may thus represent subsistence textile production, although other interpretations (specialist production, or use of linseed as a foodstuff) are possible for these finds.

### Specialist Craft Production

Archaeological excavations from Beverley, Fishergate and Wharram Percy in particular have produced evidence of craft production which suggests considerable skill on the part of the workers involved, implying they must have been specialists in their fields. The following discussion focuses on metalworking, the craft for which there is the most evidence and one which has an obvious relevance to the coinage which forms such a large part of the discussion in this report. Other crafts are represented in the archaeological assemblage from Anglian Deira. Antler-working in particular may have been a widespread craft activity, and leather-working, and, perhaps to a lesser extent fur-processing and pottery production may all have been undertaken by specialist workers, and could form interesting potential areas for future research. By the later ninth and tenth centuries, more centralized, industrial production appears to have been starting, as expressed in the York ware and, much more popular, Torksey ware potteries, but this does not seem to have affected specialist production in Northumbria until after the study period of this project.

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<sup>146</sup> Apart, perhaps, from her reported delight at the tumour on her neck as penance for the extravagance of the necklaces she had worn in her secular life: *HE* iv. 19.

<sup>147</sup> Owen-Crocker, *Dress*, p. 102 and p. 87 respectively.

## Iron Smelting

Geographical access to iron ore needed to produce the raw iron to be worked into tools would not have been available to all settlements. While metal was undoubtedly recycled,<sup>148</sup> and tools may have had a long life, the scale of the use of iron seen on early mediaeval sites suggests that re-use of scrap iron may not have provided enough metal for the subsistence needs of the agricultural population. However, specialist skills are required to produce iron from bog-iron or rock ore, and specialist settlements seem to have been engaged in the smelting of iron from its ores from well before the study period of this project.<sup>149</sup>

There is no evidence for iron smelting to supply the smithing activity at Wharram Percy.<sup>150</sup> Iron is known to have been distributed as a raw metal during Roman rule in Britain,<sup>151</sup> and finds of iron rods, including some that seem to be partially worked, amongst broken iron objects which probably represent scrap for re-melting, suggest that a supply of raw iron continued to be available to the smiths at Wharram Percy.<sup>152</sup> Excavations of Anglian (period 3) levels at the Fishergate site in York also recovered 'iron strips', which may have been a traded form of raw iron, similar to the rods from Wharram Percy.<sup>153</sup> Henriette Lyngstrøm's discussion of the

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<sup>148</sup> See 'Iron', p. 146 below.

<sup>149</sup> See I. Schröder-Kolb, 'Past to Present: Roman Iron Production in the East Midlands, England', in L.C. Nørbach (ed.), *Prehistoric and Medieval Direct Iron Smelting in Scandinavia and Europe: Aspects of Technology and Science (Proceedings of the Sandbjerg Conference 16th to 20th September 1999)*, Acta Jutlandica LXXVI: 2 Humanities Series 75 (2003), pp. 71–6 for discussion of an example in the vicinity of Deira.

<sup>150</sup> The processes used to smelt iron in the early mediaeval period were unable to remove every trace of slag from the raw metal. Metallurgical analysis can establish whether slag was formed during smelting or was released during re-working of impure iron metal. No slag produced as primary smelting waste has yet been found from Anglian Deira.

<sup>151</sup> See V. Fell, 'Metallographic Examination of Two Iron Age Hooked Blocks from England', in Nørbach (ed.), *Direct Iron Smelting*, pp. 129–33.

<sup>152</sup> G. McDonnell, 'The Ironworking Evidence', in Croft and Stamper (eds.), *South Manor*, p. 163.

<sup>153</sup> N.S.H. Rogers, 'The Finds: Metalworking', in Rogers (ed.), *Anglian Finds*, pp. 1228–30.

distribution of raw iron identified bar-forms as particularly suitable as they enabled the consumer to make an assessment of the quality of the metal.<sup>154</sup>

There is, as yet, little evidence for early mediaeval iron production in northern England, but archaeological remains of two middle Saxon smelting furnaces have been discovered in southern England.<sup>155</sup> At both sites the associated buildings seem to have been temporary constructions, and neither produced any evidence that smithing activity had been associated with the iron-smelting. Peter Mikkelsen's analysis of plant material used to absorb slag in Denmark has suggested that the iron production there was probably seasonal.<sup>156</sup> The plant remains were well preserved by charring, and could be identified as 'green straw'.<sup>157</sup> The use of undried grass stems suggested that smelting was undertaken in midsummer, which is an ideal time for industrial activity: the weather would have been suitable for the prolonged operation of the smelting furnace, and farming communities had limited agricultural demands on their labour as the crops ripened for harvest.<sup>158</sup> The temporary constructions around the English smelting furnaces suggests that they also were not in full-time use, and it is therefore possible that a similar kind of seasonality to that identified in the Danish examples may have conditioned the production of iron in England.

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<sup>154</sup> H. Lyngstrøm, 'Farmers, Smelters and Smiths: Relations between Production, Consumption and Distribution of Iron in Denmark, 500 BC–AD 1500', in Nørbach (ed.), *Direct Iron Smelting*, pp. 21–5. The thin bar shape allowed a visual assessment of the quality of the metal as the residual slag inclusions would be visible (see n. 150 above, this chapter).

<sup>155</sup> At Ramsbury and Millbrook. See J. Haslam, 'A Middle Saxon Iron Smelting Site at Ramsbury, Wiltshire', *Medieval Archaeology* 24 (1980): 1–68 and C.F. Tebutt, 'A Middle Saxon Iron Smelting Site at Millbrook, Ashdown Forest, Sussex', *Sussex Archaeological Collections* 120 (1982): 19–35.

<sup>156</sup> P.H. Mikkelsen, 'Slag—With an Impression of Agricultural Practices', in Nørbach (ed.), *Direct Iron Smelting*, pp. 43–8.

<sup>157</sup> That is, the grass was still alive, rather than dried (as it would have been by late summer) when it was used in the smelting furnace; *ibid.*, p. 43.

<sup>158</sup> *Ibid.*, p. 46.

The scale of historical iron production at excavated smelting sites in Europe could be considerable,<sup>159</sup> although it seems that during the study period of this project a smaller scale of production, with recovery of only one furnace from excavated sites, was perhaps more normal.<sup>160</sup> Combined with the seasonality of production discussed above, this would suggest that iron production was probably not a full-time occupation; indeed, iron-smelting may have been confined to an annual event, undertaken just before harvest when the labour requirements of the subsistence agriculture that dominated the economic activity of the settlements involved was particularly low.

Although there is no direct evidence for iron-smelting in early mediaeval Deira, Christopher Loveluck's analysis of cemetery evidence from around Elmswell, an area in the Yorkshire Wolds near Driffield, has suggested that iron-production is likely to have been undertaken there in the early Anglo-Saxon period.<sup>161</sup> The development of iron-smelting skills in this region seems to have started the Roman period, and was probably encouraged by the local availability of bog-iron, although some evidence may also suggest the smelting of mined iron-ore. This smelting activity probably continued into the Middle Saxon period, although this is hard to prove as the cemetery evidence which Loveluck used for the earlier period is no longer available due to changes in burial practice. However, Loveluck suggested that iron production may have been an important contributing factor to the apparent wealth of the Yorkshire Wolds.

### Metalworking

Evidence from several sites around the Yorkshire Wolds in south-eastern Deira suggest that metalworking, sometimes at a highly skilled level, was practised extensively in the region. The area includes the sites identified by Christopher Loveluck as specialists in iron production into the Anglian period. Considerable

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<sup>159</sup> See, for example, I. Spazier, 'The Germanic Iron-Smelting Complex at Wolkenberg in Lower Lausacia, Southern Brandenburg', in Nørbach (ed.), *Direct Iron Smelting*, pp. 37–42, where the discovery of over 1,000 furnaces is discussed.

<sup>160</sup> L.F. Stenvik, 'Recent Results from Investigations of Iron Production in Northern Europe: Some Reflections on the Variation', in Nørbach (ed.), *Direct Iron Smelting*, p. 80.

<sup>161</sup> Loveluck, "'On Driffield'", p. 46.

archaeological evidence attested both iron-working and non-ferrous metalwork being undertaken in buildings on the site at Wharram Percy. Even the otherwise more mundane settlement at Cottam produced a finds assemblage which suggested a skilled level of non-ferrous metalworking. In addition to a considerable assemblage of copper-alloy objects recovered from the site, Cottam produced four silver-wire strap-ends, a silver finger-ring and a small piece of gold sheeting.<sup>162</sup> These were interpreted as suggesting that non-ferrous metalworking may have been undertaken on the site; the gold sheeting in particular cannot easily be interpreted as a finished artefact, and so implies the presence of at least an itinerant non-ferrous metalsmith.<sup>163</sup> The four silver-wire strap ends were the only objects found on the site that are likely to have originated south of the Humber,<sup>164</sup> and may suggest that Cottam's specialism in non-ferrous metalwork allowed it some limited ability to engage in long-range communications networks.

Metalworking was clearly not limited to this area, even within Deira; the Fishergate site, for example, has also produced evidence for metalworking in iron and other metals,<sup>165</sup> and the find assemblage from Beverley also suggests considerable metalworking activity may have taken place near the Lurk Lane site in the Anglian period.<sup>166</sup> The concentration of excavated sites in the Wolds may owe more to the general archaeological focus in this region than a particular specialism in the mediaeval period. However, the concentration of metalworking expertise in the Wolds may be of particular economic significance for Deira as it may have made an important contribution to the development of the Anglian coinage. A link between the wealth of this area and the coinage of the kings of Northumbria was originally postulated by Loveluck, who noted the local concentration of finds of

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<sup>162</sup> Originally published as Fig 3.7 in D. Haldenby, 'An Anglian Site on the Yorkshire Wolds: Part III', *Yorkshire Archaeological Journal* 66 (1994): 51–6 No. 118 in the Concordance published in Richards, 'Cottam', p. 104.

<sup>163</sup> Richards, 'Cottam', p. 91.

<sup>164</sup> *Ibid.* G. Thomas, 'Silver Wire Strap-Ends from East Anglia', *Anglo-Saxon Studies in Archaeology and History* 9 (1996): 81–100 identifies the strap-end as a type known mainly from East Anglia.

<sup>165</sup> Rogers, 'The Finds: Metalworking', pp. 1224–43.

<sup>166</sup> Armstrong and Evans, 'Beverley Excavation Report', pp. 11–3.

*sceattas* of King Aldfrith in his discussion of the iron wealth of the Driffield area. Loveluck suggested that the metalworking wealth may have contributed to Aldfrith's ability to mint coinage, and even speculated that a mint for these coins may have been located in the region.<sup>167</sup>

Evidence from Wharram Percy may also link Wolds metalworking expertise to the *styca* coinages of the mid-ninth-century, a hundred and fifty years after the reign of King Aldfrith. The first notable point is the apparent working of gold and silver, as well as copper alloy, in the workshop discovered in context 39 of the Wharram site. Loveluck's analysis had suggested that the importance of iron in the economy of the Driffield area had given it an anomalous social importance in the region, reflected in its use in grave goods in the fifth and sixth centuries. It could be suggested that copper alloy achieved a similar importance in the later Anglian period, and its appearance alongside gold and silver at both Cottam and Wharram might be a reflection of this increased status. It is possible that the decision of Eanred to adopt an alloy of copper as a coin medium in the face of increasing silver shortages might be related to such a pre-existing higher status of copper alloys in a 'heartland area' of the kings of Northumbria.<sup>168</sup>

More concrete associations between the Wolds metalworking sites and the *styca* coins comes from an analysis of the metalworking remains from a group of crucibles from the non-ferrous metal-workshop at Wharram. The results of the metallurgical analysis were consistent with the alloy on the crucibles having been a form of brass (that is a copper alloyed with zinc). This result was dismissed in the site report as all other copper alloy residues proved to be of bronzes (alloys of copper and tin), and 'the existing evidence on alloy usage does not suggest that brass is being made during the Anglo-Saxon period.'<sup>169</sup> However, brass alloys are known in the first copper-alloy *styca* coinages issued in Northumbria in the ninth

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<sup>167</sup> Loveluck, "On Driffield", p. 44.

<sup>168</sup> See 'The Establishment of the Study Area', p. 53 above for discussion of the 'heartlands' of Deira.

<sup>169</sup> J. Bayley, 'The Metal-working Evidence', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, p. 60.

century.<sup>170</sup> The rarity of brass alloys elsewhere in Anglo-Saxon England means that their possible presence at Wharram is particularly significant. If confirmed, it would suggest that metal-working on this site is likely to have been particularly specialist in the use of copper alloys, forming a possible link between this area of Deira and the *styca* coinage.

### Specialist Craft Workers

C. R. Dodwell's discussion of master-craftsmen in Anglo-Saxon England suggested that many of them were multi-talented: master scribes could also be manuscript-painters, and embroiderers could specialize in other decorative arts. It is likely that less exalted craft-workers were similarly versatile, and that craft-working skills related more to the activities involved than the medium. Sculptors, for example, probably worked in wood, perhaps learning their skills in this medium before they acquired the expertise to attempt the probably rarer, but considerably more durable, stone pieces which have survived into modern times. Archaeological evidence for the association of metal-working and some forms of glass-working can be seen in the finds associated with an isolated burial interpreted as that of an itinerant metalsmith at Tattershall Thorpe in Lincolnshire,<sup>171</sup> which included a considerable amount of scrap metal, and a small group of glass fragments interpreted as cullet, suggesting the metalworker who owned the rest of the hoard would have had the ability to work with glass on a small scale.

In this context, it is notable that all the sites in Deira which have produced glass finds have also shown evidence of metalworking.<sup>172</sup> With the exception of Beverley,<sup>173</sup> this metalworking activity included the more valuable precious metals

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<sup>170</sup> See p. 236 below.

<sup>171</sup> See essays in D.A. Hinton (ed.), *A Smith in Lindsey: the Anglo-Saxon Grave at Tattershall Thorpe, Lincolnshire* (London, 2000) for discussion of the Tattershall Thorpe discoveries.

<sup>172</sup> Glass artefacts are among the finds assemblages from Fishergate, Beverley, Whitby, Wharram and Kirkdale; see 'Glass', p. 136 below for more details of these glass finds.

<sup>173</sup> It should be noted that the metalworking evidence from Beverley was at the edge of the excavated area: at Wharram Percy, the smithy area excavated at the south manor site showed little evidence of the non-ferrous metalworking activity discovered at the contemporary sites 94/5.

and copper alloys that might have been expected to have been decorated with enamel. The skills involved in working with high temperature furnaces and molten materials are similar for both metal- and glass-working. There are also practical advantages to the association of these 'pyro-industries'. Noting the association of glass-working with metal-working at some Irish sites, Julian Henderson observed that they would have shared the same requirements for large amounts of fuel.<sup>174</sup> The use of glass for mounts and enamelling on metalwork may suggest that the workers who used glass for small-scale decorative purposes were the metalworkers who had created the objects being decorated, and if glass decoration was being applied to metal products, it would obviously be convenient to have that done in the same workshop so the manufacturing could be completed on site.

Manual working, particularly in dirty and dangerous conditions such as a metalworking furnace, might be assumed to have been low-status work, and there is some evidence that blacksmith work could be associated with servile status.<sup>175</sup> However, this is not likely to have been the case for all metalworkers. Weapon-smiths in particular were well-respected in heroic culture: both the legend of Weland the Smith, and poetic metaphors used in *Beowulf* also give an indication of the high regard in which skilled weapon-smiths were held by the aristocratic consumers of their arts.<sup>176</sup> It is inherently likely that the status of the craft-worker would depend on the quality of their work, unless they were born of noble blood.

The status of the moneyers named on Northumbrian coins from the turn of the ninth-century is unclear. It has been suggested that at least one of these individuals, Cuthheard, can be seen striking coins in Mercia after the end of his coinage in Northumbria, but it is not obvious what this means for his social position in Northumbria. It is generally implied that moneyers were only medium-status

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<sup>174</sup> J. Henderson, 'The Production Technology of Irish Early Christian Glass with Special Reference to Beads and Enamels', in J. Price (ed.), *Glass in Britain and Ireland, AD 350–1100* (London, 2000), pp. 143–59.

<sup>175</sup> See p. 101 above.

<sup>176</sup> Dodwell, *Anglo-Saxon Art*, pp. 46–52.



craftsmen, and Cuthheard's relocation could be taken as a reflection of his need for employment after the end of his time at the Northumbrian court. However, two centuries previously, Saint Wilfrid had accepted a position as bishop in Mercia after he encountered political difficulties in Northumbria, so a lowly position for Cuthheard should not perhaps be assumed.

The majority of metal-smiths in Anglian Deira, however, are likely to have been settled, and of comparatively ordinary status. Their necessary and important work would have involved producing and repairing the mundane metalwork of mediaeval life: agricultural implements, knives and personal fittings such as brooches, pins and strap-ends. It is inherently likely that they worked in a variety of metals. Although there was spatial differentiation between ferrous and non-ferrous metalworking in the Anglian settlement at Wharram Percy, it is not impossible that the same craftsmen worked both sites. In any case, it has been suggested above that Wharram may have been a particularly specialist metal-working site. There is no indication of spatial differentiation in metalworking at either the Fishergate or the later Coppergate sites in York, or, indeed, at Cottam, and it seems more plausible that work in a variety of metals was the general rule for eighth- and ninth-century smiths. It is likely that many such craft-workers were themselves peasant-farmers, producing the majority of their own subsistence, and, as suggested above for iron-smelters, fitted their craft-production around the cycles of the agricultural year.

## 4: Distribution

### *Introduction*

This chapter will explore the evidence for distribution in the economy of Anglian Deira. The brevity of the first section, is, in all probability, directly inverse to the relative volume of the short-range distribution it considers. It may be possible to overestimate the technical difficulties that travelling in the early middle ages would have involved: in good weather, particularly, it may have been easier and cheaper to move about than can be discerned from a vantage point eleven centuries later.<sup>1</sup> Technology would not have been the only issue, however, and social factors may have been more troublesome to potential travellers than the weather. In any case, where most of the population relied on agriculture for their survival, there may have been so few opportunities to leave the farm for any length of time that the issue of whether or not it was possible did not often arise. The consideration of short-range distribution will consider the evidence for the distribution of products and resources between settlements so socially and geographically close to each other that the peasant farmers who lived in them were able to be directly involved in the distribution. This discussion covers both individual settlements' access to a variety of environmental resources and the distribution of products and resources between distinct settlements within the same multiple estate.

Where larger distances were involved, travelling across the lands of many nobles, and perhaps the realms of different kings, distribution was a qualitatively different activity; this is the medium and long-range distribution considered in the next section of this chapter. The relative length of this second section is to some extent determined by the amount of scholarly debate there has been around this subject, but is also a reflection of the nature of the evidence: goods distributed over short distance will not be very distinctive from local produce, whereas more exotic imports are more distinctive, and attract more attention from contemporary, as well as modern, authors. This section will begin with a consideration of the theoretical

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<sup>1</sup> For an analogy, see J. Masschaele, 'Transport Costs in Medieval England', *The Economic History Review, New Series* 46 (1993): 266–79.

approaches to long-range distribution that have been developed in previous scholarship, which will provide a context for a detailed consideration of the role of York in the Anglian economy. The kinds of commodities which might have been distributed will then be considered, followed by an examination of the long-range distribution networks which may have connected Deira to other areas in north-west Europe. A brief conclusion will summarize the themes that have emerged from this chapter.

### *Short Range*

The multiple estate model would suggest that the primary form of exchange between individuals who lived close to each other was limited to a 'funnelling' of surplus from tributary settlements to the central settlement that formed the focus of the estate. However, the fragment of Mayen lava quernstone in the finds assemblage from excavations at Cottam suggests that the situation may have been more complex. There are no indications that the site at Cottam was ever the centre of a multiple estate, but this imported artefact nonetheless suggests that it had some kind of access to distribution networks.

It could be argued this was an isolated example; quernstones are likely to have been used over several generations, and, given their importance and longevity, may have been acquired in special circumstances. However, the four silver wire strap-ends of a type usually associated with East Anglia that were recovered from Cottam are less easily dismissed. Gabor Thomas has suggested they reflect an East Coast trading route,<sup>2</sup> but, even so, it is not immediately obvious how they would have ended up in Cottam, particularly as none of the distinctive East Anglian Ipswich ware pottery was recovered from the site.

The finds from Cottam raise the possibility that individual settlements could have had a wider range of communications links than the single road to the central settlement of the estate. In this context, an obvious possible network would be the multiple estate itself: settlements might have exchanged their specialist production

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<sup>2</sup> Thomas, 'Silver Wire Strap-Ends', pp. 81–100.

with each other as well as paying some in tribute to their lord. The multiple estate structure would have established links between all the settlements whose communities gathered at central events (such as court meetings or religious festivals). These events would provide a natural setting for individuals and communities to work out mutually beneficial arrangements, and there is no reason to think that such intra-estate relationships would have been disapproved of by their common lord.

There is little direct evidence for these kind of arrangements, although some excavated finds assemblages could be interpreted in this context. The botanical assemblage from the south manor site at Wharram, for example, included heathland plants whose nearest habitat was in the North York Moors Fruits, some 10–15 miles away.<sup>3</sup> The recovery of woodland fruits and nuts on the site were also a surprise in the light of the local environment of mixed grasslands, with few trees, suggested by pollen analysis.<sup>4</sup> Antler was also found at Wharram, and antler artefacts, particularly combs, are regularly recovered from sites that show no other skeletal elements of deer. As deer shed their antlers annually, it has been suggested that villagers may have had seasonal rights to collect the antler from the woodland in which the deer lived, but that consumption of venison was restricted by elites. However, where there was evidence that there was no woodland deer-habitat in the immediate vicinity, as at Wharram, the presence of antler may be evidence of economic links with woodland areas.

The age-at-death analyses of zooarchaeological assemblages discussed in the production chapter may also suggest some co-operation between settlements: livestock consumed as meat have significantly different age-profiles at different sites, but no single assemblage from Deira can obviously be interpreted as self-sufficient: the age distributions are either too young for the overall population to have been maintained, or show too few young animals to confirm stock-breeding.<sup>5</sup> It is possible that zooarchaeological assemblages may have been distorted by

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<sup>3</sup> Richards, 'Wharram South Manor Evidence', p. 199.

<sup>4</sup> J.G. Hurst, 'The Wharram Research Project: Results to 1983', *Medieval Archaeology* 28 (1984): 87.

<sup>5</sup> See discussion in 'Anglian sites in Deira: Self-sufficient agricultural producers?', p. 93 above.

selective distribution of the stock, perhaps as tribute, or by different waste disposal practice. Nonetheless, as it currently stands, the evidence could be interpreted as suggesting that different communities consumed livestock at different stages in their life-cycle.

One possible explanation for this could be the practice of transhumance. The need to ensure access between traditional seasonal grazing-areas seems to have affected the structure of estates in southern England,<sup>6</sup> and landscape studies have suggested this may have been the case in some areas of Deira as well. Consideration of the landscapes of the North York Moors, for example, has suggested that the 'strip' pattern of townships, where parishes covered areas of both moorland and lowland pasture (as well as woodland and areas suitable for arable cultivation) may be related to early multiple estate structure.<sup>7</sup> A similar pattern of regular stock movement between lowland and moorland pastures has been suggested by Andrew Fleming from analysis of place-name evidence of the Swaledale region in the Yorkshire Dales.<sup>8</sup> Both these examples are from areas where the quality of the land for arable production is somewhat limited. As they are the only major landscape studies from the region, the hypothesis cannot be tested, but it is possible that transhumance was mainly practised where the land was too poor to sustain settled arable farming.

There is, then, very little direct evidence for the nature of short-range distribution in Anglian Deira. The ubiquitous emphasis on subsistence suggests that no distribution network was reliable enough to provide essential supplies, but archaeological evidence suggests that local networks were nonetheless a regular part of ordinary life. They would have brought useful resources, like antler and heathland plants, and maybe woodland nuts, to settlements, perhaps in exchange for other specialist food and craft produce. These kind of low-level, short-scale activities are probably almost invisible archaeologically as a result of the largely

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<sup>6</sup> Fox, 'Fragmented Manors', pp. 78–97.

<sup>7</sup> Harrison and Spratt (eds.), *North York Moors*, p. 71.

<sup>8</sup> Fleming, *Swaledale*, p. 46.

perishable nature of the resources they transported, but they may have been the most important distribution networks in the Anglian economy.

## ***Medium and Long Range Distribution***

### **Theoretical Approaches to Medium and Long Range Distribution**

Since the groundbreaking work of Henri Pirenne, the issue of medium and long range distribution has dominated study of the early mediaeval economy.<sup>9</sup> It has been the primary battle-ground between formalist approaches, viewing such activity as market-driven trading, and substantivist theories characterizing early mediaeval distribution as a consequence of social, political and religious interactions with little or no economic imperative. This fundamental, and sometimes dogmatic, theoretical rift has problematized the study of early mediaeval economies in general, and of distribution in particular. This section will begin by introducing some of the theoretical approaches that have featured in previous scholarship.

### **Gift-Exchange**

The ‘gift-exchange’ model, deriving ultimately from anthropological research on modern tribal societies forms a foundation to much of the substantivist approach to the early mediaeval economy. The concept of gift-exchange originated in the studies of Marcel Mauss, based on the anthropology of the *pottatch* in north-west America and the *kula* exchange systems of the Trobriand Islands, as well as historical records of the early Germans, Romans and Hindus.<sup>10</sup> John Moreland has discussed the development of these ideas among historians of the economies of the early middle ages,<sup>11</sup> noting Phillip Grierson’s use of these ideas and their subsequent widespread appearance in discussions of the Anglo-Saxon economy.<sup>12</sup> The basic precept of gift-exchange is that the leaders of elites maintained their social position by giving gifts, which there was a social obligation to accept, but which placed the

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<sup>9</sup> See n. 9, ‘2: General Introduction’, for references.

<sup>10</sup> See M. Mauss, *The Gift: Forms and Functions of Exchange in Archaic Societies* (New York, 1967).

<sup>11</sup> Moreland, ‘Concepts’, pp. 1–34.

<sup>12</sup> P. Grierson, ‘Commerce in the Dark Ages: a Critique of the Evidence’, *Transactions of the Royal Historical Society* 9 (1959): 123–40.

recipient in a sub-ordinate position if they could not respond with an appropriate gift. This kind of social interaction is clearly visible in Anglo-Saxon sources, most obviously in *Beowulf*, where the giving of treasure at the mead-bench is celebrated as an expression of leadership and nobility by the head of the warrior-band. Timothy Reuter developed these ideas to suggest that this kind of gift-exchange was a primary motivator of economic and social behaviour as continuous military activity was necessary to enable treasure-givers to acquire the booty they needed to retain their warriors through constant reward.<sup>13</sup>

Clearly, the exchange of gifts was in the Anglo-Saxon period, as in modern society, an important means of establishing and confirming social relationships. The elite exchange of gifts has come to be seen in some studies as the dominant economic activity of the early mediaeval period, with the small-scale exchange of a limited number of prestigious artefacts in the upper levels of society a thin layer of icing on a economy otherwise characterised by entirely self-sufficient farmsteads. However, as John Moreland has noted,<sup>14</sup> this does not reflect the evidence for production in the early mediaeval economy. The previous chapter demonstrated that the economies of farming settlements are considerably more complex than the isolated, self-contained, units that the gift-exchange model might suggest. At the elite level too, there are problems with gift exchange (or military seizure) of heirlooms as the only source of treasure. Although a full discussion of the evidence proved beyond the scope of this study, it is likely that both kings and lesser nobles would have had the means to produce new treasures in gold, textiles and stone, as well as acquiring them through warfare. Even the social functions of gift-exchange are more complex than immediately obvious. The circulation of prestige weapons in early mediaeval societies is perhaps a classic example of gift-exchange in action, and gifts of such weapons were certainly used to reinforce the position of members of the elite.<sup>15</sup> However, Heinrich Härke notes that there is also evidence for a

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<sup>13</sup> T. Reuters, 'Plunder and Tribute in the Carolingian Empire', *Transactions of the Royal Historical Society 5th Series* 35 (1985): 75–94.

<sup>14</sup> Moreland, 'Production', pp. 69–104.

<sup>15</sup> For more discussion, see R. Le Jan, 'Frankish Giving of Arms and Rituals of Power: Continuity and Change in the Carolingian Period', in J.L. Nelson and F. Theuvs (eds.), *Rituals of Power from*

movement of weapons the other way, from retainer to lord, highlighting the complexity of social forces in the early middle ages.<sup>16</sup> From an economic perspective, a focus on 'gift-exchange' can lead to something of an over-emphasis on distribution, neglecting the evidence for production and consumption that has much to offer for the understanding of economic activity in the early middle ages.

### *Wics, Emporia and Elite control of the Early Mediaeval Economy*

The theory of gift-exchange has heavily influenced the understanding of the group of sites which have been characterized as *wics* or *emporia*,<sup>17</sup> and thereby the historiography of economic history, as these sites have often dominated discussion of the early mediaeval economy. The work of Richard Hodges has been particularly influential in the developing theory of *wic* sites. He has characterized them as a particular type of controlled trading depot set up to facilitate elite control of the trade in the prestige items they needed to reinforce their position as dominant gift-givers. Hodges suggested a tripartite typology for trading sites,<sup>18</sup> which was quickly incorporated into wider scholarship, particularly in archaeological discussions. However, the intense regionalism of early mediaeval Europe highlighted in the General Introduction undermines too rigid an application of such typological approaches. A particularly problematic aspect of Hodges' ABC *emporia* relates to the Type B *emporia* which has been the most influential aspect of his framework. Marxist approaches have been very influential in the study of the early middle ages, with many aspects of life seen as a struggle for power between different social groups,<sup>19</sup> and Hodges typologies to some extent reflect this: type A is a 'grass-roots' market, a kind of organic development from the human instinct to trade; type B is an elite response, attempting to limit this freedom, and type C the result of the ultimate failure of elites to control the economic behaviour of their population. However,

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*Late Antiquity to the Early Middle Ages*, Transformation of the Roman World 8 (2000), p. 291 and p. 305 and H. Härke, 'The Circulation of Weapons in Anglo-Saxon Society', in Nelson and Theuws (eds.), *Rituals of Power*, pp. 379–81.

<sup>16</sup> Härke, 'Circulation of Weapons', pp. 381–5.

<sup>17</sup> See discussion in '*Wics, Emporia and Long Distance Trade*', p. 25.

<sup>18</sup> Discussed above, p. 26.

<sup>19</sup> See Johnson, *Archaeological Theory*, pp. 92–6.



there is little evidence to suggest that elites were so much more powerful during the eighth and ninth centuries that they were able to exert this anomalous level of control over the lives of their subjects. The nature of power in the early mediaeval period has been the subject of much academic debate, a full discussion of which is beyond the scope of this project.<sup>20</sup> Important in this context, however, is the way in which the concept that elites were regularly able to control social behaviour has been undermined. In many aspects of mediaeval life, perhaps especially in burial practice, cultural expression is now considered to be part of much more complex social trends than simple elite control. While elites are certainly likely to have profited from economic activity,<sup>21</sup> and may have founded towns to encourage such activity, it cannot therefore be assumed that they were able, or even wanted to control, rather than merely profit from, the economic activities that took place there. The offer of protection to foreign merchants might in itself have been of benefit,<sup>22</sup> although it seems, in any case, to have been something of a moral duty for kings to protect foreigners in their realms. This model for the ‘ownership’ of trading sites, with elites receiving a portion of the benefit, but playing little direct role in the enterprise, parallels the model for the ownership of land suggested below quite closely.<sup>23</sup> But it is a long way from the founding and control of particular settlements by elites in order to *control* the economic activity within them.

The large quantities of foreign goods recovered from *wic* sites provide clear evidence of international distribution being focused on these sites. The Fishergate site is a prime example, with around 40% of the post-Roman pottery from the first Anglian phase of the site being imported, and the recovery of fragments of imported

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<sup>20</sup> For more discussion see papers in G. Halsall (ed.), *Violence and Society in the Early Medieval West* (Woodbridge, 1998) and W. Davis and P. Fouracre (eds.), *Property and Power in the Early Middle Ages* (Cambridge University Press, 1995).

<sup>21</sup> See discussion in Middleton, ‘Port Customs’, pp. 313–58.

<sup>22</sup> See A. Woolf, ‘The Russes, the Byzantines and Middle Saxon Emporia’, in M. Anderton (ed.), *Anglo-Saxon Trading Centres Beyond the Emporia* (Glasgow, 1999), pp. 63–75 for a discussion of a Byzantine system of protection for Scandinavian merchants which, he suggests, might have been inspired by motives shared by Northern European rulers.

<sup>23</sup> See ‘The ‘Ownership’ of Land and the Support of Elites’, p. 174 below.

lava quernstones and glass vessels.<sup>24</sup> It seems unlikely that distribution on this scale, of such utilitarian products, can be placed within the gift exchange model. There is, then, no direct reason to assume that it was necessarily controlled by elites, who may have been no more interested in trading than they were in farming, however content they were to benefit from its produce and profits.

### **The Organization of Anglian York**

The topography of Anglian York has been the focus of some academic attention in recent years, with particular focus on the arrangement of ecclesiastical buildings since excavations under the current Minster site revealed that it was not the location of York's cathedral church before the Norman conquest.<sup>25</sup> The topographical issue of most relevance to this study, however, is in the organization of secular activity in Anglian York. Almost nothing was known of the use of the sites of modern English cities in the Anglian period until the later part of the twentieth century. Excavations at a site in Southampton usually referred to as *Hamwic* revealed dense settlement from the seventh century to the early ninth, when the site seems to have been deserted and the settlement moved to the site occupied by the modern city of Southampton.<sup>26</sup> Excavations in the early 1980s provided similarly striking evidence for Anglian activity in the city of London.<sup>27</sup> These excavations corroborated developing theories of *wic* sites in England, and a general picture began to emerge of 'wic' sites as being founded as trading and craftwork centres outside the city walls of fortified settlements in the seventh centuries, thriving through the eighth, and ending, rather suddenly, in the ninth as Viking activity made their locations, established for ease of access rather than defence, untenable.

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<sup>24</sup> Kemp, *Anglian Settlement at Fishergate*, p. 73.

<sup>25</sup> See D. Palliser, 'York's West Bank: medieval suburb or urban nucleus?', in P.E. Addyman and V.E. Black (eds.), *Archaeological Papers from York Presented to M. W. Barley* (York, 1984), pp. 101–8; R. Morris, 'Alcuin, York and the alma sophia', in L.A.S. Butler and R. Morris (eds.), *The Anglo-Saxon Church*, Council for British Archaeology Research Report 60 (1986), pp. 80–9 and C. Norton, 'The Anglo-Saxon Cathedral at York and the Topography of the Anglian City', *Journal of the British Archaeological Association* 151 (1998): 1–52.

<sup>26</sup> A. Morton (ed.), *Excavations at Hamwic I*, CBA Research Report 84 (1992) and P. Andrews (ed.), *Excavations at Hamwic II*, CBA Research Report 109 (1997).

<sup>27</sup> See A. Vince, *Saxon London: an Archaeological Investigation* (Seaby, 1990).

The results of the Fishergate excavations at York were published in the late 1990s, and the site was interpreted as this kind of 'wic' site. Discussion of wic sites have become less fashionable in recent years as the dominance of such sites in early mediaeval economy has been increasingly questioned. However, this re-evaluation of their economic role does not in itself challenge the topographical history of this group of sites. The division between ceremonial and occupation space may be a helpful model in understanding settlement in Anglian York. The similarity of the model of intra-mural elite space accompanied by extra-mural trading area to the use of space around Roman towns has not received much attention; Roman practice may be as much evidence of the convenience of the arrangement as a precedent, but it is nonetheless an interesting context for the evidence from the Fishergate site. The scale of the impact of Scandinavian war-bands, undermining even the strongest early mediaeval kingdoms, may suggest that this kind of military activity was something of a novelty in early mediaeval Europe. Earlier settlements may, then, not have needed the protection of the city walls, and may have been located outside them to facilitate access, or to enhance the ceremonial nature of the space within the walls, perhaps reserved for political and religious elites.

### Metal Detected Evidence and Distribution in Anglo-Saxon England

The implications, challenges and potential of the spectacular new body of evidence which has been emerging from the ground through the activity of metal-detectorists will be discussed in more detail in the chapter on coinage.<sup>28</sup> However, the volume and wide-spread distribution of this material, in particularly the coins, has reshaped the scholarship on the early mediaeval economy. Much research is still ongoing, but important studies already published have challenged the previous emphasis on the international activities of the wic sites and focused instead on more local distribution that would have taken place within a regional context at local markets.<sup>29</sup>

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<sup>28</sup> '6: Numismatic Evidence for the Economy of Anglo-Saxon Deira', below.

<sup>29</sup> See in particular Naylor, *Archaeology of Trade* and K. Ulmschneider, *Markets, Minsters and Metal-Detectors: The Archaeology of Middle Saxon Lincolnshire and Hampshire Compared*, BAR British Series 307 (2000).

This does not necessarily suggest the existence of a free market economy in the early mediaeval period; then, as now, economic activity would have taken place within the social context of its time.<sup>30</sup> Markets would have been held at the places and on the occasions most convenient to the social, as well as economic, needs of the people who used them. It was suggested in the previous chapter of this report that most of the population would spend most of their time engaged in agricultural activity, and the settlements in which they lived in the eighth and ninth centuries are thought to have been too dispersed for successful permanent markets.<sup>31</sup> However, it is likely that people did come together regularly during the year for social, political or religious reasons, and such gatherings would have been ideal opportunities for trade.

Much of the interpretative framework that has been developed for this new metal-detected evidence has relied on the structures implied in the 'minster hypothesis'.<sup>32</sup> This has been based on the probability that crowds of the faithful would have gathered at major churches at festival times. Such a collection of people would have needed traders to provide basic sustenance, and perhaps, outside the actual religious services themselves, of course, entertainment. They would also have been a convenient target for many other kinds of trader. Such fairs would be expected to profit the church with which they were associated; the bible after all forbade trading only within the house of God itself, and the management for profit of church estates was a requirement of canon law.

Minsters, as the focus for pastoral activity, and, with these religious markets, economic activity as well, have thus become a cornerstone of early mediaeval life in much recent scholarship. However, all such characterizations are based on the basic premise of the existence of institutional 'minster-churches' themselves. This thesis

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<sup>30</sup> The free-market capitalist economy could be argued to be a produce of the current social context of liberal democracy.

<sup>31</sup> For an introduction to Anglo-Saxon settlement patterns see C. Dyer, C. Lewis and P. Mitchell-Fox, *Village, Hamlet and Field: Changing Medieval Settlements in Central England* (Macclesfield, 2001).

<sup>32</sup> See 'Bishops, Minsters and Tithes: the Economics of Pastoral Care', p. 178 below.

has been challenged,<sup>33</sup> and if these challenge were upheld, the framework on which this economic network rests instantly evaporates. However, this does not in itself invalidate the existence of the network. If the form of the ‘minster market’ is rejected, there are at least two other major contenders. The first retains the same religious premise: even if not focused around institutional minsters, it is likely that religious festivals were a focus for collective celebrations, perhaps bringing people from dispersed communities into larger groups. Whether or not such celebrations were actually associated with churches, the coming together of dispersed communities, particularly in an atmosphere of celebratory consumption, would have made them a natural focus for external traders as well as an opportunity for more casual exchange.

Another possible replacement for minsters as the ‘nodes’ in local distribution networks are the secular institutions which brought communities of people together. These have been somewhat neglected due to the minster hypothesis’s focus on religious activity, but religion would not have been the only interest that the Anglian population shared. The form of secular proceedings – courts, councils, and so on – in Anglian Deira is entirely unrecorded, but this does not mean that they did not occur. Matters of inheritance, marriage, and the execution of justice would have needed resolving in Northumbria, as in better documented areas. The wording of the *Dialogus* of Ecgberht, a text primarily concerned with the law as it related to the clergy, offers some confirmation that secular courts existed in eighth-century Northumbria.<sup>34</sup> This suggests that early mediaeval citizens in the region, like their contemporaries across Europe, came together to witness, and, when necessary, participate in local and regional courts. Just like the pilgrims at religious festivals, these temporary gatherings would have required sustenance, and would have been a natural target for traders as well as an ideal opportunity for the individuals attending to trade any of their own surplus for items they could not produce themselves. Textual sources and the archaeology of settlement sites offers little evidence for this kind of economic activity; even in the better-documented Frankish realm, peasant

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<sup>33</sup> See, for instance, E. Cambridge and D.W. Rollason, ‘The Pastoral Organization of the Anglo-Saxon Church: a Review of the “Minster Hypothesis”’, *Early Medieval Europe* 4 (1995): 87–104.

<sup>34</sup> See ‘Ecgberht, *Dialogus*’, p. 47 above.

markets fall below the radar of the textual sources as such low-value transactions were not subject to taxation.<sup>35</sup>

### 'Things that travelled' – The movement of commodities in Anglian Deira

The section will begin with a consideration of the factors which were important in determining the kinds of goods which were distributed in north-western Europe in the early middle ages.<sup>36</sup> Evidence for the movement of particular commodities will then be considered, starting with McCormick's 'bulk goods', that is, agricultural produce, then moving on to consider the craft materials and produce. Discussion of the limited evidence from Deira for the distribution of the ritual needs of the church is followed by a consideration of the distribution of slaves. McCormick secured the discussion of slavery in future studies of the early mediaeval economy by identifying slaves as 'the source of the western wealth that was used to acquire Arab coins and drugs'.<sup>37</sup> This section therefore concludes with a consideration of the importance of slavery within the context of Anglian Deira, despite the somewhat limited sources available.

### 'Market' forces

Given the dearth of information about the nature of markets themselves, it is unsurprising that there is very little evidence for the nature of the goods on display within them. However, market goods can perhaps be identified as surplus produce rather than goods produced specifically for sale. Carolingian records record the deliberate acquisition by wealthy monastic institutions of estates which specialised in the production of particular commodities such as wine, salt, or even fish.

However efficient the estate manager, the organisation of estates that were so distant from the monastic centre must have been a considerable administrative challenge. If a reliable supply of the commodities involved was available locally, institutions wealthy enough to acquire distant estates may have preferred to purchase their needs rather than transport them long distances.

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<sup>35</sup> Verhulst, *The Carolingian Economy*, p. 97.

<sup>36</sup> The title of this section parallels that of the third part of McCormick, *Origins*.

<sup>37</sup> McCormick, *Origins*, p. 758.

Textual evidence could suggest that this pattern of surplus-based markets extended to Anglian Deira, in the form of a letter written to a Continental correspondent by Alcuin during a stay in York. This letter, numbered 8 in Dümmler's edition,<sup>38</sup> is a unique survival, both in the lightness of its tone and in its almost exclusive concern with what can only be called business matters. It contains requests for a veritable shopping list of items, including ecclesiastical vestments and a cartload of wine (apparently from Charlemagne's own vintner). Alcuin was probably an honoured guest in York. Even if he were providing for his own sustenance, the considerable sums of money he is transferring around in other parts of the letter suggest that his personal wealth could have ensured him a comfortable standard of living. The implication of his letter is thus that the wine he would have chosen to drink, and indeed the specific vestments he sought, were not available in York, or its surrounding region, at any price.

It may seem a rather facile point that the markets of Anglian Deira, like others in early mediaeval Europe, traded goods and material that were surplus to their producer's requirements. However, if it can be accepted on the somewhat limited evidence available, it may allow some characterization of the role of medium and long-range distribution in the economy: (to put it in capitalist terms) it would have been producer- rather than consumer-driven. Goods would have been available at the discretion of the producer rather than the demand of the consumer. If shortages were more than extremely local, for example, as a result of a bad harvest, even the rich could not have relied on the market to supply the difference, as Alcuin's inability to procure himself a decent drink illustrates. As suggested in the previous chapter, production would therefore have been *more*, not less, important than long-range distribution in the early mediaeval economy.

### **'Movements of Bulk Produce' in Anglian Deira**

There is evidence for the movement of considerable quantities of foodstuffs around the Roman Empire, and food items made up much of the later mediaeval trade in northern Europe. McCormick discusses substantial evidence that grain was moved

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<sup>38</sup> Dümmler (ed.), *Epistolae*, pp. 33–4, translated in Allot, number 9.

around northern Francia in the early middle ages, particularly between estates of the great abbeys, and some of it seems to have been sold for profit.<sup>39</sup> However, the evidence from Anglian Deira is not able to shed any light on whether foodstuffs were traded in the region. Although analyses of economic activity in settlements in the region have produced some evidence of specialist production,<sup>40</sup> where agricultural regimes have been analysed they have all suggest mixed farming strategies rather than specialised strategies which would have relied on the sale of surplus to provide subsistence. Mixed strategies could have provided the settlement with all its subsistence needs, though do not offer conclusive proof that they did. No artefacts survive that could have been containers for traded foodstuffs, but if they had been transported in wooden barrels or textile sacks there would be no reason to expect them to. What evidence there is suggests towns consumed the agricultural produce of their local region, but this is largely an Occam's razor argument, and far from definite proof. In short, the evidence is frustratingly inconclusive, so, apart from the caveat that it is unlikely that food was available for sale during times of famine,<sup>41</sup> it is impossible even to speculate on the medium and long-range exports (or imports) of food in Anglian Deira.

## Craft Materials

### Glass

In direct contrast to the agricultural produce discussed in the previous section, there is abundant, albeit mainly indirect, evidence for the movement of craft materials. Glass may seem an eclectic choice as the first of these materials to consider as it is undeniably a rare find in the early mediaeval period from any part of northern Europe, including Anglian Deira. However, chemical analysis of its composition has allowed an unusually clear insight into its distribution in the early middle ages, so it forms a useful case study for more common craft materials, such as iron and copper alloy.

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<sup>39</sup> McCormick, *Origins*, p. 699.

<sup>40</sup> 'Specialist Food Production' and 'Specialist Craft Production', p. 103 and p. 113 above.

<sup>41</sup> Although McCormick notes that Charlemagne felt a need to forbid food exports in famines; McCormick, *Origins*, p. 699.



The largest glass assemblage yet recovered from Anglian Deira is that from the Fishergate site in York, which produced several hundred fragments of Roman and Anglo-Saxon glass.<sup>42</sup> The assemblage associated with Phase 4 (8–10<sup>th</sup> century) activity at Beverley is much smaller,<sup>43</sup> consisting of a fragment of an inkwell,<sup>44</sup> five other fragments of vessel glass, three fragments of window glass and a single bead.<sup>45</sup> Various excavations on the site of Whitby abbey have recovered fragments of glass, with the 1940s excavation report recording a glass assemblage of several highly coloured fragments interpreted as decorative mounts;<sup>46</sup> later reports of finds from the site record the discovery of some glass vessels fragments.<sup>47</sup> Another small glass assemblage was interpreted as deriving from Anglian activity at sites in Wharram Percy, including nineteen glass beads, and, from the south manor area, a fragment of a sixth- or seventh-century glass jar and nine fragments of Roman vessels, windows and bracelets.<sup>48</sup> Other finds of glass from the region include the discovery of a 6 x 3mm fragment of a reticella rod during excavations at Kirkdale,<sup>49</sup> and a small, but growing, number of finds (mainly glass beads) on the PAS database.<sup>50</sup>

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<sup>42</sup> J.R. Hunter and C.M. Jackson, 'Glass', in Rogers (ed.), *Anglian Finds*, pp. 1331–44.

<sup>43</sup> J. Henderson, 'The Glass', in Armstrong, Evans and Tomlinson (eds.), *Lurk Lane*, pp. 124–30.

<sup>44</sup> Originally considered as a possible bottle base in the excavation report (Henderson, 'Glass', p. 126), identified as an inkwell fragment in V. Evison, 'Glass Vessels in England, AD 400–1100', in Price (ed.), *Glass*, p. 82.

<sup>45</sup> Small though it is, this assemblage has nevertheless provided important evidence for the distribution of raw glass as it has been the subject of detailed specialist analysis and discussion; see J. Henderson, 'Early Medieval Glass Technology: the Calm before the Storm', in Conference On Medieval Archaeology in Europe (ed.), *Medieval Europe 1992*, pp. 175–6.

<sup>46</sup> Peers and Radford, 'Whitby', p. 55 and 73.

<sup>47</sup> See L. Webster, 'The Church in Northumbria: Metalwork, Bone, Glass and Textiles', in J. Backhouse and L. Webster (eds.), *The Making of England: Anglo-Saxon Art and Culture AD 600 – 900* (London, 1991), pp. 143–5.

<sup>48</sup> E.A. Clark, 'Miscellaneous Small Finds of Stone, Clay, Jet, Amber and Glass', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, p. 41 and 46; E.A. Clark, A. Joseph and J. Price, 'Glass Objects', in Croft and Stamper (eds.), *South Manor*, pp. 121–4.

<sup>49</sup> Rahtz, *Living Archaeology*, p. 222.

<sup>50</sup> The database can be accessed at: <http://www.finds.org.uk/database/index.php>.

It has been suggested by some scholars that fragmentary glass assemblages generally represent cullet, fragments of broken glass used as a craft material. Careful analysis of distribution of the sherds on excavated sites in western Britain, however, has provided evidence that they should be seen as the remains of vessels being used and broken on the sites.<sup>51</sup> Roman material, particularly that from Wharram, may also be residual.<sup>52</sup> However, it seems unlikely that all glass fragments, particularly the sherds of window glass recovered from the Fishergate site can be thus explained. Broken glass was recycled in the Roman period, and the twelfth-century author Theophilus describes the re-use of (Roman) tesserae (pieces of mosaic) for colouring glass.<sup>53</sup> From the early mediaeval period itself, Matthew Stiff has discussed two Continental documentary sources that suggest broken glass had a tradable value: a literary account of the theft of a church window by a sixth-century metalsmith near Tours, and a ninth-century poem on the siege of Paris which describes Viking raiders smashing church windows for loot.<sup>54</sup>

It is possible that much of the Fishergate glass fragments arrived on the site as cullet.<sup>55</sup> In addition to the extremely fragmentary nature of the assemblage,<sup>56</sup> and

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<sup>51</sup> E. Campbell, 'A Review of Glass Vessels in Western Britain and Ireland AD 400-800', in Price (ed.), *Glass*, pp. 37-8.

<sup>52</sup> In the light of the known Roman occupation of the site at Wharram Percy, Roman glass cannot be assumed to be Anglian cullet; the site report interprets the Roman glass, in the context of six fourth-century coins and tile fragments, as indicative of a Roman style building in the vicinity of the excavation (Richards, 'Wharram South Manor Evidence', p. 196).

<sup>53</sup> Theophilus, *Theophilus: the Various Arts*, ed. C.R. Dodwell (London, 1961), book 2, chapter 12.

<sup>54</sup> M. Stiff, 'Typology and Trade: a Study of the Vessel Glass from Wics and Emporia in Northwest Europe', in Cowie and Hill (eds.), *Wics*, p. 45; the metalsmith thief is recorded in Gregory of Tours *De Gloria Martyrum* and the poem is Abbon's *Le siège de Paris par les Normands* (H. Waquet (ed.), *Abbon, Le Siège de Paris par les Normands, Les classiques de l'histoire de France au Moyen Age* 20 (1942), pp. 50-1).

<sup>55</sup> Although this interpretation is not suggested in the site report (Hunter and Jackson, 'Glass', pp. 1331-44).

<sup>56</sup> There are, of course, other possible explanations for a fragmentary glass assemblage than distributed cullet; as Stiff notes, if broken glass was a valuable material, only a few fragments are likely to have been lost (Stiff, 'Vessel Glass from Wics', pp. 43-5).

its variable composition of window glass, vessel glass and highly coloured fragments, the evidence for working of glass on the site is limited to indicating the melting of some of the glass.<sup>57</sup> J. Hunter and C. Jackson comment that most of the 'waste' glass was in the form of 'large lumps of waste or remelted material up to 10g in weight' with 'no apparent form'. They 'were recovered in various colours, suggesting that cullet might have been melted down into coloured units for re-working'.<sup>58</sup>

It is possible that glass was used to make decorative mounts for metalwork, as seen in the finds from Whitby abbey, which included an oval setting in a fine translucent green glass with a depiction of the bust of a youth in Roman style and a small blue glass plaque (the dimensions given are 0.8in by 0.75in) with an interlace design inlaid into it in gold.<sup>59</sup> Glass was also probably used for the decoration of metalwork with enamelling, although surviving finds from Deira, such as the scutcheons from Whitby Abbey,<sup>60</sup> suggest this may have been a higher-status craft. However, evidence of glass working, including enamelling, in contemporary Early Christian Ireland suggests that it 'was widespread as a specialised industry' and occurred on sites of lower status as well as royal and monastic sites,<sup>61</sup> so it may be that as the corpus of early mediaeval metalwork continues to grow, more evidence for enamelling will emerge from early mediaeval Deira.

In a similar way to stone sculpture, the use of glass in decorative metalwork has been particularly associated with ecclesiastical activity. The recovery of the decorative glass mounts from excavations at Whitby Abbey, and the decorative glass rod from the undocumented site at Kirkdale, certainly suggest that the use of glass was undertaken for ecclesiastical purposes. However, the church's need for

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<sup>57</sup> Hunter and Jackson, 'Glass', pp. 1342–3 Even this glass-working 'waste' may, of course, have been imported cullet.

<sup>58</sup> Hunter and Jackson, 'Glass', p. 1343.

<sup>59</sup> Peers and Radford, 'Whitby', p. 55, illustrated on p. 73.

<sup>60</sup> That is, the decorative plaques ending in loops which attached hanging bowls to the chains from which they were suspended. See Peers and Radford, 'Whitby', pp. 48–9, with discussion of the functionality of the scutcheons at p. 50.

<sup>61</sup> Henderson, 'Irish Early Christian Glass', pp. 154–5.

shrines for relics and important manuscripts, as well as ritual vessels for the Mass and ornate decoration to glorify the houses of God may have made it a particularly large consumer (and so perhaps producer)<sup>62</sup> of decorative metalwork. This would account for the large quantity of glass at ecclesiastical sites without demanding that the medium was particularly restricted to church craft-shops.

Reticella decoration was a very popular form of decoration on early mediaeval glass. Reticella rods, such as that found at Kirkdale, are thin cylinders of clear colourless glass around which two trails of coloured, usually opaque, glass have been spiralled. These rods were softened by heating, then applied to glass vessels. The rods could be either left proud of the glass vessel, or smoothed flush with the vessel surface using a piece of stone or iron called a marver.<sup>63</sup> Reticella decoration is usually associated with the production of glass vessels, for which there is no evidence at Kirkdale. Matthew Stiff's analysis of the vessel glass from *wic* sites in north-west Europe has shown that in 140 of 156 fragments of reticella decoration, the base rod for the reticella cable was made of the same colour glass as the rest of the vessel, suggesting it had been made in the same workshop.<sup>64</sup> However, while Stiff's analysis suggests that the vessel production centres made reticella rods for their own use,<sup>65</sup> the Kirkdale fragment suggests they these rods were also distributed from vessel-producing centres, which probably included *wic* sites as well as ecclesiastical institutions, to other, smaller-scale craftworkers. The rods may have been used as a raw material for making beads or, in the light of the association with metal-working at Kirkdale, decorative mounts for metalwork.<sup>66</sup>

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<sup>62</sup> Although Dodwell highlights that many ecclesiastical treasures may have been donated to the church: Dodwell, *Anglo-Saxon Art*, pp. 21–3.

<sup>63</sup> Reticella decoration smoothed flat in this way is described as 'marvered'.

<sup>64</sup> Stiff, 'Vessel Glass from Wics', p. 47.

<sup>65</sup> Although it is not clear exactly where all of these vessels were made, Stiff identifies certain probably regions in England and northern Continental Europe that may have been production centres for these reticella-decorated vessels: *ibid.*, pp. 48–9.

<sup>66</sup> Evison had previously suggested the possibility of a trade in reticella rods for application to vessels or bead-making: V. Evison, 'Some Distinctive Glass Vessels of the Post-Roman Period', *Journal of Glass Studies* 25 (1983): 87–93.

The very small quantities of glass used in decorative metalwork and beads suggest that it was a valuable material in the early mediaeval period, a natural reflection of the fact that it was a very limited resource. Chemical analysis of some samples of early Anglo-Saxon jewellery has suggested that the glass inlays used to decorate the precious metals were not compositionally different from the glass used in contemporary vessels. It has been suggested that the early mediaeval elites who wore the surviving examples of elaborate enamelled jewellery would have been unpleasantly surprised if they had known that the 'green and blue "stones" were in fact of the same materials as their claw beakers and jars'.<sup>67</sup> Another interpretation might be that the glass vessels themselves were more valuable than has been supposed, perhaps even as valuable as vessels in gold and silver, so it was entirely appropriate to use small pieces of this colourful precious material to decorate gold or silver jewellery.

#### *The Chemical Composition of Glass: Evidence for Early Mediaeval Recycling*

Specialist analyses of the glass used in early mediaeval Europe has produced particularly clear results because of the materials used for glass production during the Roman period.<sup>68</sup> The raw materials for glass-making are silica, lime (to provide chemical stability to the finished glass) and a source of soda (to reduce the temperature at which the sand melts). Sand is the primary source of silica for glass-making, and may also have provided the necessary lime in the form of particles of shell present in the sand. Soda is available from the ashes of plants, and although it has been suggested that marine plants may have been more suitable,<sup>69</sup> inland vegetation provided the potash for much of the glass produced in the later mediaeval

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<sup>67</sup> M. Bimson and I.C. Freestone, 'Analysis of some Glass from Anglo-Saxon Jewellery', in Price (ed.), *Glass*, p. 134.

<sup>68</sup> The summary of the production and distribution of Roman glass presented here is based on the review in D. Whitehouse, "'Things That Travelled": the Surprising Case of Raw Glass', *Early Medieval Europe* 12 (2003): 301–5, although the presentation here follows some contradictory views presented by other authors, as indicated in the footnotes.

<sup>69</sup> R.J. Cramp, 'Anglo-Saxon Window Glass', in Price (ed.), *Glass*, pp. 105–7.

period.<sup>70</sup> However, in the Roman period, the primary source of soda used was a mineral, called natron, or trona, the largest source of which is the Wadi el-Natron in Egypt. The scale of raw glass production in the Roman period has been demonstrated by the huge tank-furnaces for glass production discovered at three sites in modern Israel and Lebanon; the two Israeli tanks contained glass slabs weighing around ten tons each, and the Lebanese tank was even larger, with the remains of the last glass slab it produced weighing thirty to forty tons.<sup>71</sup> Perhaps unsurprisingly, given the scale of this production, chemical analysis has suggested that most glass used at sites across the Roman empire was produced in Egypt or the Levant, although workshops for the production of the vessels were located more locally to the eventual consumers in Italy, France and England. Such a system would have been the most convenient way of dealing with the raw materials used in glass-making: natron is highly soluble, so would have been extremely difficult to transport long distances,<sup>72</sup> and the availability of suitable sand for glass-making nearby added to the convenience of production in the south-east Mediterranean. The raw glass produced in the enormous tanks, however, would have been relatively easy to transport, comparable, for example, with raw metal.

Although the end-date of the activity at the industrial glass furnaces in Israel and the Lebanon has not yet been confirmed, David Whitehouse has noted that every analysis of European glass before the eighth century suggests it was produced using natron, implying a continuous supply to this date at least. This suggests that the upheavals associated with the Arabian expansion into the glass-making areas did

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<sup>70</sup> Beechwood, for example, was particularly valued due to the colouring properties of its manganese content; R.J. Charleston, 'Vessel Glass', in J. Blair and N. Ramsey (eds.), *English Medieval Industries: Craftsmen, Techniques, Products* (London, 1991), pp. 237–8.

<sup>71</sup> For discussion of the finds in the Lebanon and Israel see: F. Aldsworth, G. Haggerty, S. Jennings and D. Whitehouse, 'Medieval Glassmaking at Tyre, Lebanon', *Journal of Glass Studies* 44 (2002): 49–66 and Y. Gorin-Rosen, 'The Ancient Glass Industry in Israel: Summary of the Finds and New Discoveries', in M.D. Nenna (ed.), *La Route De Verre. Ateliers Primaires et Secondaires de Second Millenaire av. J.-C au Moyen Age* (Lyon, 2000), pp. 49–63.

<sup>72</sup> Although it has been suggested that natron itself was imported into north-west Europe for glass production Cramp, 'Window Glass', p. 105, the difficulty of transporting the material mentioned above makes it unlikely that natron itself was moved.

not cause the immediate collapse of the industry. Although large-scale distribution of glass across Europe is likely to have decreased dramatically with the contraction of the Roman empire, a much smaller scale of export may have provided enough glass for a small scale of consumption in early mediaeval Europe. During the period of Roman occupation in Britain, glass is a relatively common find on settlement sites;<sup>73</sup> its rarity in early mediaeval Europe may be a function of the decreasing activity along the distribution networks which brought it to north-west Europe.

From the eleventh-century on, maybe as a result of increasing demand from the programme of church and cathedral building, locally produced glass, made from soda in the form of potash, becomes standard across western Europe.<sup>74</sup> However, many analyses of glass composition of fragments dated between the eighth and eleventh centuries have observed that the basic composition of the glass is identical with Roman glass: that is, it was produced using natron, so probably originated in the glass-making centres in Israel and Lebanon. This includes the analysis undertaken on the Fishergate assemblage, where Hunter and Jackson comment:<sup>75</sup>

There appears to be no diagnostic difference in the chemical composition, for those elements analysed, between the glass assigned to the Roman period and that assigned to the Anglo-Saxon period.

Similar results have been found across mediaeval Europe, as illustrated, for example, by Julian Henderson's analysis of 160 glass samples from sites across Early Christian Ireland (600–1000 AD), where he noted that 'all the translucent glasses are of a soda-lime-silica' composition of a type which might be described as "Roman",<sup>76</sup> in line with his observation that 'Soda-lime-silica glass is characteristic of glasses of the first millennium AD'.<sup>77</sup>

However, although the basic composition of the Anglian Fishergate glass is the same as Roman material, the chemical analysis showed a distinct difference in

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<sup>73</sup> J. Price, 'Late Roman Glass Vessels in Britain and Ireland from AD 350 to 410 and Beyond', in Price (ed.), *Glass*, p. 2.

<sup>74</sup> Henderson, 'Glass Technology', pp. 175–9.

<sup>75</sup> Hunter and Jackson, 'Glass', p. 1340.

<sup>76</sup> Henderson, 'Irish Early Christian Glass', p. 148.

<sup>77</sup> *Ibid.*, p. 147.

chemicals used to control colour. Raw glass is a blue-green colour,<sup>78</sup> and small quantities of decolourising chemicals need to be added to achieve a colourless appearance. Specialist analyses have suggested antimony (Sb) was the main decolourising agent used in the Roman period, and Roman material from Fishergate follows this pattern.<sup>79</sup> However, the Anglian samples tested seemed to have used manganese (Mn) as a decolouriser. This result echoes the findings of Henderson's analyses of the opacifiers used in glass samples from Irish contexts. Opaque effects in Roman glass seem to have been almost exclusively achieved by antimony-based compounds, while some samples of Early Christian opaque glass appeared to comprise a translucent Roman matrix opacified with tin oxide.

These analyses would suggest most glass used in the early middle ages was either Roman in date or from the same sources which produced Roman glass; the apparent scarcity of glass suggests that new supplies may have been limited, so it is likely that much early mediaeval glass was formed from recycled cullet. But the early mediaeval craftworkers were not limited by Roman traditions in their use of the material, and controlled the appearance of the glass using their own colouring agents and opacifiers. Henderson's analyses from Ireland identified the presence of antimony oxide (a traditional opacifier) in translucent Early Christian period glass. He suggested that this could be explained by:<sup>80</sup>

The introduction of Roman tesserae to the glass melt in order to increase its volume; Roman glass tesserae are almost invariably characterised by relatively high antimony contents because calcium antimonate crystals were used to render the tesserae opaque.

The widespread presence of oxides of antimony in translucent glasses suggests that most glass had been recycled, perhaps in large batches where the addition of a few opaque tesserae would not have had a great effect on the final appearance of the batch.

Henderson's 1992 comparison of chemical analyses of glass from three eighth-tenth sites in northern Europe, including analysis of ninth-century glass from Beverley, corroborates this suggestion. A fragment of window glass from Beverley

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<sup>78</sup> Hunter and Jackson, 'Glass', p. 1342.

<sup>79</sup> *Ibid.*, p. 1341.

<sup>80</sup> Henderson, 'Irish Early Christian Glass', p. 154.



differed from the standard 'Roman' composition in a way that suggested that both plant ash and mineral soda had been used in its production, leading Henderson to describe this as a 'mixed alkali' glass.<sup>81</sup> Two other samples, from a tenth-century Viking grave from Peel on the Isle of Man, and a furnace-site at Cordel, near Trier, proved to be of a similar mixed-alkali type to that found at Beverley.<sup>82</sup> It is likely that these mixed-alkali glasses represent melted Roman cullet which had included some potash glass fragments in the mix.<sup>83</sup>

It seems, therefore, that glass, initially of Roman origin, may have been recycled on a large scale in the early mediaeval period, with the addition of extra material for colouring, opacifying, or simply increasing the volume of the glass, at each melt. It is possible that new raw glass may have been imported from production centres in the eastern Mediterranean in the seventh to ninth centuries, although the rarity of glass in this period, compared with late Roman assemblages,<sup>84</sup> may suggest that the material was entirely recycled. Vera Evison describes a steep decline in the use of glass in tenth- and eleventh-century England, and it is possible that this may reflect the stock of glass being depleted through inevitable losses in the recycling process.<sup>85</sup>

Although glass was a fairly uncommon material in the study period, this evidence of extensive recycling may be of much wider economic significance if it can be used as an analogy for copper-alloys and iron. Much more scrap of these common materials would have been generated than broken glass, so, if the analogy holds, controlled and skilled recycling of broken objects may have provided an important source of raw materials for early mediaeval craftworkers.

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<sup>81</sup> Henderson, 'Glass Technology', p. 176.

<sup>82</sup> *Ibid.*, pp. 176–7.

<sup>83</sup> Although plant ash could also have been added to a glass melt to make it more chemically stable.

<sup>84</sup> See n. 73 above, this chapter.

<sup>85</sup> Evison, 'Glass Vessels', pp. 88–9. Continental sites show an increasing use of glass at this time, perhaps a result of the introduction of locally-made potash glass.

## Iron

It was suggested in the previous chapter that raw iron was distributed in the form of bars or strips in Anglian Deira. The wide variety in the dimensions of these proposed raw iron bars within, as well as between, the Fishergate and Wharram assemblages does not suggest any kind of centralized distribution, or standardized forms.<sup>86</sup> However, the existence of these artefacts does suggest that, unlike glass, the supply of iron was supplemented by new raw material, locally produced, possibly at specialized smelting sites. Nonetheless, it would probably always have been cheaper to melt down broken pieces than to acquire new metal. The large numbers of fragmentary iron objects recovered from the Fishergate and Wharram sites might therefore represent iron scrap, either collected over time from within the settlement, or maybe even traded for the purpose. There is no direct evidence for a trade in iron scrap, but the evidence for the distribution of cullet highlights how important recycling could be as a source of craft-working materials. Demography, again, plays a part: if there were many more farmers in the later Roman period than the early mediaeval, they may have been using a lot more iron tools than were needed by the smaller farming population of the early middle ages. Recycling Roman iron may therefore have provided much of the supply, with newly mined ore perhaps mainly used to produce special grades of iron, such as steel for cutting blades.

Similar arguments could be made for other metals, particularly alloys of copper which were widely used in Roman artefacts. Some new production of non-ferrous metals clearly did take place in early mediaeval Europe: excavations in Ireland, for instance, have revealed a copper mine that operated during the eighth and ninth centuries,<sup>87</sup> and several authors have suggested that the mining of lead was a significant industry, almost certainly in Derbyshire, and perhaps in early mediaeval Deira as well.<sup>88</sup> However, like glass, metal is more easily recycled than recovered from ore, and, given that the distribution of cullet is demonstrable for

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<sup>86</sup> See 'Iron Smelting', p. 114 above.

<sup>87</sup> W. O'Brien (ed.), *Ross Island: Mining, Metal and Society in Early Ireland*, *Bronze Age Studies* 62 (2004).

<sup>88</sup> For instance, Fleming, *Swaledale*, pp. 105–6.

glass, it seems very likely that metal scrap was an important source of craft materials in Anglian Deira.

The distribution of the finished produce of craftworkers is even less well understood than the distribution of their raw materials, although such distribution did take place in the eighth and ninth centuries.<sup>89</sup> Much craft-work would have been as perishable as agricultural produce: in later centuries Yorkshire was noted for its production of wool, but linen, timber and furs might also have been produced, and would be as ephemeral as fleeces or woollen cloth in the archaeological record.

### Ecclesiastical Commodities

The early development of the Christian church in the area around the Mediterranean established many commodities, particularly oil and wine, local to that area as essential components of ritual practice. These would have had to be imported by churches founded in the colder climate of northern Europe, and it seems that other physical expressions of *Romanitas*, particularly relics, but also manuscripts and church decorations, were also acquired by northern churches. Stephen's *Life of Wilfrid* describes the saint acquiring precious relics on his Continental travels,<sup>90</sup> and, a century later, Alcuin's York poem describes the impressive collection put together by his mentor Ælberht.<sup>91</sup> Little archaeological evidence survives from Deira to corroborate these documentary sources, but Northumbrian manuscripts show the influence of imported late antique Roman books in the uncial and half-uncial letter-forms of their scripts.<sup>92</sup> Given the emphasis on Ælberht's gifts to the library in Alcuin's account, it is likely that imported books were similarly important to the church at York.

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<sup>89</sup> As shown, for example, in Stiff's discussion of glass vessels: Stiff, 'Vessel Glass from Wics', pp. 43–9.

<sup>90</sup> *LW*, chapter 55.

<sup>91</sup> Alcuin, *York Poem*, lines 1454–7.

<sup>92</sup> See J. Backhouse, 'The Church in Northumbria: Manuscripts', in Backhouse and Webster (eds.), *The Making of England*, pp. 110–32 for illustration and discussion of the most important surviving manuscripts.

However, the accounts of Stephen, Bede and Alcuin all describe the means by which Northumbrian churches acquired such imports as personal – the items are brought to the churches by senior clerics on their return from journeys sometimes directly inspired by their desire to acquire such goods for their churches. Manuscripts and relics might have been sold in northern as well as southern Europe, but textual evidence would suggest that clerics who felt their churches to be in need of such items travelled themselves to acquire them.

The importance of personal networks for the distribution of ecclesiastical requirements extended beyond individual pilgrimages. References in the body of eighth-century correspondence make it clear that church-leaders could request items felt to be necessary for Christian practice from other churches; Boniface, for example, requests opulent manuscripts for his missionary work in Saxony.<sup>93</sup> If a church felt a justifiable need for a particular item, it may have been able to rely on a network of connections for its provision. Gifts between clerics would also have played some role in the distribution of church resources. Letters sometimes record gifts which accompanied them, but gifts may not always have been noted. The kinds of gifts that were sent were not always luxuries: Alcuin's letters record the gift of tin for the coating of a church roof in York, and money, as well as the liturgical necessity of oil to another church in Britain.<sup>94</sup>

There is no evidence from Deira for any kind of formalisation about these ecclesiastical 'distribution networks', and it seems perhaps more likely that they were casual arrangements, based on personal relationships between individual clerics. Nicholas Brooks' study of the diocese of Canterbury, however, found evidence for the organised distribution of oil for the baptismal chrism between Canterbury and its diocesan churches.<sup>95</sup> The nature of such networks would depend

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<sup>93</sup> See discussion in Dodwell, *Anglo-Saxon Art*, p. 24.

<sup>94</sup> Dümmler (ed.), *Epistolae*, pp. 369–70 and pp. 31–3, translated in Alcuin, *Alcuin of York*, numbers 19 and 31.

<sup>95</sup> Brooks, *Church of Canterbury*, p. 188.

on the nature of pastoral care,<sup>96</sup> but it is at least possible that the cathedral centre at York may have been a focus for a similar kind of diocesan distribution network.

The wording of Alcuin's letter above suggests that oil was something of a rarity in Anglo-Saxon England; the distance of England from the nearest oil-producing regions, in the Mediterranean, would easily account for this scarcity, and may suggest that English clerics had to find other alternatives for the ritual purposes oil fulfilled further south. Wine, however, can be produced in northern Europe, and documentary evidence from Carolingian abbeys suggests that it was the focus of an important trade in the early middle ages.<sup>97</sup> A certain amount of wine would still have been distributed through the personal ecclesiastical networks identified above. A letters of Alcuin quoted above suggests at least some of this might have reached Anglian York, although whether this situation was typical or a particular reflection Alcuin's closeness to the Carolingian court is a matter for speculation.<sup>98</sup>

However, even if churches might have been able to acquire their ritual needs from their personal connections, it is unlikely that secular consumers could have relied on this kind of distribution. Wine was known to the Anglo-Saxons even before their conversion to Christianity, but its association with the church probably fostered its elite appeal. Bede's introduction to his *Historia Ecclesiastica Gentis Anglorum* implies that wine could be cultivated on British soil.<sup>99</sup> However, the scale of specialist wine production in Northern France, and the strength of the connections between Deira and this region, suggest that Alcuin's was not the only Carolingian wine drunk in eighth-century Yorkshire.

Wine would have been a particularly high-status beverage, and it appears to have been particularly associated with certain types of pottery, which perhaps expressed the exclusive nature of the drink they contained. One of these pottery types is Tating ware, a black burnished pottery fabric with distinctive tinfoil

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<sup>96</sup> See 'Bishops, Minsters and Tithes: the Economics of Pastoral Care', p. 178 below.

<sup>97</sup> Verhulst, *The Carolingian Economy*, pp. 70–1.

<sup>98</sup> P. 135.

<sup>99</sup> *HE* i. 1.

decoration thought to have been produced in the Rhineland and Northern France,<sup>100</sup> fragments of which were recovered from both Wharram Percy and the Fishergate site in York.<sup>101</sup> Ipswich ware, a hard-fired pottery produced in East Anglia, has also been associated with the distribution of wine.<sup>102</sup> Naylor observed the prevalence of pitcher fragments in the Deiran Ipswich-ware assemblage, and, noting that pitchers are not among the local forms of pottery, suggested that they may have been a tradable commodity in their own right.

### Slaves

Although the numbers of people that were involved are unknowable, it is clear that slavery was known in early mediaeval Deira. Indeed Deiran slaves famously found their way to the slave-markets of Rome to inspire Pope Gregory into sending a mission to convert the Germanic peoples of Britain.<sup>103</sup> References in the *HE*, Stephen's Life of Ripon and Alcuin's *York Poem* corroborate the generally accepted importance of warfare as a context for the capture of slaves.<sup>104</sup> The almost constant military activity that accompanied the development of the kingdom of Northumbria through the sixth and seventh centuries forms a good context for the capture of the slaves discussed above who were exported to continental Europe. However, even in peacetime, famine or the exigencies of extreme poverty could force free families to sell their children, or the whole family group, into slavery to give themselves a chance of survival. Records of manumission in the *Liber Vitae* of the community of St Cuthbert preserve the manumission by a pious benefactor of a group of people 'whose heads she took for food in the evil days' in the eleventh century, and slavery probably always formed 'the bottom of a long slippery slope' for the lowest social groups in the early mediaeval Deira, as across contemporary Europe.<sup>105</sup>

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<sup>100</sup> See discussion in C. Coutts and R. Hodges, 'Tating Ware: a Review with Particular Reference to the Wharram Sherd', in Milne and Richards (eds.), *Two Anglo-Saxon Buildings*, pp. 38–9.

<sup>101</sup> See Mainman, *Pottery from Fishergate* for discussion of the Fishergate sherd.

<sup>102</sup> Vince, *Saxon London*, p. 144.

<sup>103</sup> *HE* ii. 1.

<sup>104</sup> *LW*, chapter 19; *HE*, iv. 22, iv. 26; *York Poem* lines 41–45; See D.A.E. Pelteret, *Slavery in Early Medieval England from the Reign of Alfred until the Twelfth Century*, Studies in Anglo-Saxon History Vol 7 (1995), pp. 70–4 and McCormick, *Origins*, pp. 744–8 for more discussion.

<sup>105</sup> For more discussion and references see Faith, *Lordship*, p. 61.

The importance of slaves as an exported commodity is a contentious issue in early mediaeval scholarship. Some scholars, most recently McCormick, have suggested that slaves may have been one of the most important commodities in an export trade which fuelled the economy of north-west Europe between the seventh and ninth centuries.<sup>106</sup> However, Joachim Henning has observed that landowners would probably have been damaging their own interests by selling off their rural workforce (as well, presumably, as damaging their relations with their tenants): fewer workers would have produced less agricultural surplus.<sup>107</sup> The absence of firm evidence either way (it has become a commonplace of this debate that the slave trade would leave little impact in the archaeological record) means both positions are largely speculative.

Little more can be said about the impact of slavery on economic production. The history of slavery in the early mediaeval period is as regionally variable as that of land-holding practice, so it is probably unsafe, in the absence of further evidence, to use other regions as analogies for the economic impact of slavery in early medieval Deira.<sup>108</sup> The only historical sources related to Deira that refer to the economic role of slave labour in texts are two accounts of the activities of Saint Wilfrid. The *Vita Wilfridi*, lists among Wilfrid's pious acts that he 'brought back captives',<sup>109</sup> although it is one of a list of virtues, and may be an illustration of Wilfrid's general piety rather than a reference to specific events. An account in Bede's *Historia Ecclesiastica Gentis Anglorum* provides some more details of Saint Wilfrid's relations with slaves:<sup>110</sup>

Since the king had given them the land together with all the stock on it, along with fields and men, he [St. Wilfrid] instructed them all in the faith of Christ and washed them in the waters of baptism; among these were 250 male and female they worked slaves, all of whom he released from the slavery of the devil, at the same time releasing them from the yoke of human slavery by granting them their liberty.

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<sup>106</sup> See n. 37 above, this chapter.

<sup>107</sup> J. Henning, 'Slavery or Freedom? The Causes of Early Medieval Europe's Economic Advancement', *Early Medieval Europe* 12 (2003): 269–77.

<sup>108</sup> For a summary of regional differences in slavery see Pelteret, *Slavery*, p. 257.

<sup>109</sup> *LW*, chapter 11.

<sup>110</sup> *HE*, iv. 13.

The concept of dependent workers being owned in association with the land derives from Roman law, and Rosamond Faith has analysed examples of dependent workers being transferred with land in wills and other documents from later Anglo-Saxon England.<sup>111</sup> However, as this event took place in Sussex, and Wilfrid's first act on acquiring these slaves was to free them as an act of piety, it can be no more than a hint that slaves in Deira were owned or transferred as part of landed estates.

### The Communications networks of Anglian Deira

This section will focus on the long-distance communications networks in which Deira appears to have participated in the Anglian period. More local communications routes, particularly rivers and Roman roads, would probably have been much more important to the economy, but the detailed landscape analysis necessary to identify these kind of communications routes is beyond the scope of this study.

### Within Britain

Northumbria is traditionally seen as fairly isolated after its 'golden age' in the eighth century. Study of economic activity in Deira has seriously challenged this view; there is clear evidence, in fact, that Northumbria was well connected within, as well as beyond, the island of Britain. The strongest evidence for these connections comes from the geographical analysis of coin-find distributions undertaken in this project, and it is mainly within that context that Northumbria's relations with other areas in Britain are discussed in this report.<sup>112</sup> However, this section will introduce an important body of pottery evidence suggesting economic relationships between sites in Deira and its southern neighbours.

There has been little study of pottery from Anglian Deira in a regional context, with the important exception of John Naylor's analysis of this material in his survey of the archaeological evidence for trade in Yorkshire and Kent in the

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<sup>111</sup> Faith, *Lordship*, pp. 80–4.

<sup>112</sup> '6: Numismatic Evidence for the Economy of Anglo-Saxon Deira' below.



Middle Saxon period. His recent study mapped all recent finds from within his Yorkshire study area,<sup>113</sup> identifying three pottery types which offered important insights into economic relationships between Deira and the rest of Britain: the Ipswich-ware pottery already discussed, shelley wares from Lincolnshire and Charnwood ware, which is thought to originate from northern Leicestershire. Naylor suggests that the shell-tempered pottery (also known as ‘Maxey-type’) might have been associated with the distribution of salt from Lincolnshire. This would certainly provide an explanation for the large quantities of this pottery that seem to have entered Deira: it formed 22% of the total pottery assemblage from the first phase of Anglian activity on the Fishergate site and 36% of the second phase;<sup>114</sup> three of the eight sherds which were recovered from Anglian levels of the site at Cottam were also of this type. Other sites produced less evidence of the type, with just a single sherd from Beverley, and six sherds, from the South Manor at Wharram Percy. The Charnwood ware was not found at York, but comprised around 10% of the pottery assemblages from sites in Wharram Percy and a nearby cemetery at Sancton in the Yorkshire Wolds; it was also found at West Heslerton, though its importance at this site cannot be assessed until the full excavation report is published.

Although it is possible that the shelley ware might have been a container for mineral salt which was the primary interest of the contemporaries involved in its distribution, the Charnwood wares appear to have been commodities in their own right. The assemblages collated in Naylor’s study show this pottery was being distributed into Deira; as Naylor notes the significantly higher quantities of shelley ware from sites in York may suggest that the site was some kind of central node for the distribution of this pottery (and associated contents), but the absence of Charnwood ware at York, and its importance at other sites, shows that economic links between Deira and its southern neighbours were not all mediated through the centre at York.

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<sup>113</sup> Naylor, *Archaeology of Trade*, p. 16.

<sup>114</sup> *Ibid.* p. 62.

## The North Sea Trading Region

Even with the benefits of modern transport infrastructure, it is still considerably cheaper, and, for international travel, often easier, to move goods by sea than by land. Given the absence of any real evidence for the logistical and political demands of early mediaeval transport routes, it is usually assumed that land travel in the period was a difficult and dangerous option, although it is possible that the difficulties have been somewhat overstated.<sup>115</sup> Nonetheless, water routes are always likely to have been dominant, particularly for the transport of large or heavy items. Deira's topography included a considerable length of coastline to the east, and the Humber estuary to the south, both of which would have allowed access to the North Sea.

However, there is little evidence for extensive contact with Scandinavia before the period of Anglo-Scandinavian settlement in the later ninth and tenth centuries. Although there is no direct evidence that Deira was *not* engaging in economic relationships with Scandinavia in the Anglian period, the increasing body of social and cultural evidence for the development of a new Anglo-Scandinavian cultural identity in northern England in the later ninth and tenth centuries suggests that economic relationships across the northern part of the north sea may also have increased at this time.

Deira's participation in distribution networks associated with the southern part of the north sea region, however, has been clearly established from both archaeological and historical evidence. The career of Alcuin is a clear expression of the closeness of the ties between Northumbria and continental Europe.<sup>116</sup> The documented activity of Frisian traders may be the most striking demonstration of Deira's links with the southern ports of the north sea trading region.<sup>117</sup> However,

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<sup>115</sup> See Masschaele, 'Transport Costs', pp. 266–79 for a demonstration that transport costs were not always higher in earlier periods of history.

<sup>116</sup> See 'Alcuin, Letters and *York Poem*', above, p. 46.

<sup>117</sup> See p. 67 above; see also discussion of Frisian mercantile activity in Lebecq, *Marchands et Navigateurs* and S. Lebecq, 'Long Distance Merchants and their Ventures at Time of the Dorestad Heyday', in Sarfartij, Verwers and Woltering (eds.), *In Discussion with the Past*, pp. 233–8.

evidence for contact between northern England and continental Europe is not limited to the Fishergate site, or indeed to the city of York; although the evidence for Continental contacts is concentrated in York, pottery and quernstones from northern Francia have been found at other sites in the region.<sup>118</sup>

Textual evidence corroborates this widespread contact between Northumbria and Continental Europe. Bede's account of the career of St Hild suggests that in the early days of Anglo-Saxon christianity, it was normal for Northumbrian as well as southern English noblewomen to take the veil at major religious centres in the Frankish world.<sup>119</sup> The careers of several other Northumbrian figures in his book demonstrate Frankish connections, most prominently, perhaps, St Wilfrid, who not only received hospitality and friendship from the Archbishop of Lyons, but even involved himself in local dynastic disputes.<sup>120</sup> There is no evidence to suggest that the aristocratic connections between Northumbria and the Frankish empire decreased in the eighth, or indeed the ninth centuries, although there is no source comparable to Bede to document them. The visit of papal legates to Northumbria in 786 also provides evidence for the closeness of links between Northumbria and the Vatican.

Nonetheless, there has been a general impression in historical scholarship that Northumbria in the late eighth and ninth centuries was somewhat beyond the pail of western Christendom. This sense of isolation may derive from attitudes expressed by Alcuin, a highly influential scholar as well as a Northumbrian exile. Alcuin's correspondence records Charlemagne's angry response to the murder of King Æthelred in the late eighth century.<sup>121</sup> However, it should be noted that Alcuin's account is the only source for this incident, and his description of his own involvement in pacifying the Frankish ruler might have been a context for some exaggeration of the implications. By analogy with a dispute between Offa of Mercia and Charlemagne (in which, incidentally, it has been suggested that Alcuin

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<sup>118</sup> See Naylor, *Archaeology of Trade*, pp. 56–75 for details and discussion.

<sup>119</sup> *HE* iv. 23.

<sup>120</sup> *LW*, chapter 33.

<sup>121</sup> Dümmler (ed.), *Epistolae*, pp. 147–8, translated in Alcuin, *Alcuin of York*, number 43.

talked up the nature of his own involvement), such disputes, if Charlemagne's reaction to the Northumbrian succession issue even caused a dispute, could be resolved within months. A more concrete historical observation could be made from this text: Charlemagne thought the king of Northumbria equally deserving of his attention as Offa of Mercia, a ruler whose power in the eighth century has been the focus of much greater academic interest.

## Ireland

The important of relations between Anglian Northumbria and Ireland is clear from contemporary textual sources, and the two regions share many cultural similarities.<sup>122</sup> These links have been the focus of some academic interest,<sup>123</sup> and it is clear that there were important scholarly links between Northumbria and Ireland: the history of the monastic community of Mayo is the most striking expression of English interest in Ireland,<sup>124</sup> but there are numerous other references to Northumbrians undertaking religious study in Ireland, including Aldfrith, who would return to the throne of his native land.<sup>125</sup> Textual evidence also provides examples of Irish clerics in Northumbrian monasteries. Political connections between Northumbria and Ireland seem equally close. The later history of the two regions continues this pattern: Hiberno-Norse leaders expelled from their Irish base in Dublin in the early tenth century turned their attention to, and eventually conquered, the Anglo-Scandinavian settlement at Jorvik.

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<sup>122</sup> Webster, 'Metalwork, Bone, Glass and Textiles', pp. 132–3 for an introduction to the shared influences in material culture.

<sup>123</sup> Previous discussions include: R.J. Cramp, 'Northumbria and Ireland', in P.E. Szarmach (ed.), *Studies of Anglo-Saxon Culture* (Kalamazoo, 1986), pp. 185–201; K. Hughes, 'Evidence for Contacts Between the Churches of the Irish and the English from the Synod of Whitby to the Viking Age', in P. Clemons and K. Hughes (eds.), *England Before the Conquest: Studies in Primary Sources Presented to Dorothy Whitelock* (Cambridge, 1971), pp. 49–67; H. Moisl, 'The Bernician Royal Dynasty and the Irish in the Seventh Century', *Peritia* 2 (1983): 103–26; C.A. Ireland, 'Boisil: an Irishman Hidden in the Works of Bede', *Peritia* 5 (1986): 400–3.

<sup>124</sup> *HE* iv. 4.

<sup>125</sup> See chapter 24 of Bede's *Life of Cuthbert*, edited in Colgrave (ed.), *Two Lives*.

However, research for this project has not been able to identify any economic manifestation of these apparently substantial cultural connections between Northumbria and Ireland. If this does reflect a mediaeval reality (and, it must be said, it seems more likely that future research will find evidence for a substantial economic relationships),<sup>126</sup> a possible explanation may lie in a basic incompatibility of their respective economic infrastructures. Discussion in the following chapter on 'Consumption' will suggest that treasure, particularly in the form of precious metals, was the most desirable form of wealth in the Anglo-Saxon economy. If elites in western Britain and Ireland, focused more on livestock as a store of wealth, it is possible that this difference in surplus management may have resonated through the whole economy, causing fundamental differences that limited the possibility for economic interaction. However, given the socially embedded nature of economic activity, the close cultural ties between Northumbria and Ireland would suggest that this kind of economic incompatibility was unlikely. Although little evidence of it is yet visible, it is likely that there was some kind of economic relationship between Northumbria and Ireland, and more detailed scrutiny of this subject would be an interesting avenue for further research.

## *Conclusion*

The discussion in this chapter has ranged over many issues. It is fitting that the last section, considering of the economic importance of the relationship with Ireland, should reach the same conclusion as the first, examining short-range distribution: both are proposed to have been important, but poorly represented in the sources examined for this project. This discussion has raised many lines for further enquiry, and more detailed consideration of the sources used above, with new examination of the metalwork, pottery and stone sculpture from Anglian Deira could go some way towards clarifying the economic position of Anglian York, the nature of distributed commodities in the region and the communications networks which passed through the kingdom of Northumbria. The most useful insights came, perhaps, from the consideration of glass, a surprising source for Anglian Deira,

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<sup>126</sup> The coinage evidence, for example, could not be evaluated as no Irish coin-finds have yet been entered in the EMC.

given its rarity. However, the availability of clear, and reliable chemical analyses, were able to demonstrate the high rate of recycling of old glass, suggesting that distribution of broken scrap may have been an important factor in the distribution of raw materials to the craftworkers of Anglian Deira.

## 5: Consumption

### *Introduction*

This chapter will begin by considering the theoretical approaches that have characterized the interpretation of Anglo-Saxon consumption in previous scholarship, emphasizing the importance in this context of the demographic research presented in the chapter on production, above. The next section considers the evidence for the consumption undertaken by those apparently most able to benefit from any available surplus, the secular and ecclesiastical elites. Evidence for the lifestyle of the more ordinary residents of Anglian Deira is then considered, followed by an examination of the ways in which surpluses were redistributed from the general population to the elites whose wealth was demonstrated in the second section. The conclusion provides a brief summary of the main themes that have emerged in the course of the chapter.

### *Approaches to Early Mediaeval Consumption*

Traditional perceptions of consumption in the middle ages are caricatures of extremes: an extravagant lifestyle of feasting in opulent surroundings for a very small group of elite consumers at the top of the economic scale, while the vast majority of the population endured a miserable life of grinding poverty. This is perhaps more the world of Robin Hood than Bede or Alcuin, but such assumptions have, nevertheless, been implicit in characterizations of Anglo-Saxon England.<sup>1</sup> In theoretical discussions, this has been expressed most clearly in the historiography of the 'gift exchange' model, where the regional economy was limited to re-distribution of precious heirlooms among the top levels of society, while most settlements produced only what they needed to survive and provide subsistence for these warrior elites.<sup>2</sup> Previous chapters have already undermined the economic importance of the gift exchange model: production is suggested to have been more important than gift-exchange would give it credit for, while distribution extended

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<sup>1</sup> See the quotes on Anglo-Saxon diet, p. 180 below.

<sup>2</sup> See discussion in 'Gift-Exchange', p. 126 above.

much more widely across society than the giving of treasure in the mead-hall. Consideration of the evidence for consumption, particularly from apparently non-elite settlements, further refutes the idea of a repressed and isolated rural population.

The best introduction to this examination of consumption in Anglian Northumbria therefore may be to re-iterate the conclusions of the section on demography above.<sup>3</sup> This would suggest that the low levels of population in Anglian Northumbria meant that there were more economic resources available than could actually be consumed. It would therefore have been possible for most producers in most years to have a comfortable lifestyle themselves while also paying a level of tribute to secular and ecclesiastical elites which allowed the latter to maintain a lifestyle that, from the patchy evidence that has survived, was exceedingly opulent. The availability of excess resources naturally encouraged a growth in population, but there is no reason to think that the productive capacity of the land had been reached by the Scandinavian settlement of Deira at the end of this study. Economically, then, as well as culturally, the eighth and ninth centuries may well come to be seen as a continuation of 'Northumbria's Golden Age'.<sup>4</sup>

### *Lifestyles of the Rich and Famous – Elite consumption in Anglian Deira*

#### The Wealth of Anglian Northumbria

Enough sumptuous examples of the most precious objects of Anglian Northumbria have survived the thirteen centuries to the present day to form a glittering treasure-  
hoard: the fierce, but pious,<sup>5</sup> Coppergate helmet sits next to the glory of the Ripon jewel,<sup>6</sup> and, from Bernicia, the exquisite patterns of the Byzantine silks which covered the mortal remains of Saint Cuthbert and the wonderful gold-and garnet

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<sup>3</sup> 'Demographics and Production', p. 76 above.

<sup>4</sup> The phrase taken from Hawkes and Mills (eds.), *Northumbria's Golden Age*.

<sup>5</sup> Tweddle, *Coppergate Helmet*.

<sup>6</sup> Hall and Whyman, 'Ripon', pp. 134–6 See also R.A. Hall, C. Mortimer and E. Paterson, 'The Ripon Jewel', in Hawkes and Mills (eds.), *Northumbria's Golden Age*, pp. 268–80.



cross which proclaimed his faith – and his episcopal stature.<sup>7</sup> More Anglian treasures are preserved in Continental Europe, though their attribution can be no more definite than ‘Northumbrian’: the wondrous carving of the Franks casket celebrates the Germanic heritage of Northumbria,<sup>8</sup> while at the other end of the cultural spectrum, Northumbrian manuscripts exquisitely emulated the Late Antique Italian exemplars which they identified as part of their own, Classical, Christian ancestry. Embroidery may have been an important medium in Anglo-Saxon England, and the embroideries preserved at Maaseik, in the Netherlands, give a tantalizing glimpse into the quality of textiles available to the Anglian elite of Deira.<sup>9</sup>

It may seem parsimonious to follow a description of such riches with the usual early mediaeval caveat that ‘much has been lost’. However, in the context of an assessment of the economic value of such treasures, it is a critical point. What remains is, naturally, the tip of the iceberg, but there is a huge difference between estimating the survivals at, say, 1%, or, 0.001% of what was originally produced. These kind of order of magnitude estimates have been attempted using numismatic methods for the coinage of Anglo-Saxon England, although even in that area there has been extensive debate about the results.<sup>10</sup> There are no comparable methods to even start assessing the survival rate of treasures. However, C. R. Dodwell’s discussion of Anglo-Saxon art suggests that it may be easier to under- rather than over-estimate its economic value. Dodwell highlights the particular emphasis in

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<sup>7</sup> See E. Coatsworth, ‘The Pectoral Cross and Portable Altar from the Tomb of St. Cuthbert’, in G. Bonner, D.W. Rollason and C. Stancliffe (eds.), *St. Cuthbert, His Cult and Community to A.D. 1200* (Woodbridge, 1989), pp. 287–301; C. Higgins, ‘Some New Thoughts on the Nature Goddess Silk’, in Bonner, Rollason and Stancliffe (eds.), *Cuthbert, Cult and Community*, pp. 329–37; A. Muthesius, ‘Silks and Saints: the Rider and Peacock Silks from the Relics of St Cuthbert’, in Bonner, Rollason and Stancliffe (eds.), *Cuthbert, Cult and Community*, pp. 343–66.

<sup>8</sup> I.N. Wood, ‘Ripon, Francia and the Franks Casket in the Early Middle Ages’, *Northern History* 26 (1990): 1–19.

<sup>9</sup> M. Budney and D. Tweddle, ‘The Maaseik Embroideries’, *Anglo-Saxon England* 13 (1984): 65–96

<sup>10</sup> See D.M. Metcalf, ‘How Large was the Anglo-Saxon Currency’, *Economic History Review* 18 (1965): 475–82 and P. Grierson, ‘The Volume of the Anglo-Saxon Coinage’, *Economic History Review* 20 (1967): 153–60.

Anglo-Saxon written sources on the gold and silver that made up their treasures.<sup>11</sup> Among many other examples, he discusses the case of a set of worn-out Anglo-Saxon ecclesiastical vestments that was melted down – *melted* – to recover the gold content in their embroidery. Pounds of gold seem to have been used in these embellishments, and the wall-hangings, drinking vessels, books, even perhaps furniture and wall-paintings of the elites were covered in precious metals, forming a rich booty for the conquering Normans to re-distribute to continental Europe. Although much of the evidence for these treasures comes from the literate Normans who seized them – the Vikings who had preceded them left no such records of their victories for posterity – there is no reason to think that such extravagance was only available late in the Anglo-Saxon period, or only in southern England: the epitaph to Saint Wilfrid recorded in Bede’s *Historia Ecclesiastica Gentis Anglorum*, for example, describes vestments of gold and purple.<sup>12</sup>

Textual references from Northumbria add to the list of Anglian treasures given above as confirmation of this. Æthelwulf’s poem, *De Abbatibus*, celebrating his small, unidentified Deiran monastery,<sup>13</sup> describes a set of wall hangings, which Dodwell suggests should be understood as a gold-embellished series depicting the miracles of Christ. It may seem odd to dwell on this rather than the descriptions of gold and silken treasures in the great religious houses of Northumbria. However, it is precisely the diminutive nature of Æthelwulf’s foundation that gives this reference its importance. As Dodwell notes:<sup>14</sup>

‘this Christian epic of needlework was not set in a great cathedral or a famous foundation. It was displayed in the church of a cell of Lindisfarne, so small that it has never been identified. What was in the larger churches we do not know.’

The point, by now, is becoming clear: although little has survived, it is likely that there was a lot of treasure, including gold, in Anglo-Saxon Northumbria. If Anglo-Saxon society valued precious metals and textiles above other forms of wealth, then presumably, wherever wealth would have been invested and expressed

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<sup>11</sup> Dodwell, *Anglo-Saxon Art*, Chapter 2: Anglo-Saxon Taste.

<sup>12</sup> *HE* v. 19.

<sup>13</sup> See ‘Æthelwulf, *De Abbatibus*’, p. 47 above.

<sup>14</sup> Dodwell, *Anglo-Saxon Art*, p. 133.

in precious metal. Unfortunately, this considerably reduces the odds for its survival. Unlike, for example, cattle or buildings, gold leaves little archaeological trace, unless an extremely fortuitous series of circumstances preserves the actual Anglian artefact. Gold in jewellery, vessels, ornaments, mounts, and, as illustrated above, even textiles, can be recovered completely and recycled into new objects as tastes and fashions change. Even the gold in wall-paintings and manuscripts was vulnerable to a host of threats as changing religious attitudes in the Reformation reduced the number of these artefacts in England to an minute fraction of what existed in the early middle ages.

The geld payments of the tenth and eleventh centuries have been used to suggest that Anglo-Saxon England was almost incomprehensibly wealthy, and it is surely possible at least that the storehouses which were to contain this wealth were already filling within the study period of this project. The small piece of gold sheeting recovered from excavations at Cottam is analogous in importance to Æthelwulf's tapestries: the very presence of gold at a settlement site that has been interpreted as relatively mundane is a fact of more general economic importance than the discoveries at the exceptional sites at York, Fishergate and Whitby. The large volume of copper alloy metalwork recovered from the site suggests that non-ferrous metalworking may have been undertaken at Cottam, and the sheeting may have been intended to gild another item of metalwork. The implication could be that ordinary Anglian metalworkers had some access to gold.

However, the diminutive Cottam sheet contains a very small amount of actual gold. Even with the bias towards the reporting of more valuable metals through metal-detecting recovery, the enormous increase in the known body of metalwork in recent years has comprised almost entirely copper-alloy pieces. In the context of the high value of gold, it must be a real possibility that early mediaeval people were so fanatically careful with gold, and perhaps, at some times, silver, that these metals were almost never casually lost. It is not so much that copper alloy items were not valued – just that when a single coin of gold could be worth considerably more than the building in which it had been lost, enormous efforts might be made for its recovery. The high value of gold, and the fickle fashions in design, that characterize European history means that it is almost inevitable that at

some point, and probably at many points, these treasured gold artefacts are going to have had more value as bullion than objects, and been melted down to produce something in more contemporary taste.

Even if a high rate of recycling is accepted, it could be argued that wealth could be converted into other tangible forms which could be expected to have survived to bear witness to such an excess of resources. However, other investments that could have been made may have been even less likely to have survived than gold. Next to gold and silver, Dodwell's analysis suggests a particular Anglo-Saxon taste for fine textiles, which, even if cherished, are unlikely to have survived across many centuries in the damp of northern Europe. The stone buildings which form so dominant an impression of the wealth of imperial Rome were not in the cultural tradition of the Anglo-Saxons. Wealth may, of course, have been displayed in wooden buildings, and traces of these remain in posts-holes and other features that comprise the archaeology of Anglian settlement sites. Careful excavation allows the dimensions of buildings to be reconstructed, though the quality of what lay above the ground can never be recovered. However, many buildings are also lost, destroyed or buried in the foundations of later structures, or ploughed out by modern agriculture.

This applies particularly to the buildings that would have formed part of industrial activity such as milling or mining. The use of water-mills is often perceived to have been limited in England before the Norman conquest. However, knowledge of water-milling has been shown to have spread throughout the Roman Empire, and analysis of documentary evidence from north-western Europe has shown that the spread of mills through the Empire was determined not by 'barbarian' tendencies in the local population but by the availability of suitable water courses.<sup>15</sup> Such were available in several areas of Deira, and it seems unlikely that an area so heavily Romanised would not have benefited from such a widespread Roman technology. However, the rivers suitable for water-mills remained suitable, and evidence of the early mills would be easily obliterated as the machinery was repaired and modernised through every century until the industrial revolution.

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<sup>15</sup> Wikander, 'Water-Mills', pp. 9–14.

Similarly any early investment in mining, or, indeed, quarrying would be obscured as mines were enlarged or deepened in more recent attempts to extract mineral deposits from the site.

Another potential Anglo-Saxon investment about which very little is known is boats. Very little is known about the boats that made up the navy which must have been involved in Edwin of Deira's victory over the Isles of Man and Anglesey.<sup>16</sup> The potential costliness of boats is seen later in the Anglo-Saxon period when Edward the Confessor is reported to have sailed proudly on a vessel with heavily embroidered sails.<sup>17</sup> Underwater archaeologists may yet shed more light on Northumbrian examples, but the nature and number of these potentially exquisite vessels is probably beyond reconstruction.

The reference to Edwin's navy brings up another huge expense for the aristocracy of Anglian Deira: warfare. Although the human cost of war is always more prominent than the financial, the military activity must have been as significant an expense in the early mediaeval period as in all others before and after. The dynastic tensions that seem to have played out through the eighth and ninth centuries must have been a significant drain of wealth as well as blood for the Northumbrian aristocracy, and the cost of feeding and arming retainers probably affected many nobles beneath the king. Other aristocratic pastimes may have been similarly expensive. Hunting, for example, demanded largely ephemeral investments (such as horses and hounds), which would not be expected to leave much archaeological trace as well as the (perhaps precious metal) saddlery and mounts necessary for riding).<sup>18</sup>

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<sup>16</sup> Although see J. Gifford and E. Gifford, 'The Art of Anglo-Saxon Shipbuilding', in Hawkes and Mills (eds.), *Northumbria's Golden Age*, pp. 73–86 for recent experiments in reconstructing clinker-built vessels. and J. Bill, 'Ships and Seamanship', in P.H. Sawyer (ed.), *The Oxford Illustrated History of the Vikings* (Oxford, 1997), pp. 182–201 for a detailed discussion of Viking ships, although these might have used more advanced technology.

<sup>17</sup> Dodwell, *Anglo-Saxon Art*, pp. 136–7.

<sup>18</sup> See p. 103 above for discussion of J. Richards' suggestion that canine remains found at Cottam might represent hunting dogs.

None of this amounts to direct evidence; it would be speculative to suggest that because the wealth itself would not be expected to survive, Anglian Northumbria was necessarily possessed of an affluence otherwise entirely unappreciated. However, Dodwell's careful analysis of the art of Anglo-Saxon England does build up a strong circumstantial case that Anglian Deira lay in an exceedingly wealthy cultural context. This problematizes the characterization of its economy as isolated, and implicitly poor, in previous scholarship.<sup>19</sup> The following section will consider a body of evidence which provides more direct evidence of economic strength.

### Anglo-Saxon Elites and Religion

Notwithstanding all the investments which, it has been suggested above, may have been made, and subsequently lost, there is one investment which seems to have been particularly close to the heart of Anglian Northumbrians for which considerable, though mostly indirect, evidence has survived: religion. Churches would have invested in perishables which have left little trace: above all wine for communion, but also incense and oil, the latter for important ritual purposes such as the chrism, as well as for high-status oil lamps (which expressed the *Romanitas* of their ecclesiastical buildings as well as providing lighting for their dim interiors). Manuscripts constituted an immense investment of resources, tangible in the skins which could otherwise have provided leather, and in the fine pigments and even gold which could be applied to their embellishment.<sup>20</sup> However, intangible resources were also invested in manuscript production, particularly the considerable amount of time taken to prepare the parchment and the scribal training, and patient labour, involved in presenting the text.

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<sup>19</sup> For more discussion see p. 191 below.

<sup>20</sup> See M.P. Brown, 'Pigments and their Uses in Insular Manuscripts', *Bibliographia* 14 (1994): 136–45 for discussion of the use of pigments.

The region's turbulent history seems to have been an insurmountable hurdle for the survival of the libraries which certainly existed in Anglian Deira.<sup>21</sup> However, while we cannot marvel at a Deiran parallel to the Lindisfarne gospels, the ghosts of these lost books have not been entirely dispersed. Evidence for their existence remains in the scholarship of a whole group of Northumbrian scholars of the seventh and eighth centuries. The manuscript wealth of Bernicia is reflected in the learning of the Venerable Bede, a stalwart of the Catholic faith and one of Fathers of the Church. That he was able to become one of the most notable scholars of the middle ages while apparently never travelling further than York is a staggering testimony both to the quality of the library at the double monastery of Monkwearmouth-Jarrow and to the wealth of that institution to support not only Bede himself, but a school in which he was nurtured and later worked, that is, a whole group of people able to devote much of their time to study. However, Bede does not stand alone. In the competitive atmosphere of the early eighth-century Northumbrian church it seems unlikely that major institutions would accept a library vastly inferior to that of Monkwearmouth-Jarrow, and the levels of scholarship demonstrable from hagiography emanating from Deiran Ripon and Whitby as well as Bernician Lindisfarne testifies that Bede's monastic school was not unique in its ability to provide a high level of education.<sup>22</sup> Again Æthelwulf's poem celebrating the history of an unknown, but minor, Northumbrian monastery proves a valuable source, demonstrating that learned scholars were not limited to the major monastic institutions of Northumbria, but could also be educated in much smaller, now effectively lost, institutions.

Scholarship may have extended even more widely in Anglian society. Bede gives accounts of the intellectual interests of two Northumbrian kings, Aldfrith and

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<sup>21</sup> The most famous documented example perhaps the library built up by Alcuin and his teacher Ælberht at York, which Alcuin worked vigorously, if not entirely successfully, to have delivered to him at Tours. See discussion in Bullough, *Alcuin*.

<sup>22</sup> As demonstrated in Stephen's *Life of Wilfrid* and an anonymous life of Pope Gregory the Great composed at Whitby: B. Colgrave (ed.), *The Earliest Life of Gregory the Great, by an Anonymous Monk of Whitby* (Oxford, 1968).

Ceolwulf.<sup>23</sup> If they inspired a degree of scholarship in ambitious members of court, Northumbrian scholarship may have extended beyond the confines of explicitly religious institutions. The investment required to produce and maintain such a community of scholars may be even more convincing evidence for the wealth of Anglian Northumbria than the glittering treasure-hoard outlined in the introduction to this section. However, scholarship was not the only way in which the Anglian investment in religious activity can be seen. Alcuin describes many treasures in his poem on York, but even more than this, he records the construction, in the eighth century of an entire new church, dedicated to the Alma Sophia. Much speculation has surrounded the identification of this building,<sup>24</sup> but its importance here is in highlighting that the churchbuilding in Anglian Northumbria was not limited to the seventh-century churches recorded in Bede's *HE*.

Evidence for the investment which had taken place in the Northumbrian church is seen in its work proselytising the Christian faith abroad. Northumbrian clerics including Willibrord and Willehad played a leading role in missionary activity in Continental Europe.<sup>25</sup> The charge to spread the good news was keenly felt by many in early mediaeval Europe, but the kind of institutional mission undertaken in early mediaeval Saxony was not an under-funded excursion supported only by the faith of its well-meaning participants. Boniface wrote to contemporaries in Anglo-Saxon England asking for purple manuscripts written in gold letter to awe the pagans into accepting the Faith,<sup>26</sup> and the influence of Northumbrian scripts on the manuscripts produced by the new Continental monasteries is a testimony to the institutional investment in terms of scribes and books that poured into the mission field. The valuable items that accompanied letters returning to England is further

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<sup>23</sup> Aldfrith exchanged a substantial estate for a book on the Cosmographers (chapter 15 of Bede's *Historia Abbatum*; Bede, *Venerabilis Bedae Opera Historica*, 1: 364–87); the *HE* was dedicated to Ceolwulf, who had apparently received a first draft of the work for his official approval (*HE*, preface).

<sup>24</sup> See references in n. 25, '4: Distribution', above.

<sup>25</sup> See W. Levison, *England the Continent in the Eighth Century* (Oxford, 1946) for discussion of English missionary activity on the Continent, considering the career of Willibrord at pp. 45–69 and Willehad on p. 110.

<sup>26</sup> Dodwell, *Anglo-Saxon Art*, p. 24.



evidence for the wealth of the churches founded there. Anglo-Saxon activities in the far north were less welcome as the diocese of Hamburg-Bremen sought ecclesiastical authority in the area. However, it seems that clerics from the later archdiocese of Hamburg-Bremen were not the only Christian missionaries in Scandinavia and the English missionaries recorded in documentary sources could easily have come directly across the North Sea, from Northumbria.<sup>27</sup>

However, the urge to proselytise abroad did not lead the Northumbrian church to forget the needs of the flock at home. Bede is somewhat scathing in his letter to Ecgberht about the quality of pastoral provision in Northumbria, but his concerns may not have applied equally to all areas. The volume of stone sculpture that has survived from Anglian Northumbria, and the geographical spread of the monuments, as illustrated in the maps presented in the north and east riding volumes of the Corpus of Anglo-Saxon Stone Sculpture,<sup>28</sup> is comparable to the major corpus of Anglian coinage. At least some of this sculpture may have served a pastoral function, as has been suggested in Ian Wood's consideration of the group of pieces from Otley, a site in the West Riding of Yorkshire.<sup>29</sup> The investment of the considerable resources needed to produce such sculpture on pastoral work suggests that Bede's concern that the faith be *taught* to the population was taken up in at least some centres across the region. Much as the availability of water courses determined the distribution of mills, the availability of stone appears to be an important factor in the distribution of sculpture, but areas where stone was less available than the Otley estate may have disseminated these pastoral motifs through carving or paintings in wood, or decorated textiles.

Even where no specifically pastoral motif can be discerned, the Christian motifs on much Anglian stone sculpture testify to a keen interest in religious patronage. The stones are often assumed to indicate the presence of a monastic community, although further work is necessary to prove the link between sculpture

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<sup>27</sup> See P. Meulengracht Sørensen, 'Religions Old and New', in Sawyer (ed.), *Vikings*, p. 219 for references and discussion.

<sup>28</sup> Lang, *Northern Yorkshire* and Figures 1 and 2 in Lang, *York and Eastern Yorkshire*.

<sup>29</sup> Wood, 'Otley', pp. 20–38.

and monastic, or even ecclesiastical activity on a site. However, Christian sculpture must have served as an expression of the patron's Christian faith, and thus of the important of religious investment in Anglian Northumbria.

A stone sculpture is a considerable investment of resources. Even if much of the stone used in eighth- and ninth-century Deiran sculpture was local, or re-used, the carving of a monument requires a considerable investment of time by a skilled craftsman, who would also have had to be supported while a considerable time was invested in training to be able to produce such work. Sculpture is not a subsistence requirement, so the investment of so many resources in training the sculptors and production of the actual monuments is a statement that sculpture must have been quite highly valued, despite the silence of the written sources. The detailed work and complex iconography of the finest examples suggests that Anglian Deira must have supported a thriving community of artists in stone, who share the sad fate of its manuscript artists in receiving almost no attention from contemporary authors,<sup>30</sup> despite the high esteem in which they must have been held by their patrons.

Thus, on this occasion, the religious bias of the written sources may be a fairly accurate reflection of a piety in Anglian Deira that was at the core of the region's cultural identity and motivated significant investment in religious activity. Undoubtedly there was more pious investment than outlined here – the value of religious commodities such as relics, for instance, must have demanded much financial outlay in their acquisition. Travel would have been expensive as well as uncomfortable, so the pilgrimages recorded with surprising frequency in contemporary sources must have been another costly indulgence.

There is no way of assessing 'secular' consumption to compare with the religious activity discussed in this section. However, the ability of the economy of Anglian Deira to sustain such a great investment in the training of its scholars, the spreading of its faith and the production of the stone sculpture which is the only surviving tangible representation of this wealth is particularly interesting in the context of the previous discussion of factors which could explain the apparent

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<sup>30</sup> Dodwell, *Anglo-Saxon Art*, p. 109.

disappearance of much of the wealth of the period. The case is, of course, still circumstantial: the evidence of religious investment proves that there certainly was a great deal of wealth in the Anglian economy of Deira, and a considered assessment of the region's secular culture has concluded that many inherently plausible forms of investment would not have survived. That does not prove that secular society was able to command the consumption of the undeniably considerable resources directed towards the church. However, along with the favourable demography discussed above and the large volumes of coinage examined in the next chapter, it is certainly a significant pointer in that direction.

## Redistribution of Wealth – the maintenance of the elite

### *Scirs* and the origins of Multiple Estates

The formation of the early Anglo-Saxon kingdoms has been the subject of considerable academic debate, and there is still considerable disagreement about the history of the period between the end of Roman administration of Britain and the consolidation of the 'Germanic' polities of the early mediaeval period.<sup>31</sup> A full consideration of these issues is beyond the scope of this discussion,<sup>32</sup> but one idea in particular may offer some insight into the development of the economy of the Anglian period. This is the concept of the '*scir*',<sup>33</sup> a small landscape unit which Rosamond Faith has characterized as the antecedents of the multiple estates which characterized early mediaeval landholding.<sup>34</sup> It is possible that these *scirs* were originally, albeit perhaps for only a very short time, independent polities: indeed it has been suggested that these units should be described as 'kingdoms', although, as

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<sup>31</sup> For more discussion, see papers in S.R. Bassett (ed.), *The Origins of Anglo-Saxon Kingdoms* (Leicester, 1989), particularly Bassett's own 'In Search of the Origins of Anglo-Saxon Kingdoms' at pp. 3–27.

<sup>32</sup> It should be noted that the concept of *scirs*, in particular, has been challenged by some authors who see these regions as later administrative developments. See discussion in Hadley, *Northern Danelaw*, pp. 61–2.

<sup>33</sup> This is sometimes spelt in the modern English form 'shire', but this study follows Faith's in using the form *scir* to make a clear distinction between these units and the larger 'shires' of the tenth and eleventh centuries.

<sup>34</sup> Faith, *Lordship*, pp. 8–12.

Andrew Fleming notes, ‘if there was a local leader, he or she would have been more like a chieftain than a king’.<sup>35</sup> As these units were incorporated into larger regional polities which became the kingdoms of Deira and Bernicia, and by the time of this project, the larger united kingdom of Northumbria, it should not be assumed that the Deiran and Bernician, and later Northumbrian kings became direct rulers of all the *scirs* in their kingdoms. Certainly it is likely that kings directly controlled more *scirs* than other leading figures in their kingdom:<sup>36</sup> it was, to some degree, control over greater resources that made them eligible for the kingship, although military strength may have allowed successful warriors to acquire the land they needed for nobility, and would certainly have been necessary for a successful king to maintain ownership of and, crucially, increase his wealth.

The unstable dynastic politics of Anglian Northumbria may suggest that no single royal dynasty controlled an overwhelming proportion of the region’s resources. The process by which the principle became established that the king had a fundamental right to all economic resources in the kingdom is far beyond the scope of this study, but it was one that did not become firmly established in northern England until well after the end-date of this project. The origins of the organization of the landscape in *scirs*, which has been particularly explored within Deira,<sup>37</sup> is likely to have contributed to the independent power (economic as well as political) of leading members of the aristocracy.

As well as influencing the political circumstances in which economic activity took place, the origins of multiple estates as independent political units may have economic implications: such independent units would have fostered the development of local traditions, implying a considerable variation of exploitation of the land and its people between different *scirs*. As larger polities (in this region,

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<sup>35</sup> Fleming, *Swaledale*, p. 26.

<sup>36</sup> The definition of a ‘leading figure’ in this case perhaps being a ruler of *scirs*.

<sup>37</sup> Fleming (Fleming, *Swaledale*, p. 28) comments that ‘The early medieval territorial jigsaw is taking shape’, with the suggested identification of several territorial units in the Pennines which may have been *scirs*, including, among others, Woods’ discussion of Craven, in the upper valleys of the rivers Ribble, Aire and Wharfe (P.N. Wood, ‘On the Little British Kingdom of Craven’, *Northern History* 32 (1996): 1–20) as well as his own reconstruction of the ‘kingdom of the Swale’.

Deira, Bernicia, and eventually the unified Northumbria) developed, and the same landholders acquired large numbers of individual *scirs*, it would probably have been in the landholder's interests to standardize tenurial arrangements across their holdings. However, their ability to do this would have depended to a large degree on their personal authority and the overall process of standardization would have no doubt been interrupted by changes in ownership across generations as various dynastic branches struggled over who would dominate the kin-group's land, or territories were lost in political struggles or through military aggression.

As well as providing an explanation for the extreme regionalism of early mediaeval Europe, the origins of the multiple estates of the early mediaeval period in the *scirs* of an earlier age provides an insight into what 'ownership' of an area of land actually meant on the ground. This issue has already been touched on in a quotation from Ros Faith in the General Introduction, where she described multiple estates as 'a stage in the evolution of extensive lordship'.<sup>38</sup> The term 'extensive lordship' was first used by G. Barrow to define what Faith describes as:<sup>39</sup>

The dominance of considerably developed local political authorities over a society based on a still relatively undeveloped agrarian economy [which] took the form of a complex of rights to services and renders from the people of a given territory.

This was the kind of rulership that has been suggested for the early *scirs*, and it is this that allows Faith to make a clear distinction between a *scir* and a multiple estate:

The *scir* was a political unit; the multiple estate was essentially a unit of ownership and production, and we should be cautious of using the term in contexts where these are anachronistic concepts. Rule and control over people only gradually evolved into the ownership of land...<sup>40</sup>

Other authors have seen the concepts of *scir* and multiple estate as interchangeable,<sup>41</sup> but the distinction made by Faith is important for the economies of these mini-regions. The implication of her distinction seems to be that early mediaeval kingdoms became larger as the ruler of one *scir* came to dominate similar petty kingdoms around his 'heartland', and, as the over-kingdom became yet larger and more powerful, the political status of the rulers of the *scirs* it absorbed was

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<sup>38</sup> See p. 23 above.

<sup>39</sup> Faith, *Lordship*, p. 3.

<sup>40</sup> Faith, *Lordship*, p. 11.

<sup>41</sup> See, for example, Fleming, *Swaledale*, pp. 36–7.

reduced until they became mere economic beneficiaries of the tribute of what were now merely 'multiple estates'.

Various sources suggest that the organization of the landscape in multiple estates began to change in Deira just after the end of the study period of this project. Documentary evidence from the Anglo-Scandinavian period suggests that by this time the bonds that had bound the settlements within the multiple estate dissolved, and fragmented to produce several smaller independent units, and evidence from later ninth- and tenth-century levels at settlement excavations at Cottam and Wharram is consistent with these historical sources.<sup>42</sup>

Tenurial arrangements were thus in constant evolution through the study period of this project. The General Introduction highlighted the importance of the 'the mental, social and cultural context' for the study of economic history and this constantly evolving tenurial system must have been reflected in the economic activity of the people who lived within it.<sup>43</sup>

### **The 'Ownership' of Land and the Support of Elites**

'Ownership' in modern terms is usually associated with direct personal use of the land or its facilities. As with 'trade',<sup>44</sup> this may be unhelpful for an examination of the mediaeval economy, where ownership was more associated with the rights to particular privileges, payments, or services than direct occupation or exploitation. In the *scir* → multiple estate model, these privileges would originally have been an expression of loyalty to the leader of the *scir*, and Faith suggests that this origin explains the 'nobility' of particular forms of service, such as work at the lords' harvest.<sup>45</sup>

Mediaeval kings are thought to have been usually itinerant, moving from one estate to another to maintain their political authority, and receive and consume the

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<sup>42</sup> See interpretative discussion in Richards, 'Cottam', pp. 1–110 and Richards, 'Wharram South Manor Evidence', pp. 195–200.

<sup>43</sup> See discussion, p. 14 above.

<sup>44</sup> See p. 51 above.

<sup>45</sup> Faith, *Lordship*, Chapter 4.

*feorm*, that is the food renders that were their rights as king.<sup>46</sup> No direct evidence exists that this was the lifestyle of the Anglian kings of Northumbria, but there is no reason to think that they should have ruled in a fundamentally different way from their contemporaries across north-western Europe. Dr. Faith describes the “privatisation’ of *feorm*’ when kings ‘granted land away’, but this relies on the assumption that all *feorm* was theoretically due to the king. If *scirs* had become multiple estates under the control of the same families who had ruled them as independent rulers, those descendants may have been due some relic of the render (which would likely have included some food produce) that had been due to the ‘kings’ of the *scir*. It is likely that their subjects/‘tenants’<sup>47</sup> played some part in the payment of tribute to the ‘over’-king of the polity which had subsumed the *scir*. It may not, therefore, be possible to attribute a necessarily royal significance to the term *feorm*, which may be more usefully seen as any tribute rendered in food produce.

Faith suggests that the church played a major role in the development of *feorm* into a fixed system of taxation by introducing the novelty of settled elite communities which needed more regular provisioning with their nutritional subsistence.<sup>48</sup> Bede’s description of ‘family monasteries’ in his letter to Archbishop Ecgberht may corroborate this position,<sup>49</sup> but, if so, the development was not long ignored by the secular aristocracy. It is possible that the concept of a settled lifestyle was indeed new to the Northumbrian nobility, and, once introduced in ecclesiastical form, they hurried to reap the comforts of a sedentary existence. More likely, perhaps, the aristocracy was already settled or settling, and adopting a religious form to such settlements had its benefits. These foundations have received a somewhat mixed press in modern scholarship, sometimes derided as cynical tax-dodges, sometimes more generously described as genuine monastic foundations that

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<sup>46</sup> Faith, *Lordship*, p. 102.

<sup>47</sup> That is, the non-lordly occupants of the original *scir* at the time when it came under the influence of the ‘over’-king.

<sup>48</sup> Faith, *Lordship*, p. 3.

<sup>49</sup> In chapter 13 of the letter: Haddan and Stubbs (eds.), *Councils and Ecclesiastical Documents*, 3: 314–26, translated Whitelock (ed.), *EHD*, pp. 735–45.

simply failed to live up to the high standards of monasticism espoused by Bede and his brethren at Monkwearmouth-Jarrow. Establishment of a church to serve a local population might have attracted tithe payments, as it was certainly to do later, although Bede's letter suggests that the existence of family monasteries did not challenge the bishop's right to tithe.<sup>50</sup> It seems most likely that the founders of monastic institutions, family or otherwise, had a mixture of motives. Piety should certainly not be dismissed, but a family monastery could have more tangible benefits, not least in enshrining in perpetuity the right of the founding family to the estate in which the monastery was situated. A facility for the schooling of aristocratic children, and preparation for careers in the church for some of the family would have been another potential benefit.

It is even possible that the foundations were never really intended as monasteries, but were only ever presented as if they were – a possibility that would certainly explain Bede's ire over the issue. It is unlikely to be a coincidence that the charter form was being introduced in southern England at around the same time,<sup>51</sup> and striking that many of these documents take the form of the records of pious acts, when they seem to record something more similar to the sale of land.

The crucial point, however, is that, in Northumbria at least, it is likely that the move towards settled lifestyles occurred at a similar time in the secular as well as ecclesiastical elite, and was probably part of the consolidation of political authority that resulted in the evolution from the 'rule and control over people' to the 'ownership of land'. The needs of both secular and ecclesiastical landowners were thus probably changing at the same time, from irregular *feorm* to a need for regular supplies to a settled elite community. These could be centres for the collection of the food, craft and service renders from other settlements on the estate that were a relic of the tribute due to the leaders of the *scir*. It is inherently likely that these settlements would also have had some kind of 'home farm', and easy to imagine that the workers on this farm, presumably imported in at the lord's convenience, must have been of very servile status, perhaps originally purchased slaves.

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<sup>50</sup> See 'Bishops, Minsters and Tithes: the Economics of Pastoral Care', p. 178 below.

<sup>51</sup> See Chaplais, 'The Case for Augustine', pp. 526–42.



As numerous multiple estates came under the control of emerging major landholders, individual estates might not have a central settlement at all: renders could be taken at annual fairs, or transport services to get the produce to the owner's home settlement might have been introduced. Another motivation for the foundation of family monasteries may have been the establishment of a convenient centre for the collection of *feorm* in estates that had newly come into their owners' possession.

### Nature of Renders

This section is particularly short, not because of a lack of variety in the types of render paid but due to an almost complete absence of any sources from Anglian Deira on the issue. The seventh-century laws of Ine of Wessex refer to renders in grain, livestock, honey, dairy products and two grades of ale.<sup>52</sup> The introduction to Bede's *Historia Ecclesiastica Gentis Anglorum*, describing the fertility of the island of Britain in precisely these kinds of produce suggests that Northumbria, Bede's homeland, produced at least some of them,<sup>53</sup> but on the details of Northumbrian renders, there is almost no information.

It has been suggested that cattle should be seen as a major part of the 'regional food-rent',<sup>54</sup> at least for the area around York. That cattle should have formed part of the *feorm* is inherently likely: they provide by far the largest meat yield of any of the domestic livestock,<sup>55</sup> and they are relatively easy (compared, at any rate, to pigs) to move long distances. Cattle were also highly regarded in contemporary Irish, and probably also Welsh, society, as a form of moveable wealth. However, as noted above, Anglo-Saxon society seems to have valued treasure as the most desirable form in which to own wealth, and the laws of Ine appear almost ambivalent about

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<sup>52</sup> Edited in Liebermann (ed.), *Die Gesetze*, volume I, pp. 88–123; translated in Whitelock (ed.), *EHD*, pp. 364–72.

<sup>53</sup> *HE* i. 1.

<sup>54</sup> N. 65, above, '3: Production'.

<sup>55</sup> Standard figures for meat yields are: cattle, 275 kg; sheep, 37.5 kg and pigs 87.5 kg; for discussion and references see: Pinter-Bellows, 'Animal Remains', p. 168.

the rendering of cattle as tribute; they specify only two full grown cattle *or* ten full-grown wethers, implying the exact nature of the livestock render was not a matter of particular concern.<sup>56</sup>

Specialist produce, such as the fish and pigs referred to above,<sup>57</sup> and perhaps honey, grain and craft produce such as iron bars or metalwork might also have been rendered as tribute to elites as well as produced under their direct control. In later Anglian Northumbria the emergence of a huge volume of low-denominational coinage suggests that this also came to be used as a medium of taxation. Coin had a long association with taxation in western Europe, and the presence of the king's name from an early date suggests that the usefulness of this function was not lost on the elites of Anglian Northumbria.<sup>58</sup>

### Bishops, Minsters and Tithes: the Economics of Pastoral Care

Christian elites made their own demands on the early mediaeval system through the redistribution of the wealth of the Christian people to the church through the tithe system. Bede's letter to Ecgberht provides some direct evidence for the operation of this system in Anglian Northumbria. The bishops is encouraged to ordain priests to help him provide pastoral care for his diocese (chapter 5), and divide the diocese if necessary to ensure an adequate level of pastoral provision (chapter 9). He is warned against greed in taking on a greater population than he can *visit and preach to* (chapter 8), or accepting money for baptism (chapter 6). Bede also laments the neglect of diocesans in remote villages, particularly since they are paying for pastoral care (which they should not be), and then not receiving it as they should (chapter 7).<sup>59</sup>

This is not an appropriate context for a full consideration of the provision of pastoral care in Anglo-Saxon England, which has been the subject of considerable

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<sup>56</sup> Whitelock (ed.), *EHD*, p. 371.

<sup>57</sup> 'Specialist Food Production', p. 103.

<sup>58</sup> See interpretations suggested for individual coin-series below: 'Individual Ruler Coin-Series'.

<sup>59</sup> Haddan and Stubbs (eds.), *Councils and Ecclesiastical Documents*, translated in Whitelock (ed.), *EHD*, pp. 735–45.

academic debate in recent years, particularly in the context of the ‘minster hypothesis’.<sup>60</sup> Catherine Cubitt has recently provided a useful summary of this thesis:

The early pastoral geography of Anglo-Saxon England has been widely – but not universally – interpreted as without parishes and divided rather into larger units, ‘minster parishes’, dependent on monastic communities.<sup>61</sup>

It is generally considered that many of these ‘early minsters’ remain unidentified, and considerable scholarly attention has been expended on identifying potential minster sites. However, the Bedan evidence quoted above suggests that pastoral care, in eighth-century Northumbria at least, was organized by bishops and provided either by the pontiffs themselves or by priests appointed by and responsible to episcopal authority. Crucially for this study, the profits of this pastoral care (whatever’s Bede’s personal doubts of the morality of such profiteering) were also due to the bishop, whether or not any services were actually received. This seems similar to a system of tithe, which benefited bishops (not local churches or monastic communities, although these might have received other kinds of payment) and was a regular payment rather than a one-off charge for services rendered. Thus tithe could be seen (from a rather unscrupulous perspective) as a profitable right deriving from the bishops’ ecclesiastical ‘ownership’ of a diocese.<sup>62</sup>

## *Lifestyles of the Ordinary and Anonymous – Large-Scale Consumption in Anglian Deira*

### Zooarchaeological Evidence from Anglian Deira

The lifestyle of the average inhabitant of Anglo-Saxon England is generally considered to have been pretty basic. Perhaps the most obvious example of this is in the characterization of the diet of these sites. This negativity about the food consumed in, eighth- and ninth-century England extends even to the *wic* settlements,

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<sup>60</sup> For developments of the minster hypothesis see: J. Blair and R. Sharpe (eds.), *Pastoral Care Before the Parish* (Leicester, 1992) and J. Blair, *The Church in Anglo-Saxon Society* (Oxford, 2005). For a critical re-evaluation see: Cambridge and Rollason, ‘Review of the “Minster Hypothesis”’.

<sup>61</sup> C. Cubitt, ‘The Clergy in Anglo-Saxon England’, *Historical Research* 78 (2005): 273.

<sup>62</sup> See ‘The ‘Ownership’ of Land and the Support of Elites’, p. 174 above.

including those at York and *Hamwic*,<sup>63</sup> which are on other occasions characterized as generally prosperous. The following comments are particularly illustrative of these kind of negative attitudes to Anglo-Saxon diet:<sup>64</sup>

Of the main food animals [consumed in *Hamwic*], the pigs were mostly killed soon after reaching full size. This would be economical, and it would make for good eating. ... [the cattle and sheep] had of course been eaten but they would have been quite tough. This indicates some lack of choice in the food sent in, and not a situation where the consumer demands – and gets – the best. It would perhaps mark the diet of artisans, but not that of entrepreneurs. ... For food supplies it seems the pressure for quality was not great. ... From the broad homogeneity one may suggest that the source of such control was not located in the settlement itself... the dull substantial feeding and the scale of artisan activity would seem to suggest something more

‘But perhaps no-one would want to eat like an Anglo-Saxon peasant.’

Such negativity has particularly influenced interpretation of the species distributions in zooarchaeological assemblages. Anglian assemblages from Beverley, Cottam, Wharram and the Fishergate site at York follow the general pattern for eighth- and ninth-century English sites in that their zooarchaeological assemblages are dominated by the remains of domestic mammals, with a ‘remarkable absence’ of other species utilised for food.<sup>65</sup> Finds of much more varied assemblages from other, contemporary, English sites of the same period has led O’Connor to suggest:<sup>66</sup>

8<sup>th</sup>–9<sup>th</sup>-century settlement at Fishergate exhibited a narrow food resource base because prevailing institutional mechanisms inhibited the settlement population's freedom to obtain such other resources as may potentially have been available, and that the population would have traded for such other resources had they been able to do so.

However, the Fishergate site which provided the context for O’Connor’s comment was the first significant zooarchaeological assemblage from early mediaeval Yorkshire to be published after the Coppergate site,<sup>67</sup> which formed a somewhat inescapable comparandum for the Fishergate material. The zooarchaeological record from Coppergate was much more varied than that of the

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<sup>63</sup> See n. 26 above, ‘4: Distribution’, for references for *Hamwic*.

<sup>64</sup> J. Bourdillon, ‘The Animal Provisioning of Saxon Southampton’, in Rackham (ed.), *Environment and Economy*, p. 123 and Banham, *Food and Drink*, p. 75.

<sup>65</sup> O’Connor, *Fishergate*, p. 263 for O’Connor’s comment on the ‘remarkable absence’ of wildfowl.

<sup>66</sup> T.P. O’Connor, ‘8th – 11th Century Economy and Environment in York’, in Rackham (ed.), *Environment and Economy*, p. 141.

<sup>67</sup> See O’Connor, *Bones from Coppergate* for the zooarchaeology of the Coppergate site.

Fishergate site. Even allowing for the vastly superior preservation conditions at Coppergate, this result was significant, as many of the species 'missing' from Fishergate had similar, or larger, bones than species that were recovered from the Anglian site. There is therefore little reason to think that these extra species had originally been present, and O'Connor's suggestion of tight control over the economic activities of the Fishergate certainly provides one reason why so many fewer edible species were represented. Zooarchaeological assemblages from Beverley, Cottam and Wharram subsequently showed a similarly limited species diversity.

### Species Diversity and Early Mediaeval Lifestyles

However, O'Connor's suggestion is not the only one that could explain this zooarchaeological evidence from Deira. The assumption that a wider range of species consumed means a higher overall lifestyle may be a somewhat over-formalist interpretation of the mediaeval evidence: modern western consumers have the most varied diet of any humans throughout history, which provides a context in which an association between variety in diet and quality of life becomes a natural assumption. However, the argument for a re-interpretation of the limited species consumption of middle Saxon sites does not depend on nostalgia for a simple life. There are far stronger arguments in the basic differences between farming and hunter-gatherer lifestyles. The diet of all mediaeval sites, even those later ones which provide more evidence for the exploitation of wild meat show beyond a doubt that they are all from farming societies: the vast majority of the nutrition in the mediaeval diet came from agricultural products. Farming had been established as a cultural norm in western Europe centuries before even the Roman conquest of Britain, and by the Anglian period, general lifestyles seem to have been based on mixed farming strategies, with many back-ups in the event of a bad harvest or disease, but extremely little use of wild meat.

It has been suggested that the lack of wild meat in the assemblages could be a reflection of elite control over the activities of those who ate the animals preserved in them. However, a simpler explanation, particularly in light of the demographic arguments presented above, could be that the farmers of Anglian Deira were very

successful in providing for the nutritional needs of the population. Farming lifestyles are intense; in contrast to the elites whom they supported, there is little reason to believe that farmers would have had time to abandon their fields and livestock to hunt for wild meat. Even had they wanted to, hunting requires specialist skills that would be hard to acquire and maintain within the framework of a farming lifestyle. However, the cultural framework associated with farming is so different from that of the hunter-gatherer that there is a more basic problem than time and skills in assuming that farmers wanted to hunt: a farming lifestyle generates a culture where nutritional needs are provided through labour, not gathered from the wild. Crop failure or pestilence would certainly prompt farmers to look elsewhere for nutrition,<sup>68</sup> but in good years, when their farms were supporting them comfortably, it seems perverse to expect farmers to turn their attention away from their profitable agricultural enterprises to exploit wild resources, even if such wild resources were abundantly available.

It could even be argued that the emergence of greater species variety in tenth-century and later mediaeval sites was a result of the increasing pressure on farming production creating an unsustainable demand, leading hungry consumers to finally pay attention to the wild meat available for relatively little effort on their doorsteps. Political factors may also have played a role. The animal bone assemblage from Beverley is a particularly interesting example of this as the species diversity increases dramatically in the eleventh-century Norman levels of the site. The consumption of less nutritionally efficient wild meat could be explained as a display of lordship that was part of the establishment of Norman power.<sup>69</sup>

In the context of an unstrained farming society, the eighth- and ninth-century sites mentioned above that present a wide range of food species demand some kind of explanation. This may lay in cultural differences that would have had a profound

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<sup>68</sup> Banham suggests acorns and beech-mast may have supported the poor through famine; Banham, *Food and Drink*, p. 52.

<sup>69</sup> Wild meat can be considered less nutritionally valuable than farmed as it took more energy to hunt it than it provided in calorific content. See Hagen, *A Second Handbook*, p. 357 for more discussion of

impact on the lifestyles of the ordinary and the elites, who are invariably present on sites which show a large zooarchaeological species diversity. Elites were supported by the subsistence produce of their tributary populations, giving them the leisure time to hunt – and hunting may have been the major occupation of elites in peacetime. Particular species may have been reserved for elite consumption, although there is little evidence to prove this was by enforcement rather than tradition. This could have created an environment where the consumption of wild animals came to be a particular characteristic of elite lifestyles, in contrast to the majority of the population, who provided for their own subsistence through farming. Food tributes may therefore have come to include wild animals, such as wildfowl, less amenable to glamorous hunting parties. These, in addition to the meat procured through perhaps extensive high-status hunting by the elites themselves, may have created a cornucopia of variety at the feasts which characterized the lifestyle of the Anglo-Saxon elite.

However this does not mean that the absence of wild meat, any more than the absence of huge quantities of gold, should be used to characterize a site as economically downtrodden. Certainly, elite sites might be expected to show particular characteristics, but ‘non-elite’ does not necessarily mean ‘poor’. It is easy to assume that meat was the most desirable element in the Anglo-Saxon diet. However, Anglo-Saxon texts have little to say on the whole topic of food.<sup>70</sup> It may be that the alcoholic beverages – ale, mead and wine, all archaeologically invisible, were more important than food in cultural terms.<sup>71</sup> Even within food products, meat may not have been dominant. Debby Banham has discussed the linguistic evidence underlining the importance of cereal in Anglo-Saxon culture: a lord was a *hlaford*, a provider of loaves, and his lady a *hlafdige*, a kneader of loaves – even if she was very unlikely to have been engaged in much manual labour.<sup>72</sup> In this context the

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food as a status symbol. For the wild bird assemblage from Beverley: Scott, ‘Beverley Animal Bones’, pp. 222–3.

<sup>70</sup> See H. Magennis, *Anglo-Saxon Appetites: Food and Drink and Their Consumption in Old English and Related Literature* (Dublin, 1999), pp. 28–36 for discussion of the reticence of Old English sources in describing food.

<sup>71</sup> *Ibid.*, 21–8.

<sup>72</sup> Banham, *Food and Drink*, p. 17.

large proportion of cattle old enough to have spent some years on a plough-team in the assemblages from Deiran sites may have a very different interpretation from that offered by Bourdillon: ‘... the meat on the elderly animals might have been tougher than one could readily enjoy, more suited for some form of stewing than for cooking as succulent joints’:<sup>73</sup> it could be a shadowy reflection of the large-scale consumption of cereal. If, and it probably cannot be proved, the nutrition of these sites was dominated by the ephemeral cereals rather than the robust plough cattle whose remains have survived, they may have been eating the most prestigious food in their culture.

### Species Diversity and Monotony of Diet

The final negative aspect associated with the Anglo-Saxon diet, particularly in the study period of this project, concerns its monotony. The zooarchaeological assemblage of *Hamwic*, was, like that of York, dominated by cattle remains, and was described by in the following way by Bourdillon:<sup>74</sup>

the bone waste was homogenous, adequate for food, but very dull  
However, it could be argued that this is a rather unfair interpretation; while species diversity can certainly be shown to have been limited, to assess the diet as monotonous may be to apply another assumption more appropriate to modern life than mediaeval. Firstly, in contrast to modern supermarkets, which tend to focus on particular cuts of meat, animal bone distributions suggest that every part of the domestic mammals slaughtered on the site was consumed. While every part of a cow is ‘beef’, a carcass contains many different meat-bearing elements, and these have been prepared according to local traditions to produce a wide range of food products in many ancient and modern societies. Plant foods would have provided another obvious source of dietary variety. No records at all of the vegetable component that must have made up a significant component of the diet of their Anglian residents survive from any Deiran site, so it is as justifiable to assume a gourmet assortment as it is to assume monotony.<sup>75</sup> When vegetable remains have

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<sup>73</sup> J. Bourdillon, ‘Countryside and Town: the Animal Resources of Anglo-Saxon Southampton’, in D. Hooke (ed.), *Anglo-Saxon Settlements* (Oxford, 1988), p. 180.

<sup>74</sup> Bourdillon, ‘Countryside and Town’, p. 183.

<sup>75</sup> See Banham, *Food and Drink*, pp. 31–5 for a discussion of the evidence for vegetable consumption in Anglo-Saxon England.



not survived on any Deiran site, it may be unfair to expect that the remains of herb-leaves that could have been used, perhaps extensively, as flavourings should have done so.

The most remote factor for modern observers, however, may be the seasonality inherent in pre-industrial agriculture which would have necessitated a considerable element of variety in the Anglo-Saxon diet. Although food that kept well, such as bacon, fish,<sup>76</sup> peas (which could be dried) and nuts would have been particularly valuable as stores against a bad harvest, many of the foodstuffs of the Anglo-Saxon diet would have been seasonal. There is frustratingly little evidence of this seasonality in the archaeological record. There is little evidence, for example, of regular culling from zooarchaeological assemblages,<sup>77</sup> which might have indicated a seasonal slaughter. However, the slaughter of a domestic mammal must have been a major event for the diet of the family who slaughtered it, and provided much food which needed to be consumed quickly.<sup>78</sup> While grain can store well, if protected from damp and pests, and was probably eaten year-round, if enough was available, the annual harvest must always have been a time of relief, and celebration, that another year's supply was ensured; in good years late summer was probably a time of particular plenty.

Other foods were completely seasonal. Most important among these must have been vegetables, fruits and berries, which crop at different times throughout the year, so even a relatively restricted number could provide year-round variety. Other common foods may have been only seasonally available to Anglian consumers: the availability of the milk for dairy products would have been conditioned by the seasonal breeding habits of the cows and sheep which provided it; there is no evidence for the kinds of cheese that were made from these, so it is possible that some mature cheese could have lasted through the year, but most would have been restricted to spring and summer. Eggs would also have been

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<sup>76</sup> See 'Fish', p. 104 above.

<sup>77</sup> See p. 90 above.

<sup>78</sup> Offal in particular could not be preserved and customs of sharing such products among neighbouring households may have developed to avoid waste.

limited to the early months of the year, as the year-round productivity of modern hens is a relatively recent innovation.<sup>79</sup> While freshwater fish would have been available all year, there was probably always variety in the abundance of individual species. However, the gradual accumulation of the waste remains of these seasonally changing foodstuffs means that this seasonal variety is concealed in the archaeological record, which, particularly when middens are dug up and spread evenly over a cleared area,<sup>80</sup> presents a picture of a diet that seems only as varied as the number of species it contains.

This assessment of species ratios suggests a rather different interpretation of zooarchaeological assemblages than that suggested in previous scholarship. It is suggested that sites with limited species distributions cannot necessarily be labelled as higher or lower status on that basis, although the presence of a wide variety of food species, particularly wild ones, is likely to be an indicator of the presence of elites of the highest level. It has been suggested that these individuals spent much of their own time, when not engaged in warfare or military training, on the high-status activity of hunting, which may have earned its prestige as the nearest peacetime preparation for the intensity of battle. Other sites, with more restricted species distributions (but not necessarily dietary consumption) but are likely to have been associated with working farms, and consumed the produce of this agricultural activity. In the under-populated context of mediaeval Deira, such activity should have provided a comfortable lifestyle, and probably usually a significant surplus.

As previous interpretations have been characterized as formalist above, it is important to note that this one runs the risk of an excessively substantivist nostalgia, echoing the Victorian notion of the 'free Anglo-Saxon peasant', a brief glimpse of Eden before the grim realities of the feudal economy. Nonetheless, the suggestion of more comfortable lifestyles, in economic terms at least, seems more plausible in an under-populated landscape than the concept of completely controlled ones: less a matter of nostalgia, perhaps, than one of demographics. The impact of demographic changes through the tenth and eleventh centuries may corroborate this 'comfortable'

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<sup>79</sup> Banham, 'Food and Drink', p. 57

<sup>80</sup> As seems to have been the case at Fishergate; see discussion at p. 97 above.

assessment of the economy of the eighth and ninth centuries. If an initially low population meant that everyone had access to a good balance of economic resources, it also stimulated a growth in population. Stabilisation of political structures, may have given elites more time and ability to focus on the extraction of surplus from their tributaries, but initially this would not have caused a strain on the economy: while the land was under-used, farmers could have increased the productivity of their farms by having more children (more workers=more produce) and/or bringing more, or more productive, land into cultivation. For the eighth and ninth centuries that are the focus of this project, this discussion would suggest that ordinary Anglian peasants, like the elites discussed in the first section of this chapter, may have enjoyed a level of economic comfort not often associated with the early mediaeval period.

### ***Conclusion***

Much of the discussion in this chapter has been theoretical; too little evidence has survived from Anglian Deira for a more detailed consideration of the specifics of consumption in the region. However, re-evaluation of the evidence that has survived, has suggested that, while most of the details remain oblique, consumption in Anglian Deira was perhaps less subsistence-based than previous commentators have suggested. The opulence of the lifestyle of the elites is clear in the few surviving artefacts that are preserved in modern museums, but it is suggested that they represent a minute fraction of the treasures that once existed, and were melted down by later generations to be refashioned into their own tastes. Less exalted individuals naturally enjoyed more ordinary consumption; but an evaluation of the evidence from even apparently modest settlements could suggest a comfortable lifestyle, supported by a relatively under-populated landscape, easily capable of producing enough resources to ensure farmers' success in providing for the nutrition of themselves and their workers in all but the very worst conditions.

# **6: Numismatic Evidence for the Economy of Anglo-Saxon Deira**

## ***Introduction***

This chapter is organized in five sections; this structural introduction will be followed by an introduction to the numismatic context of Anglian Deira, considering the numismatic history and scholarship of the region and the nature of the numismatic material used in this project. The third section introduces the geographical analyses that have been undertaken on the numismatic material, and the fourth presents the results of these analyses. The chapter concludes with a brief reflection on the preceding discussions.

## ***Numismatic Context***

### **The Numismatic History of Anglian Northumbria**

Historians of the early middle ages, particularly of continental Europe, have questioned whether early mediaeval coins can be considered as having an economic function: the prestige and *Romanitas* associated with minting would be enough to explain the issue of coins that were perhaps largely ceremonial, used as stores of wealth by elites but of little economic importance. This position has influenced British numismatics largely in the form of a long-running debate over the volume of coinage issued that somewhat paralleled a similar debate on the size of Viking armies: the larger the figures, in both cases, the deeper the historical impact.

For the ninth century, however, the volume of Northumbrian coinage makes it something of a special case: there is no need to prove that thousands of coins were minted as thousands survive. The composition of three hoards discovered in the nineteenth century gives some indication of the volume of these coins that must have been in circulation: 8,000 were recovered from a hoard in Hexham in 1832, around 5,000 from a hoard in York discovered in 1842 and over 2,000 from a hoard in Bolton Percy in 1846, although nearly 2,000 more should probably be added to

the Bolton Percy group.<sup>1</sup> These hoards do not represent any kind of organized cessation of coinage: they are widely distributed geographically, and numismatic analysis suggests they were buried some years apart.

Although an anomalously high percentage of coins minted in ninth-century Northumbria may have survived, it is inherently likely that many more coins were originally struck than could be recovered.<sup>2</sup> With thousands of coins known, the volume of what must be called a currency in ninth-century Northumbria cannot plausibly be considered a ceremonial issue, and numismatic analysis of the coins themselves means such an explanation is entirely impossible for a considerable number of them.<sup>3</sup> An economic function is therefore implied for the ninth-century coinage of Anglian Northumbria at least, and it must therefore be a possibility for the eighth-century coinage from the region as well.

The general pattern for English coinages is for many fewer coins to survive from the ninth century than from the relatively prolific eighth.<sup>4</sup> The extraordinary volume of ninth-century Northumbrian coinage is unique, but has attracted relatively little historical attention.<sup>5</sup> The general focus on Mercia in the later eighth- and Wessex in the ninth-century historical narratives of Anglo-Saxon England no doubt plays its part in this neglect, but it is also related to the medium, that is, the metal alloys, of Northumbria's voluminous ninth-century coinage. Silver alloys had

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<sup>1</sup> For more discussion and references see J. Booth, 'Northumbrian Coinage and the Productive Site at South Newbald ("Sancton")', in Geake and Kenny (eds.), *Early Deira*, p. 89.

<sup>2</sup> The distinctive alloy of the coins, discussed below, made them less vulnerable to re-melting, at least for coinage, after the Viking issues began to be minted.

<sup>3</sup> See discussion of the mid-ninth-century 'irregular' issues below, p. 240.

<sup>4</sup> See M.A.S. Blackburn, "'Productive' Sites and the Pattern of Coin Loss in England 600–1180", in Pestell and Ulmschneider (eds.), *Markets in Early Medieval Europe*, pp. 26–34.

<sup>5</sup> They did not feature at all in Stenton's magisterial survey (Stenton, *Anglo-Saxon England*), and where they are mentioned by historians, it is usually in the same vein as the quote from Metcalf above, that is, that the copper alloy coins were a function of the poor state of Northumbrian government in the late Anglian period.

been the standard medium for western European coinage since the seventh century,<sup>6</sup> and were used in Northumbria until the reign of Eanred.<sup>7</sup> However, the high-volume coinages of ninth-century Northumbria were minted in a medium based on copper-alloys. The large volume of these coins has been considered a natural function of the fact that the lower bullion value of the copper-alloy medium meant that more of the coins were needed to fulfil the same economic functions as the silver issues which had preceded them.

The choice of coinage medium is so distinctive that it has earned these coins their own descriptive term: *stycas*.<sup>8</sup> However, apart from their copper-based medium, the *stycas* are identical to a coin-type known as *sceattas*, a silver coin form which was widely used in seventh- and eighth-century Europe and preceded the *styca* type in Northumbria. The *sceatta* type ceased to be used in continental Europe in 755 when the *denier* type was introduced in the Frankish realm.<sup>9</sup> This type was later adopted in England, most famously perhaps by King Offa of Mercia, as the English 'penny'. The penny was characterized by a larger, thinner flan than the *sceat*,<sup>10</sup> an increased silver content than the preceding *sceattas* (though this was not maintained for long in many series)<sup>11</sup>, and a new typology with the king's name (and sometimes portrait) on the obverse of the coins and the name of the moneyer

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<sup>6</sup> See M.A.S. Blackburn, 'Coinage', in McKitterick (ed.), *New Cambridge Medieval History II*, pp. 539–41 for more discussion of the change from gold to silver as a coin-metal in early mediaeval Europe.

<sup>7</sup> Booth (Booth, 'Northumbrian Coinage', pp. 83–9) and Pirie (E.J.E. Pirie, *Coins of Northumbria: an Illustrated Guide to Money from the Years 670 to 867* (Llanfyllin, 2002)) provide general introductions to the coinage of Northumbria; sections below (in 'Individual Ruler Coin-Series', p. 218) introduce the coinage of each of the Northumbrian kings and archbishops individually.

<sup>8</sup> This term is generally used for the copper-alloy coins of ninth-century Northumbria, although Pirie has suggested it should be used to reflect typological developments; see discussion of Pirie's approach in 'The Numismatic Historiography of Anglian Deira', p. 193 below.

<sup>9</sup> See M.A.S. Blackburn, 'Coinage', in R. McKitterick (ed.), *The New Cambridge Medieval History II, c. 700 - c. 900* (Cambridge, 1995), pp. 545-51. for discussion of the history of silver coins in medieval Europe.

<sup>10</sup> The flan being the round piece of metal impressed with the inscription to produce the coin.

<sup>11</sup> Following the Oxford English Dictionary definitions of a coin series as 'A set of coins, medals, etc. belonging to a particular epoch, locality, dynasty or government'.

on the reverse.<sup>12</sup> These numismatic developments were reflected in the designs of the Northumbrian coinage: the king's name had previously been, and remained, on the obverse of the coins, but previous eighth-century Northumbrian coin had featured an animal design on the reverse. From the 780s, Northumbrian coins followed the new pattern, with the king's name on the obverse and the moneyer's on the reverse.<sup>13</sup> The 'penny' flan, however, was not used in Northumbria until the Anglo-Scandinavian coinages of Jorvík, which appear at the end of the ninth century.

Early numismatic discussions interpreted Northumbria's continued use of the *sceatta* flan as a sign of its isolation from the mainstream of the European economy. This academic context is important as it has influenced the interpretation of the choice of copper-alloy as a coinage medium. As Kirby has outlined, this has often been taken as a sign of weakness, perhaps most graphically in Michael Dolley's assessment that when the Vikings took York:<sup>14</sup>

...they overthrew a kingdom that had long been bankrupt, economically, if not spiritually as well.

More recent scholarship has taken a slightly more positive view, although with something of a lack of enthusiasm. James Booth, for example, comments:<sup>15</sup>

Thus the isolation of the Northumbrian coinage, begun with the failure to adopt the larger 'penny' module in the later eighth century, was completed by the reduction of the coinage to base metal. Internally this change could imply – at least initially – an increase rather than a decline in economic activity, as the shift from gold 'thrymsa' to silver 'sceat' in the late seventh century seems to have done. But it must be remembered that the earlier change in metal had taken place simultaneously throughout Francia, Frisia and England, whereas this change to copper-alloy is unique to Northumbria. During its final short phase between the 830s and the 850s the coinage of Northumbria was an idiosyncratic anomaly among the coinages of Europe, a debased shadow of its former self.

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<sup>12</sup> The obverse being the front side of the coin and the reverse the back.

<sup>13</sup> It is most likely that this typology was introduced in the second reign of Æthelred I (789–96); a group of moneyer's name-reverse coins exist in the name of Ælfwald, but these are considered by both Booth and Pirie (E.J.E. Pirie, *Coins of the Kingdom of Northumbria c. 700–867 in the Yorkshire Collections* (Llanfyllin, 1996), pp. 34–5 and Booth, 'Northumbrian Coinage', p. 86), to be more likely to be coins of Ælfwald II (806–808) than Ælfwald I (779–788); the EMC also lists these coins under Ælfwald II.

<sup>14</sup> See D.P. Kirby, 'Northumbria in the Ninth Century', in D.M. Metcalf (ed.), *Coinage in Ninth-Century Northumbria: The Tenth Oxford Symposium on Coinage and Monetary History*, BAR British Series 180 (1987), p. 14 for references and more discussion.

<sup>15</sup> Booth, 'Northumbrian Coinage', p. 88.

The changing perceptions of early mediaeval coin mediums can be related to modern economic developments. In the early and middle part of the twentieth-century, many economists held that the gold standard was an essential foundation of economic activity. However, the expansion of financial markets through the last century eventually proved that gold was not the only possible means for storing value, and a proliferation of other means, including abstract financial constructs such as bonds as well as more tangible commodities, became accepted as equally, if not on occasion more, secure as a store of wealth.

This new attitude towards the economic imperative of the gold standard provided a new context for understanding the economies of the early middle ages. The move from gold to silver coinage across Europe in the seventh century came to be regarded as an expression of economic strength rather than weakness: the decision to mint in silver could be seen as a sign of a vibrant economy which had more demand for a reliable means of exchange than could be satisfied by the increasingly limited gold reserves. A consequence of the change in medium (in itself perhaps motivated by the profits that could be garnered from the issue of more coin) was that individual coins became less valuable. This facilitated smaller-denomination transactions, and made coinage more useful as a means of exchange. However, as the quotation from Booth suggests, these arguments have not generally been extended to Northumbria's decision to move to a copper-alloy coinage medium.<sup>16</sup>

Considerable new analyses of the whole body of Anglian coinage from Northumbria, *stycas* and *sceattas*, have been undertaken in the course of this project, based on the increasing body of single-coin finds made by metal-detecting

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<sup>16</sup> A notable exception is the of the late Elizabeth Pirie who took a far more positive attitude: 'It should no longer be assumed that the massive output of *stycas* struck in copper alloy is evidence of economic decline. Finally, the evidence of recent discoveries puts paid to the old notion that the northern coinage was confined to the northern kingdom' (Pirie, *An Illustrated Guide*, p. 18). However, perhaps overshadowed by the more controversial aspects of her work discussed in the following section, her attitude to the economic implications of the copper alloy coin medium have not been widely adopted by other authors.



enthusiasts. This material has attracted a considerable amount of academic attention, and has been described as ‘a powerful tool for the study of the economy in the Early Middle Ages’, although, as Mark Blackburn goes on to observe, ‘it is one to be used with considerable care’.<sup>17</sup> The necessity of such caution has become profoundly apparent during the course of this project, and an entire section below has been devoted to a consideration of the issues that surround the use of single coin-finds. Nonetheless, the results presented in this chapter suggest that the study of the geographical distribution of single coin-finds have much to offer for the study of the early mediaeval economy.

### The Numismatic Historiography of Anglian Deira

The coins of Anglian Northumbria, particularly the enigmatic *stycas*, are a somewhat intimidating source for the non-specialist due to profound interpretational differences in their history in the numismatic scholarship. These arose from the approach used by the late Elizabeth Pirie, who published extensively on the *styca* coins.<sup>18</sup> Her catalogue of Northumbrian coins in particular earned widespread admiration for its comprehensiveness, recording ‘not merely the “stycas” in York and Leeds, but, as nearly as humanly possible, every “styca” currently in existence, wherever it might be’.<sup>19</sup> However, her theories about the production of Northumbrian coinage have been controversial. Pirie rejected the traditional numismatic approach to categorization, which organised coins within a type by the king in whose name they were issued, and then by the moneyer named on the coins.<sup>20</sup> She held that this was inappropriate for the coinage of Anglian Northumbria, and arranged the coins in her catalogue on typological criteria. The implications of this are more profound than the simple order in which the coins appear in the catalogue. Pirie suggests that the obverse and reverse designs were more important than the moneyers or kings named on the coins in determining their

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<sup>17</sup> Blackburn, ‘Pattern of Coin Loss’, p. 35.

<sup>18</sup> Culminating in her catalogue of Northumbrian coinage: Pirie, *Coins of the Kingdom of Northumbria*.

<sup>19</sup> Booth, ‘Northumbrian Coinage’, p. 91.

<sup>20</sup> See E.J.E. Pirie, ‘Phases and Groups Within the Styca Coinage of Northumbria’, in Metcalf (ed.), *Coinage in Ninth-Century Northumbria*, pp. 103–45.

historical significance, and that the coinage should be studied primarily on the basis of these motifs.

The interdisciplinary approach used in this study relies on pre-existing scholarship, and the breadth of Pirie's experience with the Northumbrian coins that are the subject of this chapter make her one of the most important scholars in this field. However, her approaches and conclusions have not been widely accepted in numismatic scholarship, and analysis in this study will follow a more mainstream approach, discussing the coins in groups based on the names, rather than the motifs, on their inscriptions. The numismatic case for this approach has been made by specialists in the field,<sup>21</sup> but it also works well from a historical perspective. While the iconography of coinage is an important emergent field of study,<sup>22</sup> the traditional use of issuers' names, rather than iconographical typologies, as identifiers for the coins creates defined, if somewhat ill-dated, chronological groups, which are more easily amenable to the ultimately historical aims of this project. Having established the name of the issuing authority as a distinguishing feature, the corpus of coins issued in Northumbria between 700 and 867 can be treated as a group of 22 series, issued by 11 kings and 5 archbishops, and in two anonymous groups, one illegible and one the important group of mid-ninth-century anonymous coins discussed in more detail below.<sup>23</sup> It should be reiterated that no specialist numismatic analysis has been attempted during this study: the series as presented below rest on the authoritative numismatic data presented in the EMC.

### Numismatics and Metal-Detectors: the Use of Single Coin-Find Data

The use of metal-detected single coin-find data has been extensively discussed in a number of previous studies and some specialist publications,<sup>24</sup> which have

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<sup>21</sup> See, for instance, Booth, 'Northumbrian Coinage', pp. 89–92.

<sup>22</sup> See, for instance, A. Gannon, *The Iconography of Early Anglo-Saxon Coinage: Sixth to Eighth Centuries* (Oxford, 2003).

<sup>23</sup> Eleven, five and two makes eighteen series; the further two appear as the coins issued by Æthelred I and II are presented as multiple series due to interrupted reigns.

<sup>24</sup> See discussion in Blackburn, 'Pattern of Coin Loss', pp. 20–36; Ulmschneider, *Markets, Minsters and Metal-Detectors* and C. Dobinson, *Metal Detecting and Archaeology in England* (London, 1995).

highlighted the potential of the material for the study of the use of coinage in early mediaeval society. Before hobbyist use of metal-detectors, early mediaeval coins were mainly known through hoards, supplemented by very occasional single finds (usually associated with building sites, or sometimes gardening) and the bodies of coins recovered in the finds assemblages of archaeological excavations. The activity of metal-detecting enthusiasts has revealed a huge, and largely unsuspected body of finds spread much more widely across the landscape. This material is obviously useful for specialist numismatic study; a larger sample will represent a greater fraction of the original issue, allowing a more accurate assessment of the size, weight, and chemical composition of the coins, and providing a foundation for more detailed numismatic analysis, such as die-studies.<sup>25</sup>

Traditionally numismatic studies have been based on hoard evidence. However, the hoarding of coins cannot be understood as a purely economic activity. Their appearance in hoards certainly illustrates function of a coins as a store of wealth, a fact worth emphasising for the much-derided *stycas*: the fact that several individuals thought it was worth hoarding them, even in the case of the Beverley purse-hoard, just twenty-three of them,<sup>26</sup> means that it was highly unlikely that they were in any way ‘small change’ (or indeed, ‘widow’s mites’, despite their numismatic label deriving from the Old English gloss on the gospel story). Nonetheless, by definition, the coins in a hoard were deliberately taken out of

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<sup>25</sup> Although no coin-dies are so far known from Anglian Northumbria, artefacts recovered from the tenth-century levels of the Coppergate site in York (Hall, *The Viking Dig*, pp. 60–2) confirmed what was generally assumed to have been the method of coin production in Anglo-Saxon Northumbria: a blank coin flan (see n. 10 above, this chapter) was placed on the obverse die which was embedded in an anvil; it was then covered with the reverse die, which was struck with a hammer, so the impression of both dies was simultaneously punched onto the flan. Detailed analysis of the marking on coins allows the dies used in their production to be reconstructed. New coins can then be tested against the known body of dies to establish whether they are the product of two entirely unknown dies, or whether they share ‘die-links’ (that is, whether one or both of the dies used in their production were also used to produce previously catalogued coins) with coins already known.

<sup>26</sup> For discussion of the Beverley purse-hoards, see Pirie, ‘Beverley Coins’, pp. 164–7.

economic use, so they testify to the individual circumstances of the hoarder and their family, rather than the wider economy which produced the coins.<sup>27</sup>

Any single coin-find is no more certain a witness to the economic function of the coinage at the time it was issued: the circumstances in which coins were lost are not inherently reconstructable, and unhappy accidental losses by modern collectors are evidence that not every mediaeval coin was lost in the course of mediaeval economic activity. However, the most likely means by which an early mediaeval coin could end up in the ground is that it was lost while it was in use: 'changing hands in a transaction, others slipping from people's purses or having been dropped during a fight'.<sup>28</sup> The crucial point about this is that, in direct contrast to the deliberately constructed group of coins in a hoard, single-coin losses are likely to have been accidental, and so, are basically random, although more valuable coins would probably have attracted greater care, so been lost less often, and perhaps more frequently recovered. While the concentration of coins they contain makes hoards 'the numismatist's primary tool for determining the chronology of a coin series and how long particular coin types remained in circulation', the distribution of single finds 'ought to reflect genuine patterns of coin circulation', and is so of more general economic interest.<sup>29</sup> It might, for instance, offer insights into the coins' contemporary function. If, for example, coins were largely ceremonial, they might only be expected in elite centres which would have participated in the social interactions by which the coins brought prestige.

For Northumbria, it could be argued that the sheer volume of coinage was testimony enough that coins had an economic rather than ceremonial function. Nonetheless, analysis of the distribution of single-finds offers the potential to understand more about their role, and potentially about the economic infrastructure in which they were used: was their use, for instance, limited to a small number of

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<sup>27</sup> As Mark Blackburn has noted: 'What most affects the pattern of surviving coin hoards is the circumstances that led them not to be recovered by the owners or their families'(Blackburn, 'Pattern of Coin Loss', p. 22).

<sup>28</sup> *Ibid.*, p. 23.

<sup>29</sup> Blackburn, 'Pattern of Coin Loss', p. 23.

sites, so their volume reflected intense economic activity at a few centres, or were there so many minted because they were widely used in a generally monetarized economy? However, before the analyses designed to explore these kind of questions for Anglian Deira are introduced, it is necessary to consider the nature of metal-detected data in more detail.

### The EMC Database and the Use of Metal-Detected Data

The analyses undertaken below were made possible by the free availability of a database of single coin-finds, known as the Early Medieval Corpus of Coin Finds (henceforth EMC), hosted and maintained by the Department of Coins and Medals at the Fitzwilliam Museum in Cambridge.<sup>30</sup> The structure of this database and the detail it records allow complete access for the non-specialist to the numismatic corpus from not just Northumbria, but the whole of early mediaeval Britain. The structure of the database allows searches by the name of the issuing authority on the coin, so the single-find corpus for each of the 'ruler-series' of Anglian Northumbria is readily accessible,<sup>31</sup> and the highly regular form of the data which can be downloaded from the search results mean that it can be relatively easily manipulated to allow geographical analysis of the results.

However, the regular form of the results achieved from statistical analysis can mask irregularities in the primary data. For the material analysed in this project, an obvious point is that different rulers are represented by very different numbers of coins, sometimes, but not always, related to the fact that they ruled for very different lengths of time.<sup>32</sup> The summary introductions to each ruler given below are intended to form an easy reference for this essential context, and these factors play an important part in the interpretation of the results.

However, the interpretation of the results also demands an awareness of more fundamental issues associated with metal-detected data. Although the EMC

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<sup>30</sup> The database can be accessed at [http://www.fitzmuseum.cam.ac.uk/coins/emc/emc\\_search.php](http://www.fitzmuseum.cam.ac.uk/coins/emc/emc_search.php).

<sup>31</sup> Material found in hoards can also be searched by changing the options on the form to include coins from the Sylloge of Coins of the British Isles as well as, or instead of, the EMC.

<sup>32</sup> This chapter will follow the EMC terminology for 'ruler', which is henceforth used interchangeable with 'issuing authority'.

lists every find known across Britain, for instance, that does not mean that all areas of the island have been equally thoroughly explored. Metal-detecting is more popular in ploughed fields than pasture-land, so modern agricultural land-use has a significant impact on the extent of metal-detecting activity in different regions: the cultivation of cereal crops, as indicated by the official Countryside Information Service map shown in Illustration 5 has a major impact on the density of coin finds in the EMC. Metal-detecting equipment is heavy and cumbersome, so another important factor may be the coverage of the modern road network, as enthusiasts are not likely to explore far from accessible roads.<sup>33</sup>

Even more important than the local circumstances affecting the extent of metal-detecting within a region, though, are the complex issues around the reporting of finds. Relationships between metal-detectorists and the academic community have not always facilitated the reporting of detected finds, although the EMC is an excellent example of the benefits that can result from the efforts that have been made by many professional academics in building and maintain relationships with the metal-detecting community. The development of the Portable Antiquities Scheme to provide a national framework for the recording and publication of finds of historical artefacts offers great potential for improving the reporting of finds,<sup>34</sup> although much regional variation in recording practice is still apparent, and the availability of data is still largely dependent on the quality of personal relationships. However, not all detected finds will ever be reported, and the problem of illegal metal-detecting remains significant.<sup>35</sup> The most damaging aspect of such ‘night-hawking’ is not necessarily the loss of the items effectively stolen from the ground, as many will, in the course of time, become known to honourable collectors, and, eventually, the academic community. The archaeological sites destroyed by

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<sup>33</sup> John Naylor’s advice on this point is gratefully acknowledged.

<sup>34</sup> See <http://www.finds.org.uk/background/history.php> for the history of the Portable Antiquities Scheme.

<sup>35</sup> That is metal-detecting in locations known as ‘scheduled sites’, which are protected from such activity in the provisions of the Treasure Act 1996.

irresponsible detecting and the crucial geographical information on the artefact find-spots, however, can often never be recovered.<sup>36</sup>

An ongoing study at the University of York, the VASLE project, is undertaking an assessment of the impact of these factors on the corpus of metal-detected data by comparing the coins and metalwork assemblages from different periods across the British landscape. The results of this analysis are highly relevant to the interpretation of the analyses undertaken in this project, and the generosity of the members of the VASLE project in allowing their constraints map to be presented here, ahead of completion of the project, is greatly appreciated. This map, shown in Illustration 6, indicates the areas from which, for various practical reasons,<sup>37</sup> few coin-finds could be expected, so explanations for the absence of single coin-finds is more likely to reflect trends in the contemporary data-set than the mediaeval economy.

### *Geographic Analysis of Findspot Data*

Studies by several authors have presented site-based analyses of Anglo-Saxon coins and metalwork, examining the variation of finds over time in a particular location.<sup>38</sup> The approach used in this project, however, is based on examining groups of coins issued by individual rulers, exploring the geographical distribution of coins within a fixed chronological period (the reign of the king or archbishop). This kind of approach was pioneered by Metcalf, who has published several articles where he using a form of regression analysis to investigate the distribution of early mediaeval coinage. In 2003 he published an analysis of a series of *sceattas* known as series H,

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<sup>36</sup> Indeed, the circumstances of discovery are likely to be deliberately concealed for night-hawked material.

<sup>37</sup> Urban areas, forests, lakes, danger areas and topography over 300m, roughly the limits of plough-zone farming.

<sup>38</sup> See K. Leahy, 'Middle Anglo-Saxon Metalwork from South Newbald and the "Productive Site" Phenomenon in Yorkshire', in Geake and Kenny (eds.), *Early Deira*, pp. 51–82; Naylor, *Archaeology of Trade*, pp. 49–50.

which directly inspired the analyses that have been undertaken in his report.<sup>39</sup> He described his methodology in the following terms:<sup>40</sup>

We can use a form of regression analysis in which we count up the total number of single finds within a circle, of, say, twenty-five kilometre radius, and calculate the frequency of a particular type, for example series H, as a percentage of that total. By repeating that procedure at numerous localities, we can create a map which is dotted with percentage figures. We can then interpret that information by drawing contour lines on the basis of the percentages, to reflect the districts where the type being studied was relatively more or less frequent. This procedure does not measure absolute quantities of coins: Series H could, in principle, be relatively frequent in a district where there was little coinage.

His results took the form of a contour map, presented here as Illustration 7,<sup>41</sup> which, in his own words, ‘shows rather clearly that money from *Hamwic* was diffused into the hinterland westward but not eastwards or northwards’.<sup>42</sup> Metcalf’s analysis thus not only strengthened the case for *Hamwic* as the mint-site of the Series H *sceattas*, but offered an insight into the economic region associated with the town, suggesting it lay at the east of the circulation region of these coins, which could perhaps be characterized as an economic micro-region. The potential of this version of regression analysis for the exploration of the economy of Anglian Deira seemed considerable. However, Metcalf’s publications gave little indication of the process by which he had created his maps, so the techniques used in this project have been developed independently.

This study has undertaken two main forms of regression-type analyses on the geographical distribution of single coin-finds relating to Northumbrian economic activity. The EMC searches on which the analyses were undertaken were performed on the 8<sup>th</sup> December 2006. The technical details of the processes used in the analysis, including code for the various programmes that were written to manipulate

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<sup>39</sup> Metcalf had previously used this approach in D.M. Metcalf, ‘The Monetary Economy of Ninth-Century England South of the Humber: a Topographical Analysis’, in M.A.S. Blackburn and D.N. Dumville (eds.), *Kings, Currencies and Alliances* (Woodbridge, 1998), pp. 167–97 and D.M. Metcalf, ‘Determining the Mint-Attribution of East Anglia Sceattas through Regression Analysis’, *British Numismatic Journal* 70 (2001): 1–11.

<sup>40</sup> D.M. Metcalf, ‘Variations in the Composition of the Currency at Different Places in England’, in Pestell and Ulmschneider (eds.), *Markets in Early Medieval Europe*, pp. 40–1.

<sup>41</sup> In Metcalf, ‘Variations in Currency’, pp. 37–47, it was Figure 4.1.

<sup>42</sup> *Ibid.*, p. 41.



the EMC data in Microsoft Excel, are given in the appendix.<sup>43</sup> The appendix also provides the results of each analysis for every ruler in the EMC; only those results which feature in the interpretative discussion have been printed in the booklet of illustrations which accompanies this thesis. The following sections provide a general description of the purpose of each analysis and the benefits and drawbacks of the various presentations used to illustrate the results.

### Focal Coin Density (FCD) analysis

This regression-type analysis was directly inspired by approaches pioneered by Metcalf. The results are presented as maps for each ruler series. They show the proportion of the sample series in the total corpus of coins in use between 700 and 870. A fictional king Wigred will serve to illustrate the point. If there was one coin of Wigred in a corpus of 10 coins at a site, the Focal Coin Density (henceforth FCD) analysis would result in a value of 10%. A grid of points was superimposed on a map of Britain,<sup>44</sup> and an FCD analysis was calculated for a circle 25km<sup>2</sup> around every point. Metcalf's contour approach was initially used for these maps, but a presentation of the results as surfaces proved easier to interpret.

An example of an FCD map is given as Illustration 8. This map shows a surface presentation of the total FCD analysis for all the coins which can be demonstrated to have been issued within the kingdom of Northumbria,<sup>45</sup> but are illegible, so cannot be assigned to a ruler series. The surface is comprised of squares, across each of which the value of the FCD analysis is constant.<sup>46</sup> The

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<sup>43</sup> To summarize: a computer programme was created in Microsoft Excel which generated the table on which the maps were based from the EMC search data. This table was then imported into a Geographical Information Systems application called ArcView, which presented the results in map form.

<sup>44</sup> The grid used was based on the Ordnance Survey National Grid, with points every 10km.

<sup>45</sup> The significance of the 'total' FCD analysis is discussed below when the concept of the 'Northumbrian' FCD analysis is introduced.

<sup>46</sup> These squares should not be confused with the sample areas, the size of which is indicated on each map; the square blocks on the surface arise from the grid used as a sample framework, the colour of each square reflecting the value of the analysis of the point at its centre.

significance of these results can be illustrated by considering the highlighted squares. The square highlighted with horizontal shading is light green, so its value is 20–30. This means that 20–30% of the single coin finds in that area were of the sample series (illegible coins of the kingdom of Northumbria). The square highlighted with vertical shading is light blue. This corresponds to the value 0 on the key. That means that 0% of the coins found in that area were of the sample series. A final point to note is the areas in the background colour, such as that marked by diagonal shading. These are areas from which no coins are recorded in the EMC database.<sup>47</sup>

A second FCD analysis was undertaken on the ruler series of Anglian Northumbria for this project. Returning to our fictional example, king Wigred will help illustrate the difference between the two FCD analyses. A sample contains one coin of Wigred, one coin of another Northumbrian king, and eight other coins. The total FCD result for Wigred would be 10%, as before: his coinage forms 10% of the currency in use in the sample. However the Northumbrian FCD result for Wigred would be 50%, as his coinage was half of the total Northumbrian issued coinage in the sample.

Illustration 9 shows the Northumbrian FCD analysis for the same ‘series’ as Illustration 8, the illegible coins of Anglian Northumbria. The values of each square in the surface represent the proportion of the sample series in the corpus of Northumbrian-issued coins at each location. The square highlighted with horizontal shading is red. Comparison with the key shows that this square has a value of 75–100%. So whereas Illustration 8 shows that only 20-30% of the total corpus of single finds from this area were illegible Northumbrian coins, Illustration 9 shows that 75–100% of single finds of coins issued in Northumbria in this area were illegible. This map was chosen for illustrative purposes, and is clearly of more

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<sup>47</sup> That is, these differ from the areas light blue areas of the previous example. Squares whose value is 0% are areas where coins have been found, but none are of the sample series. Squares in the background colour represent areas where no coins *at all* have been recorded. However, it should be re-emphasised that the density of finds varies considerably, so a 0% value is not necessarily statistically significant.

relevance to the understanding of the contemporary data-set than the mediaeval economy: the high proportion of illegible coins in this area is a result of the anomalously high proportion of illegible coins that were recovered from the excavated site at Flixborough.

### Relative Coin-issuer Density (RCD) Analysis

A second form of regression-type analysis undertaken was developed during the course of this project. The Relative Coin-issuer Density (henceforth RCD) analysis compares the number of single coin-finds in the sample to the total number of single coin-finds known for that EMC ruler. So, returning to the fictional king Wigred, if there were three coins of Wigred in a sample, and ten coins of Wigred known in total, the RCD result for the sample would be 30%. The purpose of the RCD analysis is to gain an insight into the importance of the sample area in the total circulation of the ruler's coinage. If, for instance, the analysis showed that the sample area consistently produced about 10% of the coins of most rulers, but it produced a value of 50% for a particular ruler, something important may have been happening at that site in the reign of that particular ruler. Statistical significance is obviously an issue in the interpretation of these results: if, for example, only two coins of the ruler were known, for example, an RCD result of 50% from a site which generally produced RCD results around 10% would not be significant.

The RCD analysis for the illustrative sample of illegible coins is presented as Illustration 10. Consideration of the FCD analysis has identified illegible Northumbrian coins to have been particularly dominant in the currency of the area around Flixborough.<sup>48</sup> However, the RCD analysis allows a consideration of the importance of Flixborough in the 'circulation' of illegible coins. Although it is still prominent, with the square highlighted with horizontal shading showing a result in that area of 20–30%, other sites record values in a similar range: the area around

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<sup>48</sup> It can be seen that the coins from the single site at Flixborough are 'spread' over a relatively large geographical area. This is a result of the large sample circles, but the size suggested by Metcalf has been retained because it was considered that the 'soft focus' of the resulting maps is probably more justifiable for their interpretation than a more resolved focus (which would have been generated from the same results if a smaller sample area had been used), which might have given a superficially more 'accurate' appearance.

Whitby, for example, highlighted with diagonal shading, has RCD values of up to 20%, and an area in the Yorkshire Wolds also presents RCD values of up to 20%. Thus, while illegible coins dominate the currency of the Flixborough area, in particular the Northumbrian corpus, the Flixborough examples are not overwhelmingly dominant in the corpus of illegible coins. It could be said that illegibles were important to Flixborough, but Flixborough was not important to the illegibles.

### Group Analyses

During the interpretative analysis of the FCD and RCD maps for the individual ruler series, it became clear that it would be useful to have the results of particular combinations of coins for comparison. FCD and RCD analyses were therefore calculated for the following groups:

1. Silver coins issued by kings of Northumbria,
2. *Styca* coins issued by kings of Northumbria,
3. Coins issued by authorities outside Northumbria

These group analyses turned out to make some particularly fundamental points more clearly than individual ruler series maps, and they have proved useful to the interpretation of the numismatic results. This section will introduce some important points that must be considered before these groups can be interpreted in detail.

The same issue is the major consideration for the first two groups: the need to pick a ruler as the dividing point between the silver and copper-alloy *styca* coins. The use of copper-alloy as a coinage medium begins some time into the reign of King Eanred,<sup>49</sup> but the significant time that would have been needed to divide his coins for the purpose of the group analysis could not be justified given the small improvement it would have made to the final results. As the majority of Eanred's coins are brass, all coins issued in his name have been put in the '*styca*' group. While this mis-groups a small percentage of his coins, it does not have a major effect on the final results.

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<sup>49</sup> See discussion in 'The Coins of King Eanred: Economic Implications of the *Styca* Coins', p. 235 below.

The third group of coins is an unusual kind of category, including all coins in the EMC issued between 700 and 870 that were *not* minted in Northumbria. This is clearly not a homogenous group, and, although detailed discussion of these issues is beyond the scope of this study, it should be noted here that the overwhelming majority are dated to the early to mid eighth century, and may well represent coins circulating in Northumbria before Eadberht's exclusion of foreign coin from the region.<sup>50</sup>

### Presentation of the Results

The surfaces produced by each of the three statistical analyses (RCD, total and Northumbrian FCD), and the 'simple', that is, unanalysed, distribution of single coin-finds, have been presented over background map data. They are presented in two views, one showing the entire British coastline, with the land in green and the surrounding ocean in blue, and one with a closer view on the Deiran study region of this project.<sup>51</sup> The Deiran-view maps also show rivers and the surfaces show a number of placenames for reference. The simple distribution maps in Deira view show the number of coins found at each site.

The colours used to produce the surfaces were essentially a best guess as to what might make the maps easiest to read. The colours were picked to contrast as strongly as possible, and to change in a gradient so the relationship between squares with different values could be easily assessed. The difference between the ranges was not equal, and as it was anticipated there would be more interest in lower than higher values, the ranges at the lower end of the scale are smaller than the higher, with the last two colours, red and orange, covering a 25% range, while the first three cover just 1%. This was reflected in the colour scale, with the colours where the ranges are larger more different from each other than the colours where the ranges are smaller, so the difference could be seen to some extent visually. With hindsight, this choice of values was probably unhelpful as the analysis is not sensitive enough

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<sup>50</sup> See p. 223 below.

<sup>51</sup> See 'The Establishment of the Study Area', p. 53 above.

for the difference of one or two percentage points, particularly at the bottom end of the scale, to be significant, and interpretation was sometimes hindered by not enough sensitivity in the 'green' area, between 5 and 30%, where the scale used in this project employed ranges of 10%.<sup>52</sup> Nonetheless, even in this somewhat preliminary form, the discussions below indicate how much this technique has to offer the study of economic history.

All the analyses produced for this project are presented in the CD accompanying this thesis. These present the simple distribution of single finds and the total FCD, Northumbrian FCD and RCD results for each of the rulers discussed above, and the three 'groups' outlined in the previous section. As each map is presented in two views (showing the whole of Britain and the close-up of Deira), there are therefore eight maps in total for each coin-series, and a total of 198 [8 x (22 individual coin-series + 3 groups – the two 'Northumbrian' analyses of non-Northumbrian coins [see note 55 below, this chapter])] maps on the CD.

## Summary of Analyses

### Total FCD Analysis

**What is the form of the results?**

**A map, presenting the regression-type total FCD analysis as a surface over the coastline of Britain.**

**What do the surface values represent?**

**The relative importance of the coin-series, as a percentage of all single coin-finds made in that area.**

**What question does the map answer?**

**How important is this series of coins in the currency of this area between 700 and 870?**

### Northumbrian FCD Analysis

**What is the form of the results?**

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<sup>52</sup> The analyses might have proved even more useful if they had been re-run with ranges of perhaps 5% for the first six ranges, and 10% thereafter, although considerations of time prevented this within the current project.

**A map, presenting the regression-type total FCD analysis as a surface over the coastline of Britain.**

**What do the surface values represent?**

**The relative importance of the coin-series, as a percentage of all single finds of Northumbrian-issued coins in the area.**

**What question does the map answer?**

**How important is this series of coins relative to other Northumbrian-issued coinage in this area between 700 and 870?**

### **RCD Analysis**

**What is the form of the results?**

**A map, presenting the regression-type total FCD analysis as a surface over the coastline of Britain.**

**What do the surface values represent?**

**The relative importance of the finds in each area as a percentage of the total finds of this coin-series**

**What question does the map answer?**

**Where were the main circulation regions for this coin-series?**

### **Simple Distribution Maps**

**What do these maps show?**

**A simple presentation of the EMC coin findspot data, with coin-findspots indicated by different symbols depending on the number of single finds at that location; a 'location' on this map is a 1km (4-digit) Ordnance Survey grid reference.**

**What question does the map answer?**

**Where are coins found, and how many are found at each findspot?**

### ***Results: Economic Implications of Numismatic Analyses***

**Although the sections below contain some biographical information, many of these Northumbrian kings and archbishops are little more than names in the historical record. Some individuals are associated with traditional historical narratives, but**

after 731,<sup>53</sup> much of the historical record of Anglian Northumbria is only attested in much later mediaeval texts, whose authority is often beyond proof, and, on occasion, deeply questionable.<sup>54</sup> Complex historical analysis is necessary to engage with these texts, and their use for the history of Anglian and Anglo-Scandinavian Northumbria is a matter of considerable academic debate. Although some details which have become established as part of the ‘history’ of Anglian Northumbria are mentioned below, a detailed consideration of non-Northumbrian, or later mediaeval, texts, and the narrative they contain, is beyond the scope of this study

However, the coins themselves form a legitimate, contemporary, source for the history of the authorities in whose name they were issued. Numismatic evidence has been used before to suggest alternative frameworks for the poorly-documented eighth- and ninth-century history of Anglian Northumbria, but previous discussions have tended to focus around the kingdom’s problematic chronological framework, another issue beyond the direct scope of this project. However, the coins have evidence to offer about wider historical issues than chronology. Although the primary focus here is economic, rather than political, history, some new insights into the reigns of the more enigmatic kings of Northumbria emerge from the discussions below. A table presenting all the rulers listed in the EMC, the dates given there for their rule, and the number of their coins represented in the EMC is given as Illustration 11.

### Group Analyses

The group analyses are among the easiest maps produced within this project to interpret, and form a useful comparanda for the individual ruler coin-series maps, so all twenty-two of them (Illustrations 12–33) have been printed in the booklet of illustrations accompanying this project.<sup>55</sup> These group analyses are discussed first to provide a general context for the individual ruler analyses which follow.

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<sup>53</sup> The year in which Bede’s *Historia Ecclesiastica Gentis Anglorum* was completed.

<sup>54</sup> See discussion in D.N. Dumville, ‘Textual Archaeology and Northumbrian History Subsequent to Bede’, in Metcalf (ed.), *Coinage in Ninth-Century Northumbria*, pp. 43–55.

<sup>55</sup> That is, the four analyses [simple distribution, RCD, total and Northumbrian FCD analyses] in two views [full Britain-view and more detailed ‘Deira’-view] for each of the three groups (silver, *styca*,



## Use of Coin in Anglian Northumbria

Perhaps the most important and most striking result is Illustration 26, showing the total FCD analysis for 'non-Northumbrian coins'. South of the Humber, 'non-Northumbrian' coins (that is, in all probability, coins minted in individual local kingdoms) overwhelmingly dominate the currency in this study period.

Immediately south of the Humber, there is what appears to be a kind of overlap area, which will be discussed in more detail below.<sup>56</sup> North of the River Humber, however, in the realm of the Northumbrian kings, non-Northumbrian currency is always a minority element in the total circulation, albeit in some areas, particularly south-east Deira, a significant minority. Particularly as most of the foreign coins found in Northumbria can be dated to a few decades in the early to mid-eighth century, the message of Illustration 26 is clear: the vast majority of the coin used within Northumbria during the study period of this project was of Northumbrian issue. This conclusion is corroborated by Illustration 25, the total FCD analysis for Northumbrian *styca* coins, which shows the dominance of the high-volume copper-alloy *styca* coins north of the Humber.<sup>57</sup> It can also be seen in a comparison of Illustrations 24 and 25 and Illustrations 30 and 31: south of the river Humber, total and Northumbrian FCD analyses produce very different analyses, but north of the Humber, the results are almost identical.<sup>58</sup>

The re-minting of Northumbrian coin into local currency would undoubtedly have played a major part in restricting circulation of Northumbrian coinage outside the kingdom, in the same way as foreign coin was restricted within Northumbria. The widespread use of Northumbrian coin within the kingdom itself suggests that it was of considerable local economic importance. As has been emphasised in previous studies, 'commercial' use, that is, the use of coins as a means of exchange in transactions may have been one important function the coins performed, although

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Non-Northumbrian); the 'Northumbrian FCD' analyses for the non-Northumbrian coins are meaningless, so are not presented.

<sup>56</sup> See 'Northumbrian Influence in Lindsey', p. 217 below.

<sup>57</sup> The values are yellow – if the silver coins and those of Archbishop Wigmund were added, they would be in the red range, more closely paralleling Illustration 26.

<sup>58</sup> This true of all the individual ruler coin-series as well as these group analyses.

it is possible that there were others. Kings would be expected to have derived a revenue from the mint, but coinage may have played a more direct role in taxation if kings were able to demand their payments in coin, thus benefiting from their percentage of the minting profits as well as the tribute itself. Given the heavy influence of the Bible, and *Romanitas* in a more general sense, on life in early mediaeval Northumbria, the gospel instruction to ‘render unto Caesar what is Caesar’s’<sup>59</sup> might also have encouraged the use of coin for tributary payments.<sup>60</sup> There is no direct evidence for the role of coin in taxation, however, so this function must remain speculative at this stage.

Jurisdictional payments are another plausible use of coin,<sup>61</sup> and it is notable that most documentary references to coinage occur in this context, including in the eighth-century Northumbrian text, the *Dialogus* of Ecgberht.<sup>62</sup> The fact that these are both socially-motivated transactions does not make them economically unimportant: they may have been a considerable factor in the movement of wealth around the Anglian economy.

However, although Illustration 26 showed that local coinage was overwhelmingly dominant south of the Humber, Illustrations 12 and 13 prove Elizabeth Pirie’s point that Northumbrian coins did travel outside Northumbria. There are several possible reasons which could explain the loss of these coins. One is that they simply reflect the travel of Northumbrians to the areas where they were lost. However, it is hard to find a convincing explanation for why so many more Northumbrians were travelling so much more widely in southern Britain between 810 and 867 than were in the hundred years previously. Another important factor is that the Northumbrian coins minted between 810 and 867 had a considerably lower silver content than their eighth-century predecessors, so were perhaps less likely to be melted down for re-minting. Nonetheless, contrary to James Booth’s suggestion (in the quote above) that the *styca* coinage was an expression of Northumbria’s

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<sup>59</sup> Matt 22: 15-22

<sup>60</sup> See discussion in ‘King Aldfrith (685–704)’, p. 218 below.

<sup>61</sup> Which could have included inheritance payments, and so on, as well as fines to settle disputes.

<sup>62</sup> See ‘Ecgberht, *Dialogus*’, p. 47 above for an introduction to this text.

economic isolation,<sup>63</sup> *styca* coins were did travel outside Northumbria, perhaps even more than their silver predecessors.

The growth in distribution of Northumbrian coinage between the *styca* and silver issues may seem to reflect increasing Northumbrian trade abroad in the mid-ninth-century, but it could have other explanations, such as a lower level of reminting of low-silver coins, or the use of the coins for transactions between locals as well as with Northumbrian traders, as mediators of lower-value exchange (although it should be noted that the distribution of Northumbrian coins, essentially in Lindsey, Norfolk and the tip of east Kent, is considerably more limited than the distribution of contemporary pennies minted in southern England). What is clear, however, is that ninth-century Northumbria cannot be described as economically isolated in Britain, although these economic connections did not otherwise enter the historical record.

### **The Distribution of Single Finds of Northumbrian Coinage within Deira**

The first point to consider is the general evidence that has emerged from this project for the distribution of single-coin findspots. Illustrations 21 and 22, the Deira views of the RCD analysis for the single-finds of the silver and *styca* coins of Northumbria, indicate that this region follows the trend that has become apparent across England, that single finds are not evenly, or even patchily, distributed across the landscape, but are concentrated in particular locations which have become known as ‘productive sites’, a term better suited to metal-detectorists than archaeologists, as it refers only to the volume of metalwork and coins recovered from a site rather than its total finds assemblage, but which has nevertheless become widely used in discussions of this material. Mark Blackburn listed the principal productive sites known in 2003, and the Deiran sites he mentions: Cottam, two sites near Malton, South Newbald, Whitby and York, are clearly visible in the maps discussed below.<sup>64</sup>

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<sup>63</sup> P. 191.

<sup>64</sup> Blackburn, ‘Pattern of Coin Loss’, pp. 35–6.

The nature of these ‘productive’ sites has been the focus of much academic debate in recent years, with some authors suggesting that they represent a hitherto unknown category of archaeological sites. Cottam, Whitby and York have already featured in this report, and, while they all qualify as ‘productive’, in that a significant number of coins have been recovered from their locality, they have been seen to share little else apart from their location within Northumbria. This report would therefore follow Julian Richards’ position that ‘productive’ sites are best understood as archaeological sites discovered by metal detectorists.<sup>65</sup> The activities which led to the loss of the significant number of coins and metalwork with characterize the sites as ‘productive’ could have varied as much as any other early mediaeval sites; the thesis that ‘productive’ sites represent a cohesive category of early mediaeval site would have to posit similarities between the sites at Cottam and York that would be very hard to sustain in the face of the clear archaeological differences between these sites. Furthermore, Richards has illustrated in several publications that the density of metalwork finds actually varies considerably between ‘productive’ sites and the volume of coins recovered is more a function of the methods of recovery than the nature of the site.<sup>66</sup> Metal-detector survey of several fields, for instance, would produce more coins than archaeological excavation limited to a few tens of square metres. The ‘night-hawking’ of archaeological sites may have a significant impact on the amount of metalwork and coinage (as well as perhaps more catastrophic effects on the preservation of other archaeological features) from these sites if further excavations are undertaken in the future.

Previous studies have suggested that ‘productive’ sites should be seen as markets, and many, including that at South Newbald, have been associated with the sites of minster-churches.<sup>67</sup> As noted above, any attempt to assign a blanket function to any site which has produced a large amount of metalwork and coinage is likely to be undermined by the archaeological distinctiveness of the sites. However,

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<sup>65</sup> See J.D. Richards, ‘What’s so Special about “Productive Sites”? Middle Saxon Settlements in Northumbria’, *Anglo-Saxon Studies in Archaeology and History* 10 (1999): 71–80.

<sup>66</sup> For instance, Richards, ‘Wharram South Manor Evidence’, pp. 199–200.

<sup>67</sup> See above, p. 178 for a discussion of minsters.

the accidental loss of many single coins in particular, which cannot easily be seen as scrap, suggests that these sites, including Fishergate, South Newbald, and several sites on the Yorkshire Wolds may have all been places where coins were used. At least one aspect of their function is likely to have been related to this coin-use. A commercial function such as a market is a plausible suggestion, although this need not have been related to a 'minster'. However, coins may also have been exchanged, and therefore lost, in more socially embedded interactions, such as judicial or lordly courts. In all probability, several functions were combined in some sites. Additionally, these are likely to have changed over time, in response to dynamic social and economic circumstances. The interpretation of 'productive sites' is thus a complex issue, and most progress can probably be expected in detailed study of particular localities.

The dominance of productive sites over isolated finds, in the volume of coins recovered as single finds, particularly in the Yorkshire Wolds, may reflect a genuine concentration in coin usage at particular sites. However, it is possible that more modern factors could explain this concentration of coin-finds in a few particular sites. The low level of reporting of metal-detected finds may be a particular problem. There are obvious reasons why night-hawks, detecting on scheduled sites or without the landowner's agreement, would not report their finds in public. However, even the finds of legitimate metal-detectorists might not necessarily be available to the academic community. Until the PAS scheme was established in 1999,<sup>68</sup> there was no organised framework to receive such individual reports and preserve them in an accessible format. Even now, there is a need to raise awareness among metal-detectorists that *every* find, even common artefacts, or those in poor condition or worth very little,<sup>69</sup> is of academic significance; many finds are probably still not reported because their finders consider them unimportant.

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<sup>68</sup> See <http://www.finds.org.uk/background/history.php> for the history of the Portable Antiquities Scheme.

<sup>69</sup> A point of particular relevance to the *styca* coins, which have a quoted value of as little as £15 according to Elizabeth Pirie's 2002 price guide (published in Pirie, *An Illustrated Guide*).

It is not immediately obvious whether fuller reporting of finds will lead to the discovery of more 'productive sites', or start to produce a larger corpus of isolated single finds. The recording undertaken for the PAS offers the potential that these questions could be addressed some time in the future, and if a larger proportion of isolated single-finds did emerge, the techniques of regression analysis developed for this project could offer a sensitive way to examine such data for circulation and minting patterns.

The sheer volume of coins from the 'productive sites', perhaps most apparent in the simple distribution maps, Illustrations 15 and 16,<sup>70</sup> dwarfs the number of isolated single finds, and these sites are clearly visible in many of the individual coin-series maps. Nonetheless, the RCD analysis of the silver and *styca* group data, shown in Illustrations 21 and 22, may suggest that the circulation of *styca* coins was somewhat more widespread within Deira than Northumbrian silver coins, whose distribution is heavily focused on the productive site at South Newbald, with a important extension in the direction of York. This could suggest that the availability of a low-denomination coinage stimulated monetization in the Northumbrian economy.<sup>71</sup>

## **Northumbria Connections From Coin-Find Distributions**

### **Networks within Northumbria**

Although the dominance of productive sites precluded the identification of mint sites, as achieved by Metcalf for the series H *sceattas*,<sup>72</sup> the distribution of non-Northumbrian coins offers some indication of economic networks within the study region. John Naylor's analysis of trade emphasised the importance of rivers, as well as coastal areas and Roman roads, in the distribution of coins in Anglian Yorkshire,<sup>73</sup> and single finds made since the publication of his work further

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<sup>70</sup> Note that York in Illustration 16 has produced 5 coins, with a nearby site producing 51, not 551 (a decidedly anomalous result) as the map presentation might suggest.

<sup>71</sup> See p. 242 below.

<sup>72</sup> See p. 199 above.

<sup>73</sup> Naylor, *Archaeology of Trade*, p. 48.

reinforce his point. The internal networks within Northumbria can be seen in the simple distribution map of 'Non-Northumbrian' coins, shown in Illustration 17. The line of coins south east of York directly following the tributaries of the river Humber, is particularly clear; a plausible interpretation of this might be the loss of coins by foreign traders travelling along this river, and seems likely that it was navigable.<sup>74</sup> It seems York was connected to this riverine route, which fits with the importance of the river ports in the understanding of the history of that site. Naylor noted the particular importance of the Roman road linking York to the Humber estuary, and what could be construed as a line of coin finds follows this route, including the site at South Newbald, although there are fewer findspots in this region and considerably fewer foreign coins than might be expected have been recovered from the prolific site at South Newbald.<sup>75</sup>

However, the distribution map also suggests a concentration of foreign coins around Malton and Driffield.<sup>76</sup> Given the dating of the majority of foreign coins to the early- to mid-eighth century, this distribution may suggest that these sites were particularly important at that time. If the volume of foreign coins at Driffield could be related to the suggested royal estate (perhaps due to strong international connections), this might have implications for the interpretation of the Malton area in the early- to mid-eighth century.

Whitby abbey also emerges as a centre in which foreign coins were used. Its position on a natural harbour made it an obvious site for an east coast port, and its links with the Northumbrian royal family possibly increased its appeal. However, it may not be as unique as the map would suggest the eastern seaboard of Yorkshire is an area of coastal erosion, and a considerable proportion of the Anglian coastline will now lie well beyond the modern shoreline.

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<sup>74</sup> Although it does not appear on the map of rivers navigable in England before the era of canals in B. Palmer, 'The Hinterlands of Three Southern English Emporia: some Common Themes', in Pestell and Ulmschneider (eds.), *Markets in Early Medieval Europe*, p. 52.

<sup>75</sup> As can be seen in Illustration 29, introduced below.

<sup>76</sup> Although the number of 15 itself is probably an agglomeration as several unidentified productive sites are currently known 'near Malton'.

## East Anglia

The more widespread distribution of the *styca* coins is particularly evident in East Anglia. Illustrations 12 and 13, the simple distribution maps for the silver and *styca* coins, illustrate this clearly, but Illustrations 24 and 25, the total FCD analyses are perhaps even more striking, showing the significance of *styca* coins in the total currency in East Anglia reached significant levels, particularly in the north-eastern and central regions. It is possible, as discussed above in the general discussion of the more widespread use of the *styca* than the silver coinage, that these connections may have existed even before the ninth century, but only become visible in the *styca* issues.<sup>77</sup> Connections between regions in what was to become the Danelaw after the Viking conquests been the subject of considerable academic debate, but this result shows that economic links between Northumbria and East Anglia should be seen as beginning much earlier.

## Kent

Moving to the results for Kent, however, re-emphasises the importance of the eastern coastal routes for Northumbrian coin circulation. It is probably significant that the only site outside Northumbria where there is demonstrable continuity between the Northumbrian silver-based and *styca* coinages is in the area of eastern Kent highlighted in Illustrations 30 and 31. This region is still an important focus for cross-channel traffic, and it is likely that travellers across the English channel also used this route in mediaeval times. The continuity of finds of Northumbrian coins at this site might suggest a long-lived sailing route down the east coast by which Northumbrian ships reached Kent. However, even here, in a region where Northumbrian coins are likely to reflect international,<sup>78</sup> and probably Continental circulation, the *styca* coins dominate the silver in the Northumbrian assemblage: the

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<sup>77</sup> Although if so, it would perhaps be expected that there would be more similarity between the silver and *styca* results, as there in the figures discussed below for the region immediately south of the Humber.

<sup>78</sup> Whoever held its overlordship, Kent was demonstrably not part of the same nation as Northumbria in the eighth and ninth centuries.



*styca* analyses produce values mostly around 50-75% (the orange areas on the map), where the silver analyses are mostly in the 20-30% bracket. Re-minting of silver Northumbrian coins in southern England will have reduced the number of surviving coins in this region, but, nonetheless, the positive evidence of the *styca* distributions suggest that the Northumbrian economy might have been less isolated than it has traditionally been presented.

### Northumbrian Influence in Lindsey

Illustration 24, 25 and 26, the total FCD analyses for the silver and *styca* coins of Northumbria and the 'non-Northumbrian' group, show a noticeable area of overlap between the two regions in an arc immediately south of the river Humber. The simple distribution maps (Illustrations 12–14) show that this result is based on finds from several sites within the arc indicated, and on a relatively large number of coin finds. This would suggest a significant circulation of Northumbrian coin in this region, through both the silver and *styca* coinages of Northumbria.

Illustration 30 and 31 show the Northumbrian FCD analysis for the silver and *styca* Northumbrian coins. They suggest that there was no difference between the circulation of coinage in this region and in contemporary Northumbria; the river Humber is not visible as a boundary in any of these maps.

It may be significant that this area encompasses the northern half of the kingdom of Lindsey. The region may originally have been within the kingdom of Northumbria, but it appears to have passed into the Mercian sphere, although contact between Lindsey and Northumbria clearly continued.<sup>79</sup> From the evidence of these coin-distribution analyses, it seems that Northumbria retained significant economic influence in the region even into the era of the *styca* coinages in the ninth century.<sup>80</sup> It is unlikely that this extended to direct rule, however, as the composition of the currency in northern Lindsey, based essentially on southern

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<sup>79</sup> See S. Foot, 'The Kingdom of Lindsey', in A. Vince (ed.), *Pre-Viking Lindsey*, Lincoln Archaeological Studies 1 (1993), pp. 128–40 for a discussion of the history of Lindsey.

<sup>80</sup> *Styca* coins make up the majority of coins issued by Northumbrian kings.

broad-flan silver pennies, is noticeably distinct from that within Northumbria itself.<sup>81</sup>

The Deiran view of the total FCD analysis of *styca* coins in Illustration 28 shows how clearly the boundary between a background level of foreign coin at 10-20% and a majority level of ‘non-Northumbrian’ coin at 50-75% follows the river Humber. The importance of this river as a boundary is implicit in its use as the defining feature of initially the people, then the kingdom of ‘North – Humberia’.<sup>82</sup> It is striking, and perhaps a useful confirmation of the validity of this kind of statistical analysis, that this boundary, which is so strongly visible in the political history of the region, should be seen so clearly in these maps.

### Individual Ruler Coin-Series

The next section will consider the results achieved from the statistical analysis of the individual coin-series, in their numismatic and historical contexts.

#### King Aldfrith (685–704)

Aldfrith is one of the best documented kings of Anglian Deira, the illegitimate son of King Oswiu (brother of the martyred seventh-century King Oswald) by an Irish princess of the powerful Uí Néill dynasty. His career ran along somewhat parallel lines to the more famous scholar-king Alfred of Wessex, with a rather circuitous route to the throne, followed by a twenty-year reign during which he successfully kept the peace as well as taking a considerable interest in learning and religion.<sup>83</sup> He was renowned as a scholar in Ireland, and the breadth of his interests are

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<sup>81</sup> See M.A.S. Blackburn, ‘Coin Finds and Coin Circulation in Lindsey c 600–900’, in Vince (ed.), *Pre-Viking Lindsey*, pp. 80–90 for more discussion of the use of coin in Lindsey.

<sup>82</sup> See discussion in ‘The Establishment of the Study Area’, p. 53 above.

<sup>83</sup> Aldfrid even pre-empted Alfred’s famous distribution of the ‘books most necessary for all men to know’ (Keynes and Lapidge (eds.), *Alfred the Great*, p. 126), arranging for the circulation of the text of Adomnán’s *De Locis Sanctis* (HE v. 15).

demonstrated by his purchase of a book on cosmography from the abbot of Monkwearmouth-Jarrow.<sup>84</sup>

Aldfrith's scholarship is a particularly interesting context for the consideration of his coins. Twenty-one coins issued in his name are listed in the EMC, and they are a crucial source for his reign. Even their form is of historical significance: they are silver *sceattas*, of the primary phase of this coinage, and assigned to Series Y. Western Europe as a whole was moving from gold to silver as a coinage medium in the late seventh century: 685, the date of Aldfrith's accession, is the approximate date of this shift in both Francia and the English kingdoms. A small group of gold coins, known as *thrymsas*, is thought to have been issued in seventh-century Northumbria,<sup>85</sup> but those in the name of Aldfrith are the first in silver. The rapid adoption of the new coinage medium in Northumbria suggests that it was well connected to surrounding kingdoms. Aldfrith's Irish connections might have been expected to lead to a westerly focus in his international relations. However, he took a West Saxon bride, Cuthburh, the sister of Ine of Wessex,<sup>86</sup> and from his coinage would seem to have had an awareness of developments across the Channel, in the Frankish realm.

However, Aldfrith's coinage does not just imitate the *sceatta* form: the iconography of the coins, rather, suggests that their issue was a deliberately conceived expression of Northumbrian royal identity. No direct parallel has yet been found for the animal which decorates the obverse of the coins; it has been

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<sup>84</sup> See n. 23, '5: Consumption' above; it should be noted that the book is described as being of marvellous workmanship, so was probably a treasure as well as a text.

<sup>85</sup> There is no dating evidence inherent to the coins; they are dated by analogy with others from across northern Europe to the time of Aldfrith's predecessor, Ecgfrith. Booth comments, 'It is not impossible, that, like their Merovingian precursors, they represent a merchant's coinage rather than a regal issue.' (Booth, 'Northumbrian Coinage', p. 84).

<sup>86</sup> Although the marriage was not a success and Cuthburh retired to Barking Abbey, eventually founding her own house at Wimborne in 718. The marriage, perhaps tactfully, was not recorded in Bede but is noted in the ASC entry for 718. See M. Lapidge, 'Cuthburg', in Blair, Keynes, Lapidge and Scragg (eds.), *Blackwell Encyclopaedia of Anglo-Saxon England*, p. 133

suggested that it may have been some kind of Northumbrian national symbol.<sup>87</sup> However the inscription on their reverse is even more innovative: it is the first in England to name the king under whose authority the coin was issued. Thus, the coin-series that opens the study period of this project establishes the kingdom of Northumbria as a well-connected kingdom, ruled by a literate, indeed scholarly, king, who was able to issue coins as a badge of royal authority. The fact that the coins bear Aldfrith's name suggest that he is also likely to have profited in some way from their issue, although the coins give no direct indication of how. It is generally accepted that kings, as issuing authorities, received a proportion of the profits associated with minting. It is possible that this may have encouraged rulers to demand that tributary, and perhaps judicial and ecclesiastical payments, be made in coin, although there is no direct evidence that this was the case.

The international connections expressed in Aldfrith's decision to mint a silver *sceatta* coinage are reflected in the distribution of single finds of his coins: Illustration 34 shows the simple distribution map for Aldfrith's coins, and it is striking that there are more findspots of his coins south of the Humber than within Aldfrith's own Northumbrian realm. This map forms a striking contrast to Illustration 37, the distribution map for his successor, Eadberht. Although Illustration 35 presents 121 coins, in contrast with the 21 known for Aldfrith, Eadberht's coinage is much more focused on Deira and the region immediately south of the Humber discussed above.<sup>88</sup> Direct comparison of Aldfrith's coinage with Eadberht's coinage is problematic as the later coins are more likely to have been more affected by deliberate re-minting policies,<sup>89</sup> but the positive evidence presented in Illustration 34 is a testament to the circulation of Aldfrith's coinage outside Northumbria.

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<sup>87</sup> J. Booth, 'Sceattas in Northumbria', in D. Hill and D.M. Metcalf (eds.), *Sceattas in England and on the Continent*, BAR British Series 128 (1984), p. 71. Anna Gannon (Gannon, *Iconography*, pp. 125–7) interprets the animal as a lion and endorses the idea that it may have been a Northumbrian royal badge.

<sup>88</sup> 'Northumbrian Influence in Lindsey', p. 217.

<sup>89</sup> See discussion at p. 221 below.

The two East Anglian finds of Aldfrith's coins seen in Illustration 34 are probably significant, but it is hard to say exactly what they mean. Only one other silver Northumbrian coin is recorded from East Anglia, although, as noted above, many *stycas* seem to have circulated here. There is no particular record of Aldfrith's relations or interests with East Anglia, but these two coins may suggest that Northumbrian had already founded strong connections in the region by the end of the seventh century.

As single finds of Aldfrith's coins are mostly extremely remote from each other, the regression-type analyses are unable to offer much further insight. Illustration 37 presents the simple distribution map for comparison and Illustrations 38 and 39 the Deiran view of the Northumbrian and total FCD analyses. The surface values are blue north of the Humber showing that Aldfrith's coins formed very little of the total Northumbrian currency in this area; given the small number of coins involved (as seen in Illustration 37) this is hardly surprising. In Illustration 38, the three coins south of the Humber generate a surface in shades of green: while the Deiran blue shows that Aldfrith's coins are between 1 and 2% of the Northumbrian-issued currency within his kingdom, they are between 5 and 10% of the Northumbrian-issued currency where they are found south of the Humber. However, many factors will have played a part in the relative analyses presented in Illustrations 38 and 39. In particular, Northumbrian coins after Aldfrith's were much less likely to survive in southern England: the next demonstrable Northumbrian issue, Eadberht's, was of a finer silver medium than contemporary southern *sceattas*, so particularly vulnerable to re-melting, and after 760, the new penny-type coins issued in southern England were themselves much finer than the Northumbrian coins, and an obviously different shape.<sup>90</sup> In addition, Offa and his successors in southern England pursued a deliberate policy of excluding 'foreign coins' (notable Carolingian, but also Northumbrian) from circulation, just as the Carolingian kings excluded Anglo-Saxon and other coins from their currency. Aldfrith's relatively strong coin-distributions in southern England probably owe much to these factors, so there is little evidence for the relative importance of his coinage compared to other Northumbrian rulers in these results.

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<sup>90</sup> See discussion at p. 190 above.

### King Eadberht (737–758)

After the death of Aldfrith in 705, no coins have been proved to have been issued in Northumbria for over thirty years.<sup>91</sup> This succession of kings for these years is reasonably secure, and the lack of a royal coinage has been ascribed to their ‘political ineptitude’.<sup>92</sup> It is possible that Aldfrith’s issue may have been inspired by his personal scholarship: coinage appears within the gospels as a marker of *Romanitas* and worldly authority,<sup>93</sup> and if theological study can be accepted as a model for the kingship of Alfred of Wessex, there is no reason why a similar motivation may not have inspired the policies of the equally scholarly Aldfrith. It may be significant that the coinage was restored by Eadberht; little is known of his personal learning, but he was presented as close to his brother, Ecgberht, an apparently exemplary pontiff in Alcuin’s writings.<sup>94</sup> The close relationship between Eadberht and his brother finds numismatic expression in the coinage issued in their joint name. The model of the archbishop appearing with the king on joint issues was used in coins throughout the eighth century,<sup>95</sup> but it is possible that it may have originated from the close relationship between Eadberht and Ecgberht. In view of the much smaller volume of coinage bearing the archbishop’s name, it is possible that these coins were the result of a kind of benefice granted to the archbishops.<sup>96</sup>

Where the form of Aldfrith’s issues were a clear expression of Northumbria’s connections with southern Britain and Continental Europe, though, Eadberht’s coinage testifies to the kingdom’s economic independence. Mark

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<sup>91</sup> A secondary *sceatta* issue known as Series J, dated between 710 and 725, has been attributed by Michael Metcalf to York (D.M. Metcalf, *Thrymsas and Sceattas in the Ashmolean Museum, Oxford* (Oxford, 1994), 3: 341–67), although John Naylor (J.D. Naylor, ‘Mercian Hegemony and the Origins of Series J Sceattas: The Case for Lindsey’, *The British Numismatic Journal* 76 (2006): 159–70) has recently questioned this attribution, preferring a mint location in Lindsey.

<sup>92</sup> Pirie, *An Illustrated Guide*, p. 15.

<sup>93</sup> In Jesus’ command to ‘give unto Caesar what is Caesar’s, and to God what is God’s’: Matt 22: 15–22

<sup>94</sup> Alcuin, *York Poem*, pp. 100–1, lines 1277–1287.

<sup>95</sup> For examples, see Pirie, Pirie, *An Illustrated Guide*.

<sup>96</sup> See p. 61 above.

Blackburn's analysis of single coin-finds from Anglo-Saxon England shows a clear surge in finds from southern sites in the first forty years of the eighth century,<sup>97</sup> to levels that those sites where coin-use continued would not reach again for several hundred years.<sup>98</sup> However this was followed by a dramatic decline in the use of coin at sites across southern England. Eadberht's action in resuming a coinage in Northumbria at the very moment that southern kingdoms were about to almost abandon coinage is intriguing.

Eadberht reigned for a very similar length of time to Aldfrith,<sup>99</sup> but six times as many of his coins survive.<sup>100</sup> Part, at least, of this difference could be explained if Eadberht had implemented a recoinage of earlier *sceattas* present in Northumbria; he certainly seems to have restricted the circulation of foreign coins (southern and continental *sceattas*) within his realm. It is likely, in any case, that Eadberht appreciated the potential profit in issuing, and controlling, coins in his name. The appearance of the archiepiscopal coinage may corroborate this, as it could be interpreted as an exemption from the new tax granted to the prelate. The joint inscription of the archiepiscopal coins suggests that their function is more likely to be in these kind of terms than as a prestige issue for the prelate. At any rate, the archbishop is not being set on a level with the king as a coin-issuing authority: no archbishop of York until Eanbald II issues coins in his sole name, and his coinage is likely to be related to coinage reforms in the early ninth century.<sup>101</sup>

Eadberht has not traditionally been regarded as a particularly effective king. Although his reign was described in glowing terms by Alcuin,<sup>102</sup> this presentation has been dismissed as didactic exaggeration, and modern historians have been more reserved in their judgement, with a prosecution case including an apparent dynastic dispute which led to the arrest of the bishop of Lindisfarne, a papal letter accusing

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<sup>97</sup> Blackburn, 'Pattern of Coin Loss', p. 27 and p. 32, Figs 3.3 and 3.2.

<sup>98</sup> Blackburn, 'Pattern of Coin Loss', p. 33, fig 3.7.

<sup>99</sup> Eadberht ruled for 21 years, compared to Aldfrith's 19.

<sup>100</sup> See Illustration 11.

<sup>101</sup> See discussion of the 'moneyer's-name-reverse' typology, in 'Monetary Reform: the Second Reign of Æthelred I below, p. 229.

<sup>102</sup> N. 94, above, this chapter.

him and his brother of disreputable dealings with monastic property, and apparent military negligence in leaving his kingdom open to Mercian attack while he conducted a campaign against the Picts in 740.<sup>103</sup> Such infelicities could, however, be ascribed to many mediaeval kings, particularly those fortunate enough to enjoy twenty-year reigns. The numismatic record would suggest that Eadberht led a vigorous, dynamic government, and the circumstances of the end of his reign corroborate this impression of confidence: Eadberht resigned in 758 in favour of his son Oswulf, and took up monastic vows, eventually dying ten years later and being buried in York, with his brother, in the minster church. Like Offa of Mercia, his confidence in his son's succession turned out to be misplaced, for Oswulf died at the hands of his own household just a year after his succession, but, as with Offa, this need not diminish the vigour of Eadberht's own time as king.

The statistical analyses of Eadberht's reign offer further insights into the nature of coin usage. Illustration 40, the RCD analysis of Eadberht's coins, shows the importance of the Yorkshire Wolds area for the circulation of Eadberht's coins. Several productive sites are located in this area, and it is highlighted in the RCD analyses of many of Eadberht's successors. This clearly reflects the economic importance of the Yorkshire Wolds in the Anglian economy. However, the low level of finds from the west and north of Northumbria are highly significant given the low volume of metal detecting in these areas, and show Eadberht's ability to stimulate the use of his coinage across the whole area of his kingdom.

Illustration 41 shows the Northumbrian FCD analysis for single-finds of Eadberht's coins. It is notable that in the three places where his coins have been recovered in southern England, they are not the only Northumbrian coins to have been recovered at that findspot. As Illustration 30 shows, this is relatively unusual for Northumbrian coins, although given the small number of coins involved it is not clear evidence of a restriction in the international circulation of Eadberht's coins.

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<sup>103</sup> D. Rollason, 'Eadberht', in B. Harrison and H.C.G. Matthew (eds.), *Oxford Dictionary of National Biography, from the Earliest Times to the Year 2000* (Oxford, 2004).



### Later Northumbrian *Sceattas*

James Booth has observed that the Northumbrian coinage of the later eighth century was considerably more continuous than that of the early eighth century, with far more historically attested rulers represented by coin-finds.<sup>104</sup>

In the years between the establishment of continuous minting under Eadberht, and the Viking onslaught half a century later, every Northumbrian king who occupied the throne for more than a few months is known to have issued coins. And it is, of course, by no means certain that minting did not take place during the brief reigns of Oswulf and Osred, given the low rate of coin survival. The production of coin may therefore have been reasonably constant during this time.

### From Eadberht to Ælfwald I: AD 758 – 788

However, the regularity that Booth suggests hides a significant difference in coin production. Eadberht is represented by 121 single-finds for his 21 years in office, a rate of just under 6 coins for every year of his reign. His successors to 790, the date of Æthelred II's second accession (which seems to have marked a major reform of the Northumbrian coinage), are represented by a total of 33 single coin-finds,<sup>105</sup> a rate of just a single coin for each year they reigned. Silver coins were always vulnerable to re-melting for their metal content, and eighth-century coins perhaps particularly so due to the limited availability of silver in the ninth century. Nonetheless, particularly given the relatively high silver content of Eadberht's coins,<sup>106</sup> there is little reason to think that the coins of his successors would be particularly more vulnerable than his own.<sup>107</sup> As noted above, the particularly large

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<sup>104</sup> Booth, 'Northumbrian Coinage', pp. 86–7.

<sup>105</sup> 16 for Alhred, 5 for Æthelred I's first reign, and 12 for Ælfwald I. See n. 116 below, this chapter, for discussion of the modification of the EMC data for Æthelred I's first reign.

<sup>106</sup> See Booth, 'Northumbrian Coinage', p. 87 for discussion of various metallurgical analyses.

<sup>107</sup> The calculation of coin-finds per year of rule is somewhat speculative due to the small corpus of coins for each of these rulers but can currently be give as:

Alhred: 1.8 (16 coins in 9 years)

Æthelred I (first reign): 0.8 (4 coins in 5 years)

Ælfwald: 0.8 (10 coins in 12 years)

This could be taken to support the thesis that the coins of earlier eighth-century kings, more remote from the silver shortages of the ninth-century, are more likely to survive than those of Æthelred I's first reign and Ælfwald. The small corpus of finds currently known does not, at this stage, merit consideration of these 'coin-rates' as a serious challenge to the thesis that the rate of survival is

volume of Eadberht's coinage may be related to a re-minting of earlier *sceatta* coins, but the fact that his successors were apparently not willing or able to re-mint his coins into their own names suggest that there may have been a real reduction in the volume of coin issued in their reigns.

It was suggested above that, from his the distribution of single-finds of his coinage, Eadberht may have been a stronger king than has been generally recognised. If the ability to control a large currency is a sign of strength, the RCD analyses of Alhred, Æthelred I's first reign and Ælfwald I (given as Illustrations 42–4, with the simple distribution maps as Illustrations 45–7 for reference) may reflect the weakness of his successors. No coins are listed in the EMC from the reign of Eadberht's short-lived son Oswulf or his successor Æthelwald Moll, whose ancestry is unknown, but who may have been another member of Eadberht's family.<sup>108</sup> Alhred's succession in 796 marked a shift of power within Ida's dynasty, to the branch descending from his son Eadric. Although far fewer in number, the distribution of his coins is remarkably similar to Eadberht's, with the emphasis in eastern Deira, but a significant number of isolated finds (which appear as higher values in the surface due to the smaller total number of Alhred's coins) in the south Humber area, and the north and west of Northumbria.

It is possible, maybe even likely, that coins will one day be found in the name of Oswulf and a larger corpus in the name of Æthelwald Moll. However, a plausible interpretation of the current evidence is that Oswulf and Æthelwald Moll succeeded to the kingship on the basis of their dynastic pedigree rather than their

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fundamentally related to the volume of coins originally issued, but this is an issue that could be of importance in the future as more finds – of all the kings concerned – are reported.

<sup>108</sup> It is often noted that Æthelwald may have been 'Moll' referred to as a patrician of Eadberht in a papal letter to the king and archbishop Ecgberht (see for example, D. Rollason, in 'Oswulf' in Harrison and Matthew (eds.), *Dictionary of National Biography*), but it is generally thought that this meant he was not of royal blood. However, that letter was addressed to both the king *and* his brother Ecgberht: Bede's censure against unjust gifts of church property to family members in his letter to Ecgberht suggests that the most likely interpretation of Eadberht and Ecgberht's partisanship to Moll is that he was a relative of theirs. The fact that Moll's son also went on to rule Northumbria as Æthelred I is further suggestive that Moll himself may have been legitimately royal.

personal authority, and neither was ultimately able to dominate as Eadberht had done, allowing another branch of the family to mount, and ultimately sustain, a challenge for the kingship, as expressed in the career of Alhred. Like all the Northumbrian kings after Bede, Alhred has not been judged kindly in modern historical scholarship: civil unrest alluded to in a letter he sent to the missionary Anglo-Saxon bishop Lul, and the return of Liudger (another cleric who was called to the mission-field and eventually became bishop of Münster) to Frisia from a stay in York because of fears for his safety have characterized Alhred's reign as a time of political instability.<sup>109</sup> Alhred's reign apparently ended in his deposition by a council, and ultimate exile, and this has no doubt contributed to the impression of his ineffectiveness. However, his ultimate failure to retain power should not perhaps be taken as an assessment of his entire period in government. The letter he wrote to Lul was in joint name with his wife, Osgifu, who seems to have been a daughter of his murdered predecessor Oswulf. The mere fact that Alhred was sponsoring missionary work in Europe, and the diplomatic relationship he seems to have at least aspired to with Charlemagne, suggest that he might be taken more seriously as an authoritative ruler, albeit one who was ultimately unable to survive the turbulent swell of Northumbrian politics. His marriage to Osgifu, if she was indeed a daughter of Oswulf might be evidence of more sophisticated *Realpolitik*, aimed at neutralising the claims of descendants of Eadberht's line by producing children who re-joined the two dynastic branches.<sup>110</sup> If the failure of Eadberht's direct descendants to produce significant coinages can be interpreted as weakness, the distribution as well as volume of Alhred's coinage might suggest that he was stronger. The significantly smaller numbers of coin-finds which survive for each year of Alhred's reign, compared to Eadberht's (1.8, as against 5.7),<sup>111</sup> on the other hand, may be a function of a less secure personal authority, which perhaps ultimately led to his demise, although it could also have arisen if Eadberht had

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<sup>109</sup> See D. Rollason's discussion of Alhred in his entry for 'Oswulf' in Harrison and Matthew (eds.), *Dictionary of National Biography*.

<sup>110</sup> Two sons of Alhred were apparently lured out of sanctuary in York and murdered by his successor, Æthelred I, during his second reign (D. Rollason 'Oswulf', in Harrison and Matthew (eds.), *Dictionary of National Biography*), suggesting Æthelred found little merit in Alhred's plan to end the dynastic tensions in Northumbria.

<sup>111</sup> See n. 107 above, this chapter.

undertaken a recoinage of those coins previously in circulation while Alhred had not.

Alhred's successor as King of Northumbria was Æthelred I, apparently the son of Æthelwald Moll, and so, if the interpretation presented above is accepted,<sup>112</sup> a representative of the line of Eadberht. Little is known of his first reign, except the dates, 777–8, and that, like Alhred, he was ultimately deposed and driven into exile, apparently as a result of his involvement in the murder of three ealdormen. He was succeeded by Ælfwald I; if Æthelwald Moll and his son Æthelred I are accepted as relatives of Eadberht, Ælfwald I's accession would not have been a dynastic shift, as he was grandson to Eadberht through his ill-fated son Oswulf.

However Æthelred and Ælfwald's blood-ties to Eadberht, do not seem to have gifted them with his economic authority. Illustration 43 and 44 show their finds had a considerably more restricted distribution than either Eadberht's or Alhred's, and the limited distribution with an emphasis on the Wolds area is even more striking. The volume of their coinage was again more restricted than Alhred's had been, with the albeit limited corpus suggesting an output only half as large: both Æthelred I and Ælfwald I are represented by 0.8 single coin-finds for each year of their reign, compared to 1.8 for Alhred. Eadberht's dynasty had been restored, but its power, as represented in its coins, seems to have been far from secure.

It may be unsurprising, then, that Ælfwald I was succeeded by a representative of a rival dynasty, Osred II, son of Alhred;<sup>113</sup> no coins survive from Osred's short reign. The rival dynasties probably continued their struggle for power right until the end of the Anglian kingdom, although their genealogies are not recorded after Æthelred I. Certainly around the turn of the eighth century Eadberht's and Alhred's lines seem to have been powerful competitors, although Eadberht's progeny, perhaps with the advantage of a better established claim to the

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<sup>112</sup> See n. 108 above, this chapter.

<sup>113</sup> It is not known when Alhred died; it is perhaps safe to assume that by the time of Osred's succession, he was either dead or fully committed to a non-political life, perhaps unsurprisingly given the danger of a career in Northumbrian politics.

throne and commensurately greater support among the nobility, seem to have dominated the struggle politically, with more representatives succeeding to power. The greater scale and volume of Alhred's coin distribution though, relative to his Eadberht-line successors, might suggest that his branch of the dynasty was better able to consolidate their political power in economic terms until the monetary revolution of the 790s.

### Monetary Reform: the Second Reign of Æthelred I

Although there is little indication from the documentary record of a significant difference between the first and second reigns of Æthelred I, the inscriptions of the coins he issued is distinct between the two reigns, in a way which may have important economic implications. Coins attributed to Æthelred I's first reign follow the standard royal type established by Aldfrith, with the king's name on the obverse and the Northumbrian beast on the reverse. Those attributed to his second reign also present the king's name on the obverse, but the reverse follows the new form inspired by the coinages of southern England, and bears the moneyer's name. James Booth has somewhat played down the significance of this change, arguing that it may have been simply a more explicit version of moneyer's marks previously expressed in more subtle variations in coin-design of the coinage. Elizabeth Pirie, on the other hand, has insisted that this typological change is of the first importance, and created some controversy by using the term *styca* to refer to these moneyer's name coins, that is, drawing the distinction between *sceattas* and *stycas* in Northumbria on the basis of typology rather than metal content. However, as Booth has commented:<sup>114</sup>

the words *sceat* and *styca* are of no historical significance, since it is reasonably certain that the actual users of the coins called them all – whether silver or copper-alloy – ‘pennies’  
Booth's point is more profound than mere terminology: at its essence it highlights the fact that numismatic categorization of coinage is a modern construct, applied to historical artefacts to aid their interpretation in a modern context.

While Pirie's typological categorizations have not been used in this project,<sup>115</sup> her emphasis on the importance of the change from Northumbrian-beast

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<sup>114</sup> Booth, 'Northumbrian Coinage', p. 88

<sup>115</sup> See discussion in 'The Numismatic Historiography of Anglian Deira', p. 193 above.

to moneyer's-name on the reverse inscription is borne out by this analysis. In some ways the most striking evidence is in the simple numbers: there are 56 single-finds of moneyer's-name reverse coins, compared to just 5 of the Northumbrian-beast reverse.<sup>116</sup> Æthelred reigned for six years during his second period in office, compared to four in his first, so the discrepancy in volume is not merely a reflection of time in office.

Illustration 48 shows the simple distribution map for Æthelred I's moneyer's name issues. It is probably significant that the distribution of the coinage of Æthelred I's moneyer's name type is noticeably different to those of his predecessors: it is noticeably wider. The most striking difference is in Northumbria itself: the distribution expands significantly from the 'heartland' in the Yorkshire Wolds with significant, albeit lower, values from a 'northern arc' of locations, as indicated on Illustration 49.

The significance of these sites, and the sites to the west of the 'royal coinage heartland', however, is hard to interpret. Illustration 50 and 51 show the total and Northumbrian FCD analysis for Æthelred I's moneyer's name issues. The first point to make is that the values of these two surfaces differ only in Kent: within his own realm, Æthelred's coins completely dominated the currency. However, more detailed interpretation is less conclusive. The coins are fairly evenly distributed across eastern Deira, with fairly evenly blue values in this area. Outside this area the values are much higher, with green values around 20%, and even squares in the red 75-100% range. However, as with single-find of Northumbrian coinage south of the Humber, single finds in these areas are often unique recoveries from their find-spots, and usually isolated. The obvious interpretation: that Æthelred I made a

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<sup>116</sup> The only change made in this project to the data retrieved from the EMC occurs for the coins of Æthelred I. The economic analysis of the difference between the Northumbrian-beast and moneyer's name reverse is the same whenever the iconography changed but, as discussed above (n. 13, this chapter), it is usually accepted that coins in Æthelred's name with the moneyer's-name reverse belong to his second rather than his first reign. The 19 moneyer's-name coins listed in the EMC as belonging to his first reign have therefore been analysed with the 37 coins already attributed to his second reign, although the text of the discussion refers only to the reverse typology, not the first or second reign.

particularly significant economic impact in these areas during his second reign, and that his government was more effective in these areas than it was in the more traditional centres of Northumbrian rule, cannot therefore be accepted with confidence.

Æthelred I has been characterized as something of a tyrant in his second reign, with an excessive appetite for murdering dynastic rivals and a fitting death at the hands of his own ealdormen.<sup>117</sup> The historical sources for these events are late, and may be as unfair to Æthelred I as it has been suggested that they were to Eadberht and perhaps Alhred. The numismatic evidence suggests a vigorous and effective king, who, it has been proposed, successfully re-invigorated the Northumbrian coinage, which had been neglected in previous reigns. It is notable that the region immediately south of the Humber that featured in Eadberht's distribution analysis is not represented in Æthelred I's single-finds, which may suggest that this region had slipped from Northumbrian economic influence by this time.

It is possible that Æthelred's choice to retain the lower standard of fineness and older-style coin-flan may have been a deliberate policy to limit the circulation of his coins in southern England and continental Europe.<sup>118</sup> The form of the Northumbrian currency would certainly have had this effect, although the established policy of reminting in these areas may have left Northumbrian kings with little possibility of influencing the international circulation of their currency.

### Eardwulf and the Collapse of the Northumbrian Coinage

With Æthelred's successor, Eardwulf, the always late and difficult historical record of the kings of Northumbria completely expires. It may be particularly appropriate

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<sup>117</sup> See discussion in D. Rollason 'Oswulf', in Harrison and Matthew (eds.), *Dictionary of National Biography*.

<sup>118</sup> Although, as discussed elsewhere in this chapter (see, for example, p. 210 above), the low-silver, small-flan *styca* coins did travel outside Northumbria.

that its last gasp,<sup>119</sup> the details of the end of Eardwulf's reign, is completely contradictory: English sources suggest he was deposed in 806 or 808 and succeeded by an Ælfwald II who reigned for two years before the long reign of King Eanred, while the Frankish annals attest an otherwise unrecorded restoration of King Eardwulf by the Frankish king. Some commentators, in particular David Rollason, have suggested that this continental source be given primacy because of its contemporary and external witness.<sup>120</sup> This is not the place for a full discussion of these issues, but, this report will follow the EMC in rejecting the assignment of a second reign for Eardwulf: Frankish involvement in Northumbria, indeed English, affairs was certainly external, but it may have been far from impartial.<sup>121</sup> Charlemagne's involvement in the matter of Eardwulf's dispossession may have been important within Francia as an expression of imperial power, as could be argued for his intended letter and gift to Northumbria recorded in Alcuin's correspondence.<sup>122</sup> This does not mean, however, that his involvement actually had any real impact in northern England.

Eardwulf's coinage is notable largely by its absence. Only two coins are known, both single finds from the extreme east of Deira, as seen in Illustration 52. Particularly in the light of the large, successful coinage of Æthelred I's second reign, this could suggest that Eardwulf had difficulty establishing his authority. His successor, Ælfwald II, may have issued rather more coins, with nine single-finds known for his short, perhaps two-year, reign. The distribution of Ælfwald II's finds is also a little more 'normal', as seen in Illustration 53 and enjoyed rather more circulation in the Wolds 'heartland' of Northumbria, with a respectable five single-finds from the site at South Newbald, and two from York, although the extreme easterly distribution that characterized Eardwulf's distribution is still noticeable in two of Ælfwald's nine single-finds. Illustrations 54 and 55, the Northumbrian FCD

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<sup>119</sup> The northern annals embedded in the Anglo-Saxon Chronicle end in 806; see n. 100, '2: General Introduction' above.

<sup>120</sup> See discussion in D. Rollason 'Eardwulf', in Harrison and Matthew (eds.), *Dictionary of National Biography*.

<sup>121</sup> Stenton's discussion implies imperial Frankish ambitions in this episode, although he nonetheless seems to accept the Frankish account (Stenton, *Anglo-Saxon England*, pp. 94–5).

<sup>122</sup> Dümmler (ed.), *Epistolae*, pp. 33–4, translated in Alcuin, *Alcuin of York*, number 9.



analyses for Eardwulf and Ælfwald II show that these easterly sites are not new areas for the circulation of Northumbrian coins, as their two finds each in this region are evaluated with values of only around 1-2%. Illustration 56 and 57, the RCD analysis for Eardwulf and Ælfwald II show how important these finds are in the circulation of these kings' coins: the effect is particularly striking for Eardwulf, whose only two known finds are from this region, but the area also records values in the 20% range for Ælfwald II; not as high as the York, or South Newbald regions, certainly, but still significant for this area of Deira.

James Booth has suggested that Eardwulf's reign was characterized by a severe economic recession, precipitated by Viking activity in the late eighth-century, most famously represented in the documented 793 raid on Lindisfarne.<sup>123</sup> He reflected on this position in 2000:<sup>124</sup>

At present, however, there remains the stark contrast; this single survival from Eardwulf's twelve years of rule as against sixty-plus single finds from Æthelred I's second reign of seven years and more than half a dozen coins from Ælfwald II's less than two years. The conclusion – however tentative and provisional – must be that far fewer coins were struck in Eardwulf's reign than in those of the other two kings. The hypothesis of an economic collapse in the 790s, caused by Viking raids or by other less apparent factors, still offers the most plausible explanation of this startling discovery.

The numbers Booth presents can be compared with the current data presented in Illustration 11;<sup>125</sup> it can be seen that the distinction he draws remains as firm as ever. However, analysis of geographical distributions in this project has suggested that numismatic patterns in this period may be related to the political authority of a ruler as well as the economy of their kingdom.<sup>126</sup> The evidence of single find volumes cited by Booth certainly demands some dramatic explanation but political weakness might be a plausible alternative to the economic collapse Booth suggests. With only two coins of Eardwulf, this is hard to prove from numismatic analysis, but the fact that both have been recovered from one small area may support this case. It is notable that both bear the same moneyer's name (Cudheard).

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<sup>123</sup> J. Booth, 'Coinage and Northumbrian history: c. 790–c. 810', in Metcalf (ed.), *Coinage in Ninth-Century Northumbria*, pp. 57–89.

<sup>124</sup> Booth, 'Northumbrian Coinage', p. 87.

<sup>125</sup> The data used in this project was generated by searches of the EMC on 8<sup>th</sup> December 2006.

<sup>126</sup> Although see below, p. 243 for the suggestion that this did not apply in Northumbria after the mid-ninth-century.

The maps discussed above suggest that the reign of Ælfwald II may have brought about something of a revival in volume and distribution, with the productive site at South Newbald again dominating the RCD analysis, but the volume of 4 ½ single coin finds per year of reign for Ælfwald II is only half the 9 single finds per year of reign of Æthelred I's second reign, and their distribution is notably more restricted, not just to south-eastern Deira, but to just four individual find-spots within than region.

Historical sources give a little insight into Eardwulf's reign before they end in 806, and in 801 he is recorded as engaging in battle with Cenwulf of Mercia, not an obvious course of action if he were plagued by Viking attack. Rollason notes Eardwulf's involvement in dynastic unrest, but this is so common in Northumbria and other kingdoms in the period that it cannot be secure evidence of weak government. Eardwulf's limited coin production could be taken as a sign of political weakness. This would be an interesting context to the Frankish account, which could be taken as suggesting he effectively submitted to Charlemagne's imperial overlordship in an attempt to regain power in Northumbria. Given the harsh political environment that seems to have prevailed in the northern kingdom at this time, it was perhaps always unlikely such a strategy would be effective.

Ælfwald's coin-production was somewhat greater, both in terms of the volume and distribution of his coinage, although it was still considerably smaller than Æthelred's had been. The brevity of Ælfwald's reign, which post-Conquest authors put at just two years, may be indicative of limitations in his authority.<sup>127</sup> The fact that only one moneyer, Cudheard, is named on coins of both Eardwulf and Ælfwald II, in contrast to the five moneyers who minted for their predecessor,<sup>128</sup> may also be a testimony to their lack of ability to command widespread personal respect across the kingdom. A plausible interpretation of the reigns of Eardwulf and

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<sup>127</sup> Although it should be noted that there is little to substantiate these later dates and it is possible Ælfwald could have reigned for longer.

<sup>128</sup> See Pirie, *Coins of the Kingdom of Northumbria*, pp. 48–9 for a list of moneyers active in Anglian Northumbria.

Ælfwald II, then, is as an interlude of relatively weak government between the powerful king Æthelred I and his even more powerful successor, Eanred I.

### **The Coins of King Eanred: Economic Implications of the *Styca* Coins**

King Eanred is another of the growing list of under-rated kings of Anglian Northumbria. He does not even merit an individual entry in the Oxford Dictionary of National Biography, attracting only a couple of comments on the dates of his rule in the entry for his interesting, but perhaps incompetent, predecessor Eardwulf. However, the considerable corpus of numismatic evidence offers eloquent, and somewhat detailed, testimony on Eanred's government, which, in several respects, demands a fundamental reconsideration of his reign. It is a little surprising that Eanred has not attracted such attention already; a reign of twenty or thirty years is generally an indication of at least general competence in any early mediaeval king, and arguably considerably more than average ability in fractious Northumbria. Absolute dates are necessary for the database framework of the EMC to function, and the dates of 810 to 840 used there represent the probable best current guess.<sup>129</sup> Rollason has suggested a reign from 830 to 854 for Eanred, on the basis of the Eanred 'penny', a unique, and extraordinary, find, most convincingly explained as a issue inspired by some kind of pious motive.<sup>130</sup> The Eanred penny has traditionally been dated to around 850 on stylistic grounds, but Elizabeth Pirie has recently re-evaluated this date, noting that the coin's stylistic affinities are with Mercian and West Saxon coins issued by rulers who acceded around 840 ( Berhtwulf of Mercia (840–52) and Æthelwulf of Wessex (c. 839–58)). Pirie's suggestion that these two rulers modelled their mainstream coins on Eanred's pious issue, and consequent redating of Eanred's coin to c. 830, seems strained, but is not entirely necessary to her case that the 'penny' can be easily dated within the traditional dates of Eanred's rule: Eanred would have had two years, between 839 and 841, to issue his 'penny' and still be using a West Saxon model. It could also be interpreted as a deathbed issue, or maybe even a posthumous legation, and have ended up in Wessex on its

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<sup>129</sup> See discussion in S. Keynes, 'Appendix: Rulers of the English, c 450–1066', in Blair, Keynes, Lapidge and Scragg (eds.), *Blackwell Encyclopaedia of Anglo-Saxon England*, pp. 502–4.

<sup>130</sup> E.J.E. Pirie, 'Eanred's Penny: a Northumbrian Enigma', *The Yorkshire Numismatist* 3 (1996): 65–7 for full discussion.

way to Rome or even a West Saxon religious centre. It cannot, therefore, be a sound basis for dating Eanred's period in office in Northumbria.

Several notable features of Eanred's coins add to the impression of governmental ability suggested by the length of his reign. Firstly, they bear the names of a considerable number of moneyers. Pirie's numismatic analysis of the coins has identified that these moneyers can be separated into two distinct groups, only one individual continuing to mint between the two groups. A detailed consideration of the economic implications of Pirie's detailed numismatic analysis, in particular the numerous die-links she identified, would have been extremely desirable in this project, but was precluded by exigencies of time, so Pirie's conclusions can only be used in their broadest sense: that Eanred's coins were minted by two sequential groups of moneyers, with a transition probably somewhere around 830.<sup>131</sup>

If the large number of moneyers (in each group) is suggestive of Eanred's personal authority over his coinage, the concerted change in minting personnel is hard to interpret in any other way. Excluding some catastrophic death-of-moneyers, which is perhaps not completely implausible,<sup>132</sup> this changeover must suggest some dispute between the moneyers and the king, and the security with which the new moneyers are established, in the reigns of both Eanred and his successors, Eanred's personal authority in ensuring the loyalty of his appointed moneyers.

However, the most striking characteristic of Eanred's coinage is the change, within his period in office, from silver to copper alloy for the coinage medium. The exact date of this has not yet been established due to the small number of reliable metallurgical analyses available: the traditional spectroscopic technique of X-ray fluorescence has been shown to give misleading results, as its beneficial aspect in not requiring any material to be removed from the coins has the drawback that only the surface of the flan, with its attendant complexities caused by corrosion, can be

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<sup>131</sup> See Booth, 'Northumbrian Coinage', p. 88 for a summary of Pirie's position.

<sup>132</sup> If moneyers were aristocrats (see discussion in 'Specialist Craft Workers', p. 119 above), a particularly disastrous battle may have decimated their ranks.

sampled. Neutron activation analysis (NAA) has produced more reliable results by determining the concentration of various metals in material removed by drilling small holes in the sampled coins. A major NAA study of the *styca* coinage published by G. R. Gilmore in 1986 is the most comprehensive metallurgical analysis undertaken on these coins, and, given its results, may be the last until an accurate non-destructive spectroscopic technique becomes available.<sup>133</sup> Forty-three coins of forty-five analysed were confirmed as authentic *stycas*,<sup>134</sup> but extensive statistical analysis of the results returned only ‘consistent inconsistency’ in every element under analysis,<sup>135</sup> apart from the zinc-in-brass ratio, which consistently emerged around 20%. This led Gilmore to suggest that the brass itself may therefore have been the valuable element of the coin, with the silver present only due to the recycling of old coins. He presented the following five stage development for the metallurgical history of the coinage medium of Northumbria, which, in the absence of further specialist research, forms the foundation of the metallurgical discussion in this project:<sup>136</sup>

1. High silver bronze coinage.<sup>137</sup> The information available at present indicates possible standards of around 40% and 20% silver.
2. A possible brief phase of high-silver brass coinage made to a definite standard prepared by adding silver to a brass.
3. The control of silver is abandoned and the coinage becomes brass with silver present only because old coinage is recycled by adding to new brass. Later small amounts of tin are added. This phase continues through the reigns of Æthelred and Redwulf.
4. Wulfhere and Osberht produce some brass coinage of poor quality
5. Osberht turns to bronze coinage.

It is unfortunate that Gilmore’s analyses were not able to establish dating for the earlier stages of his metallurgical history, but he does note that:<sup>138</sup>

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<sup>133</sup> G.R. Gilmore, ‘Metal Analysis of the Northumbrian Stycas: Review and Suggestions’, in Metcalf (ed.), *Coinage in Ninth-Century Northumbria*, pp. 159–73. Some metallurgical results were presented by Pirie (Pirie, *Coins of the Kingdom of Northumbria*, pp. 65–71), but, as she notes, they are hard to use as they are not consistent or comprehensive, and they have not been the subject of specialist discussion.

<sup>134</sup> Two further samples were identified as forgeries: Gilmore, ‘Metal Analysis’, pp. 159–60.

<sup>135</sup> *Ibid.*, p. 167.

<sup>136</sup> *Ibid.*, pp. 171–2.

<sup>137</sup> Bronze and brass are both alloys rather than pure elemental metals: bronze is an alloy of copper and tin, and brass an alloy of copper and zinc.

<sup>138</sup> Gilmore, ‘Metal Analysis’, p. 160.

early *stycas* [were] made of a silver/copper alloy with a substantial addition of tin<sup>139</sup> and later coins a silver containing brass with a generally lower level of tin. The changeover in alloy type occurred at some time during the reign of Eanred and is generally supposed to be a consequence of a silver shortage.

This 'changeover in alloy type' appears to be from 1 to 3 in Gilmore's list above as he notes that 'Although there may be scope for identifying a silver standard in the pre-zinc coinage no clear silver standards were evident in the zinc-containing coinage' so his stage 2 is presumably a theoretical bridge between 1 and 3, rather than one directly established in his analysis.<sup>140</sup> In fact, his suggestion of a 'brass standard' would seem to make such a stage unnecessary, if the silver standard of stage one were replaced directly by a 'brass standard' in stage 3; the addition of a coin medium deriving its value from both silver and brass could,<sup>141</sup> therefore be superfluous.

As discussed above, this study follows Booth's approach of applying the term *styca* to the brass coins which begin to be issued some time in Eanred's reign; it would be extremely convenient if the change in alloy could be associated with the change in moneyer-personnel identified by Pirie's study of die-links, but more metallurgical analysis would be needed to explore such an association.<sup>142</sup> In the meantime, it is notable that both developments suggest an issuing authority, presumably Eanred himself, responding decisively to changing circumstances.

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<sup>139</sup> See n. 137 above, this chapter, for the alloy definitions.

<sup>140</sup> Gilmore, 'Metal Analysis', p. 160.

<sup>141</sup> In metallurgical terms, it would be zinc, rather than brass, that gave the new alloy its value, as the copper needed to form the brass was already present in the bronze of the previous alloy; Gilmore, however, argues convincingly that the authorities issuing the coin and metalworkers smelting the medium would have been more likely to value brass. In any case elemental zinc would not, as he notes, have been available to Anglo-Saxon metalworkers, so it would perhaps be anachronistic to describe it as the 'value-determining' component of the alloy. Gilmore, 'Metal Analysis', p. 169.

<sup>142</sup> If the theory of a moneyer's revolt theory is preferred to the suggestion that a large number of them died around the same time, then the abandonment of the traditional silver-based medium could be suggested as a potential reason for the revolt.

Statistical analysis of the distribution of coins of individual moneyers working for Eanred might have added more to this discussion,<sup>143</sup> but even the general RCD and FCD analyses of Eanred's coins as a single series offers insights into his extraordinary coinage. Illustrations 58 and 59 present the Deiran views of the total and Northumbrian FCD analysis. The fact that they are almost identical highlights the small number of foreign coins that were circulating in Deira during Eanred's reign, emphasising his control over his coinage. The uniformity of mid-green across these surfaces, and indeed across Illustration 60, the Britain view of the Northumbrian FCD analysis, is another indication of Eanred's authority: it suggests that his coinage circulated freely across his entire realm, and indeed into East Anglia and Kent without the limitations, probably imposed by political opposition, discussed for his predecessors. This is seen again in Illustration 61, the Britain view of the RCD analysis of single-finds of Eanred's coins, where his coin circulation covers the whole of eastern Deira, the Whitby group almost joining up with the circulation areas to the south, and all the other known areas of Northumbrian influence. It cannot be assumed that these areas of influence to the west and north (Carlisle, Whithorn etc.) were as isolated as they appear in Illustration 61 because of very low metal detecting in these areas; most of the single coin-finds illustrated here were recovered from excavated sites.

### Northumbrian Rulers of the Mid-Ninth-Century

The final, and perhaps most striking, indicator of the strength of Eanred's kingship in Northumbria is the comparison with the numismatic history of the kingdom in the remaining decades before the Viking conquest. This spans the reigns of Æthelred II, Rædwulf and Osberht. The EMC dates for these kings, which follow the best guesses from the historical record as outlined in the Handbook of British Chronology, are given in Illustration 11. These are tremendously useful in that they allow the coins to be entered into the database which lies behind the EMC, but, as Dumville suggests, the security they imply is misleading due to the poor quality of the historical record for ninth-century Northumbria:<sup>144</sup>

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<sup>143</sup> Although Gilmore's analysis suggested there was considerable metallurgical variation across all these categories.

<sup>144</sup> Dumville, 'Textual Archaeology and Northumbrian History', p. 53

The historian can offer only the broadest dates and incomplete lists for ninth-century Northumbrian successions. The numismatist should not feel embarrassed or apologetic for trying to do better by the sole use of his proper source-materials.

Elizabeth Pirie has attempted such a numismatically based-reconstruction from her thorough analysis of die-links between Northumbrian *stycas*.<sup>145</sup> A detailed consideration of her analysis is beyond the scope of this project, and, as noted above, her conclusions have not been so generally accepted in specialist numismatic scholarship that they can be used without such consideration. In any case, the use of the EMC data as the primary source in this project means that the material had to be analysed in EMC terms, and the coins have therefore been treated as series of Æthelred II's first and second reign, interrupted for a brief time by Redwulf, and succeeded by Osberht.

There is another major coin-series from mid-ninth-century Northumbria. These appear in the EMC as 'Anonymous, mid 9<sup>th</sup>-century'. These are generally referred to as 'irregular' or 'unofficial' issues in numismatic scholarship on ninth-century Northumbrian coinage, suggesting them to be a kind of contemporary forgeries. They do, however, bear the names of kings, and sometimes were even produced using a die from a pair used to produce 'official' coins.<sup>146</sup> Illustration 11 further indicates the very large number of such coins which survive. Pirie has described these issues as a 'Civil War currency', commenting that:<sup>147</sup>

Both the quantity of such issues and the complicated patterns of die-linking count against these coins being merely contemporary forgeries. If the irregular coins were indeed meant to serve as tokens, in contrast to the authorized issues, the need for such currency could have arisen among army units serving in the field during a prolonged period of civil unrest...

The numismatic data offers further complications: although historical sources accord Osberht a twenty-year reign, both he and archbishop Wulfhere (acc. 854) are represented by many fewer coins than their predecessors, leading some commentators to suggest a very much lower level of minting in Northumbria in the years before the Viking conquest of the kingdom.

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<sup>145</sup> As presented in summary in Pirie, *An Illustrated Guide*.

<sup>146</sup> See n. 25 above, this chapter, for an introduction to coin production.

<sup>147</sup> Pirie, *An Illustrated Guide*, p. 67.



There is thus a multitude of different possible reconstructions of ninth-century history. If, as Dumville suggests, 'Hopeful manipulation of the twelfth-century literature serves little purpose',<sup>148</sup> then the numismatic data is the only source which can fill in the details of the historical framework through which it can be interpreted. However, the consideration of earlier Northumbrian kings above suggests that a simple attempt to reconstruct the number of years of a reign by the numbers of coins issued would be highly unreliable: the dynamism and authority of earlier kings may have had a far more important effect on their coin output than the length of their reigns.

Æthelred II is usually accorded a long reign, which fits well with the large number of coins known in his name: survival in office is a good indicator of powerful authority in Northumbria, as, it has been suggested above is the issue of a large (and widely distributed, as Æthelred II's will be seen to be) coinage. The usurpation of Rædwulf has perhaps received more historical attention than it deserves as it is only recorded in the *Flores Historiarum* of Roger of Wendover, and has been used to 'prove' the authority of that text for Northumbrian history. However, only thirteen single finds are known in his name, compared to 372 for Æthelred II, and Pirie's analysis of the 'irregular' coinage does little to prove her case that it was a 'civil war currency' due to fighting between Æthelred and Rædwulf.<sup>149</sup> Even Roger of Wendover only accords Rædwulf a reign of a few months. Rædwulf's reign is interesting, particularly as a case-study,<sup>150</sup> but it is unlikely to have been a major feature of ninth-century Northumbrian history.

Apart from Æthelred, historical sources grant one other mid-ninth-century Northumbrian king, Osberht, a lengthy reign. However, the other large coin-series of the mid-ninth century is not those which have been identified as Osberht's 'official' issues, but the 'irregular' mid-ninth-century series, now represented by

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<sup>148</sup> Dumville, 'Textual Archaeology and Northumbrian History', p. 53.

<sup>149</sup> Pirie, *An Illustrated Guide*, p. 67.

<sup>150</sup> See G.R. Gilmore and E.J.E. Pirie, 'Consistency of the Alloy of the Northumbrian Stycas: Evidence from Redwulf's Short Reign', in Metcalf (ed.), *Coinage in Ninth-Century Northumbria*, pp.

over two hundred single finds. Pirie's die-studies have shown these coins to be extensively die-linked into the regular series.

Sources from the court of Alfred of Wessex (871-899) describe a significant decrease in religious activity, and a consequent serious decline in literacy in southern Britain in the mid-ninth century. The Alfredian sources are corroborated by a striking decrease in manuscript survival in ninth-century England, which may owe something to destruction caused by Viking military activity, but is considered to be more related to a significant decrease in manuscript production, and scholarly activity in general. It is interesting that Alfred held back somewhat from applying his criticism to Northumbria, saying only that he supposed not many scholars beyond the Humber could understand divine service in Latin.<sup>151</sup> Any increased level of northern scholarship, however, would be only relative, and standards of learning in mid-ninth century Northumbria are likely to have been pretty dire.

In this context, the suggestion that the irregular series of coins may have been acceptable Northumbrian issues in the mid-ninth century may be more plausible. Nonetheless, contemporary Northumbrian kings did issue coins which are more obviously 'official', and it may be stretching credulity to believe that the same king would be content with the markedly lower-quality irregular issues. It is possible that the 'irregular' issues could have been a result of an increased demand for coinage due to a degree of monetization in the Northumbrian economy that had been stimulated by the availability of a lower-denomination currency.

The discussion above followed Booth's position (*contra* Pirie) that in adopting copper-alloy as a coinage medium Eanred was making a deliberate decision, responding to the increasing shortage of silver:<sup>152</sup>

...it is surely impossible to believe that coins with a covetably large proportion of silver could circulate freely alongside coins with virtually no silver at all – even if they were both called 'pennies'. Nor could the change from one to the other be the result of anything but a deliberate decision at the mint. Indeed the low survival rate of the earlier silver coins in

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175–85 for a study of the remarkable inconsistency of the *styca* alloy, even during Rædwulf's short reign.

<sup>151</sup> Keynes and Lapidge (eds.), *Alfred the Great*, p. 125

<sup>152</sup> Booth, 'Northumbrian Coinage', p. 88.

later hoards suggests that, as one would expect, they were systematically extracted from circulation; though, since the types are the same, discolouration would have served to disguise some of them.

It has been suggested that Eanred's decisiveness was a reflection of his political ability and authority. His choice of brass, perhaps even a brass standard, is indicative of this: the coins would have been aesthetically attractive, comparable to silver or even pale gold, and the alloy itself was probably respected due to the technological difficulty in making it.<sup>153</sup> Nonetheless, copper-alloy coins are inherently likely to have been worth less than coins with a higher silver content. Perhaps the large volume of coinage issued by Æthelred, and the considerable body of 'irregular' *stycas*, were a response by the Northumbrian kings to keep up with the demand (from which they were presumably deriving considerable profit) for these coins, which had begun to serve as a means of exchange for transactions between Northumbrian subjects, and potentially for transactions between Northumbrians and subjects of other kingdoms, such as East Anglia, whose links with Northumbria were already represented in the eighth century in the distribution of Ipswich-ware pottery.<sup>154</sup>

There is some metallurgical evidence that the demand for the *styca* coins caused a strain on their production capacity, in the development, noted in Gilmore's sequence quoted above, of a pure bronze coin-medium in 'official' issues of Osberht and the contemporary archbishop of York, Wulfhere.<sup>155</sup> One possible explanation could be that the zinc ore mines were becoming worked out, and Osberht, like Eanred before him, was attempting to institute a change in coin medium, presumably to secure his revenue. However, the bronze medium might have been less acceptable as a coin-alloy for the purposes of exchange: the fact that both can be described simply as 'copper-alloy' hides major aesthetic differences: bronze is a dark and somewhat dull alloy, and brass, in complete contrast, a light, shiny, gold colour.

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<sup>153</sup> See Gilmore, 'Metal Analysis', p. 169.

<sup>154</sup> See p. 150 above.

<sup>155</sup> See p. 237 above.

Further analysis is therefore necessary to understand the economic significance of the ‘irregular’ issues. The Hexham hoard would suggest that some, though by no means all, of the irregular coins are contemporary with Eanred and Æthelred II,<sup>156</sup> so whatever phenomenon these coins represent was of some duration, and they are clearly an important group for further study. More detailed consideration of the die-links established in Pirie’s catalogues would doubtless shed considerable light on these issues; as this has not been possible within this project, there is little further that can be said at this stage.

The coinages of Æthelred II have not been subject to detailed analysis in this project as initial discussions suggested that some of the results derived may be a result of data structures in the EMC,<sup>157</sup> and there was no time to follow up these issues within the research period of this project. Results for analyses for Rædwulf, Osberht and the anonymous mid-9<sup>th</sup> century coins, however, are presented below.

It was suggested above that Rædwulf’s brief usurpation may have been a rather less important feature of Northumbrian history than has sometime been implied. Illustration 62 presents the simple distribution map of Rædwulf’s coins, with Illustration 63 the RCD analysis and Illustration 64 the Northumbrian FCD analysis. Despite the low volume of his coinage, it can be seen to have a wide distribution across Britain. Hoard evidence indicates that his coins remained in circulation for many years, as indeed did Eanred’s and Æthelred II’s, which probably explains their widespread distribution. As Rædwulf himself was a guarantor of their value for only the short period of his reign (and perhaps not a reliable authority, even then), the distribution of single-finds of Rædwulf’s coins suggest that the low-value *stycas* did not rely on the status of their issuing authority for their usefulness.

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<sup>156</sup> They may also have continued past the death of Osberht, although the cessation of coinage and its association with the Scandinavian conquest of York have proved too large a subject to be considered within this project. For more discussion, see N. Brooks, ‘Epilogue’, in Metcalf (ed.), *Coinage in Ninth-Century Northumbria*, pp. 397–401.

<sup>157</sup> Mark Blackburn, pers. comm..

Illustrations 66–68 present the RCD and total and Northumbrian FCD analyses for the anonymous mid-9<sup>th</sup> century coins; the simple distribution map for this group is given for reference as Illustration 65. Illustration 66 illustrates that, while there are many minor circulation regions of these coins, the major circulation, as with all previous series, is in southern Deira, although it is notable that the focus of this area is now around York rather than the more usual focus to the east around South Newbald. The result of Illustration 68, the Northumbrian FCD analysis might seem somewhat surprising in view of the traditional interpretation of these coins as ‘irregular’ or ‘unofficial’ issues: not only are they widely used outside Northumbria, they are the largest single series in the Northumbrian corpus at almost all the sites at which they are found in southern England. The results presented in Illustration 67 are also quite striking. This shows that for several sites outside Deira, the anonymous mid-ninth century coins actually make up as much of the *total coin circulation* as they do within Northumbria.<sup>158</sup> This is not true in East Anglia, a region particularly rich in coin-finds,<sup>159</sup> but can be seen in a wide area immediately south of the river Humber, and for many sites in northern and western Britain. These results may suggest that the *styca* coins were used for low denomination transactions across Britain, although the discrepancy between Illustration 67 and 68 suggest that in East Anglia this might only have been true for transactions that involved Northumbrians themselves. Osberht’s coinage is similar to these anonymous coins, although, as shown in illustration 69, somewhat more limited.

### Archbishops

The coinages of the archbishops of York have already been discussed, in the general introduction to this report as evidence that the archbishops were clearly politically subordinate to the kings of York. The coins have not been analysed as a group because the large coinages of Ecgberht and Wigmund outnumber the single-finds of other archbishops by so much that a group map would have been completely dominated by the coins of these two prelates. However, the general point of the sub-ordination of the archiepiscopal to the royal coinages is clearly illustrated even by the tabular presentation of the single coin-finds in Illustration 11: archbishops

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<sup>158</sup> See ‘Focal Coin Density (FCD) analysis’, p. 201 above for a discussion of the FCD analysis.

<sup>159</sup> See Illustration 14.

always issue fewer coins than the kings under whom they presided, but the volumes of their coinage are, in all cases but one, clearly related to the volumes of contemporary royal coinage. The notable exception to this rule is Eanbald II, of whose coinage only eleven single finds are known despite the very high volume of single finds known of King Eanred, despite the fact that the two rulers overlapped for most of their periods in office. This could indicate that Eanred did not start to issue a large volume of coins until after the death of Archbishop Eanbald II.<sup>160</sup> However, Eanbald II is known to have had uneasy relations with at least one Northumbrian king, Eardwulf.<sup>161</sup> It is thus at least possible that the low volume of his coinage may reflect a continuation of this uneasy relationship between the archbishop of York and the incumbent of the Northumbrian throne. If a parallel with the uneasy relationship between Archbishop Jaenberht of Canterbury and Offa of Mercia is valid,<sup>162</sup> this tension may have been resolved on the archbishop's death by the appointment of a more favourable candidate from a royal perspective, and the healthy volume of 83 single finds known for Archbishop Wigmund may suggest that he was such a candidate.

The numismatic history of the archbishop's coins also follows that of the regal issues. For the silver *sceatta* coins, all known archiepiscopal issues are in the joint name of the king and archbishop, which, as discussed above, implies they may have been more of a tax-exemption of some kind than a genuine issue. The change in practice in later issues may be another indicator that, as Pirie suggests, the administrative changes that accompanied the introduction of the moneyer's-name reverse were real and wide-ranging. From this point, then, the archbishops of York issue coins in their own name, and often use distinct moneyers to produce them, although they sometimes share moneyers with the royal issues, and there is nothing (in, for example, the inscription or design of the archiepiscopal coins) to suggest that they were acting independently of royal approval; the low number of coins in the name of Eanbald II may emphasise how completely the archbishop's coins were

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<sup>160</sup> Pirie implies this in her dating of her Phase II Group A *stycas* to 837: Pirie, *An Illustrated Guide*, p. 34.

<sup>161</sup> Albeit Eardwulf, who issued few coins; see p. 64 above.

<sup>162</sup> See Brooks, *Church of Canterbury*, pp. 111–20 for discussion of Jænberht's career.

issued at the pleasure of the king under whose temporal authority, this project would suggest, they ruled their diocese.

The very small numbers of single-coin finds of coins issued in the name of Eanbald I and II and Wulfhere undermine the validity of the detailed statistical results on their coin-distributions undertaken for this project, and they can offer little apart from a general correlation to the distributions of their royal contemporaries. However, the analyses for Ecgberht and Wigmund are likely to have statistical significance, given the volume of their coinages presented in Illustration 11. Their results are printed in the illustrations accompanying this project, with Ecgberht's simple distribution map as Illustration 71 for reference, and his RCD and total and Northumbrian FCD analyses as Illustrations 72–4, and comparable maps for Wigmund's coins as Illustrations 75–8. Both of them show a striking similarity to the distributions of their royal contemporaries, Wigmund to the mid-ninth century rulers discussed in the previous section, and Ecgberht to the influential coinage of his brother Eadberht.

The similarity in the distributions of single-finds of archiepiscopal coins to contemporary royal issues suggests that the archbishop's coins were functioning in substantially the same way as the larger-volume royal coins; as Pirie suggests, their numismatic, and economic, significance is probably inseparable from them.<sup>163</sup> Their major testimony for this project is therefore, as discussed in the General Introduction, in testifying to the unity of the Northumbrian economy, with archbishops working to achieve their (presumably primarily religious) goals under the political – and here, crucially, economic – authority of the Northumbrian kings who exercised temporal rule over the kingdom.

## ***Conclusion***

The discussion in this chapter has ranged widely over many analyses, and it is perhaps regrettable that there was so little scope in this report to explore the implications of the many results presented in greater detail. The rate at which new

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<sup>163</sup> Pirie, *An Illustrated Guide*, p. 18.

finds are currently reported also means that the figures which formed the basis of the analyses will rapidly become obsolete. Nonetheless, analysis in this chapter has at least demonstrated the potential of statistical analysis of geographical coin-find data for historical study. In the case of Anglian Northumbria, interpretation of these analyses has suggested that there may be a relationship between the volume of a ruler's coinage and contemporary political as well as economic circumstances. This interpretation must be preliminary, and could be helpfully explored by further consideration of the contemporary English and European context. The copper-alloy *styca* coinages have been presented as more monetized, although again this interpretation should also be considered preliminary until it can be assessed in a more detailed numismatic context.



## **7: General Conclusion**

The research presented in this thesis has attempted to examine the history of Anglian Deira from a hitherto unexplored perspective, taking as its focus the economy, not just of one site, but of the entire region. The results of this investigation are inevitably preliminary: many other sources could bear witness to the economic context in which they were created, pottery, sculpture and metalwork being perhaps the most obvious that have barely even been touched upon in this project. Even the material which has been considered has more to offer; the historical sources in particular have been analyzed in very little depth. However, this research has made a significant contribution in demonstrating that evidence from several disciplines can be successfully combined to explore economic questions which have previously been studied almost entirely from documentary records. The thematic approach that has been used to present the results has allowed different kinds of data to be considered on equal terms, and this combination of evidence has shed at least some light on the factors that affected the ways in which the population of Anglian Deira spent their time and provided for their daily needs.

The first substantial point that has emerged from this study is the importance of regionalism. As discussed in the introduction, regionalism has come to be seen as significant for the study of history throughout early mediaeval Europe, and this increasing interest in regions was a key motivation in the choice of Deira as a study area for this project. However, although Deira was evidently recognized as a contemporary polity, the results presented here would suggest that the 'regions' which most influenced economic activity were geographically much smaller than this territory. Topography would obviously have been a major factor in the creation of these smaller economic 'regions', but social circumstances, including political allegiance, lordship and kinship would also have had a real impact. In Cipolla's terms, these were the 'mental, social and cultural' context of the people whose economic activity this thesis has investigated, and they must have played a fundamental role in determining what was done, why, by whom and for whom.

The chapter on production emphasised the economic primacy of the immediate locality, especially in the evidence for extensive subsistence production, even at sites which may have also specialised in a particular activity. However, it was suggested that zooarchaeological data indicated that settlements were also economically linked with other, perhaps usually local, communities. Whether this indicates networks of settlements which shared other connections, perhaps social (such as allegiance to a common lord), or whether it was a more formal integration of economic activity, perhaps in the context of a tenurial arrangement such as a multiple estate, was not clear from the sources examined. It is possible that these intensely local networks, rather than individual settlements, may be the most useful way to divide the landscape into economic micro-regions. Pioneering work such as Andrew Fleming's analysis of Swaledale may provide a way to reconstruct these micro-units from the palimpsest of the modern landscape.

Further consideration of production, however, suggested that these 'micro-regions' were not the only kind of economic networks in early mediaeval Deira. In particular, the specialist activities which were proposed imply the existence of more consumers than might be assumed to have been available in the immediate vicinity. The review of distribution substantiated this, presenting evidence of connections over much longer distances than these micro-regional ones, while emphasising that more locally-focussed economic activity would have taken up much more time, and involved many more people, than national and international distribution.

It was intended that the statistical analyses of single coin-find distributions presented in the final chapter might have offered more insight into these longer-range economic activities. However, interpretation of the results proved extremely complex, in large part due to the significant variations in coin production between individual rulers. Previous studies have interpreted this as a direct reflection of the contemporary economy; it was suggested in this project that coin production and use may also be related to the political strength of the issuing authority. Due in part to the large investment of time required to produce the statistical analyses themselves, full consideration of these issues proved ultimately beyond the scope of this project, but would be a particularly interesting area for further research.

Perhaps the most dramatic economic conclusion that has emerged from this research, however, is the suggestion of a considerable level of prosperity in Anglian Deira. This emerged particularly in the chapter on consumption, where the possibility that much elite investment may have been lost since the early mediaeval period was considered in some detail. Evidence that Northumbrian elites were able to direct substantial resources towards their religious interests was presented, and used to argue that the Northumbrian aristocracy may have been conspicuously wealthy. However, zooarchaeological evidence in particular was re-interpreted to suggest that this elite wealth was not collected at the expense of the poor. The absence of wild meat in non-elite diets was suggested to reflect the comfortable success of peasant farming, with subsistence easily provided for and no need to turn to wild resources.

It is suggested that this elite opulence and peasant comfort were a reflection of an essentially under-populated landscape. Apart from Fleming's detailed analysis of Swaledale, there is no direct evidence for this interpretation from within Deira, although a considerable drop in population is a phenomenon seen across Europe in the post-Roman period. The possibility that recycling of used objects might have formed a substantial source for craft-working materials, discussed in the distribution chapter, could perhaps be seen as supporting a lower population, or at least a reduced demand for resources, in the Anglian period.

The dynamism of the early mediaeval economy is expressed particularly clearly in Northumbria in the coin-distributions, but will be present, even if invisible, in every data source. If, as has been suggested, activity in the highly local micro-regions was organised essentially through personal relations, the economic situation will have changed at least every generation as the people involved changed, and probably much more frequently, as social affiliations will rarely have remained constant. The result is likely to have been an economy of considerably complexity. It would be unrealistic to expect the fragmentary evidence which has survived of economic activity in the period to present a complete, or even coherent, picture. However, the approach used in this study, combining the evidence of different sources while taking each on its own terms, has provided some answers to

new, economic, questions about the history of Anglian Northumbria, and, more generally, the nature and importance of regionalism in early mediaeval Europe.

## Abbreviations

<b>BAR</b>	British Archaeological Reports
<b>CBA</b>	Council for British Archaeology
<b>EHD</b>	English Historical Documents
<b>EMC</b>	Early Medieval Corpus of Coin Finds
<b>FCD</b>	Focal Density Analysis
<b>HE</b>	Historia Ecclesiastica Gentis Anglorum
<b>LW</b>	Life of Wilfrid
<b>PAS</b>	Portable Antiquities Scheme
<b>RCD</b>	Relative Coin Density
<b>York Poem</b>	The Bishops, Kings and Saints of York

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## Appendix Contents

The appendix on the CD included in Volume 1 of this thesis includes 2 items:

### ***Technical Description of Statistical analyses.doc***

A Microsoft Word document giving more detailed information on the process involved in the statistical analyses presented in the thesis, including a summary of the stages involved in creating the final map results, the formulae used in the analysis, illustrative examples of the analytical process and the programming code used to perform the analyses in Microsoft Excel.

### ***Directory: Complete Results of Numismatic Analyses***

A directory containing the complete results of the analyses, in the form of 198 maps presented as JPEG (.jpg) files.

**THESIS  
CONTAINS  
CD/DVD**