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EDITED BY C. GOSDEN, H. HAMEROW, P. DE JERSEY, AND G. LOCK

COMMUNITIES AND CONNECTIONS

Essays in Honour of Barry Cunliffe

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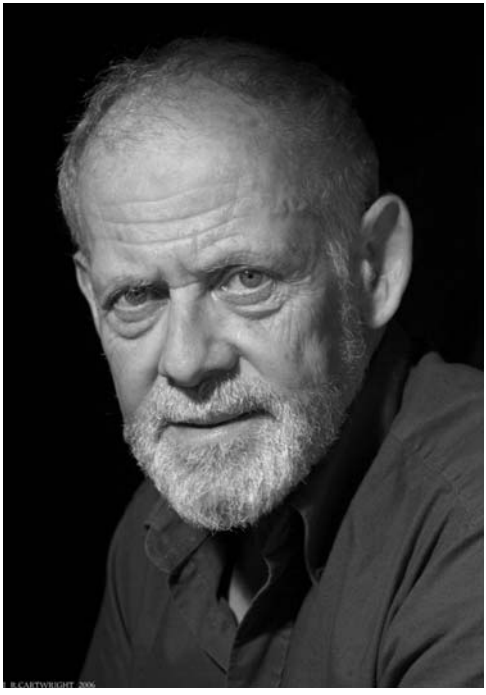

Barry Cunliffe KBE, Professor of European Archaeology, University of Oxford, 1972–2007

Communities and Connections: Essays in Honour of Barry Cunliffe

Edited by

CHRIS GOSDEN, HELENA HAMEROW, PHILIP DE JERSEY, AND GARY LOCK

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Editors' Foreword

British archaeology has been a considerable success story over the last forty years both as an academic discipline and as a subject with wide popular appeal. This success is naturally the result of the ideas and efforts of a large number of people, so that it is invidious in some ways to single out individuals. However, some individual contributions are so remarkable that the manner in which archaeology has developed in Britain would have been fundamentally different without their efforts. Barry Cunliffe belongs to that rare category of people whose activities have shaped the discipline.

Excavation is fundamental to archaeology both in providing raw material for research and in generating popular interest. Barry has carried out excavations—and published those excavations—on a scale unmatched in Britain. Mike Fulford in his Preface to this volume has considered these excavations in more detail. We would like here briefly to reflect upon the way in which Barry's immense organizational talents have been manifest in other areas, particularly within the University of Oxford, where his influence has been nothing short of profound.

When Barry took up the Chair of European Archaeology in 1972, the Institute of Archaeology (set up by Christopher Hawkes) was just over ten years old and was home to relatively small numbers of graduate students and no undergraduates. The Institute had links with that other centre of archaeology in Oxford, the Research Laboratory for Archaeology and the History of Art (set up in 1955). But these links were essentially personal, with few formal ties. The main coordinating body in Oxford was the Committee for Archaeology, set up in the late 1950s largely as a means of overseeing the postgraduate degrees within archaeology. The Committee was under the Faculty of Anthropology and Geography, unlike Classical Archaeology which was in the Faculty of Literae Humaniores. This administrative structure and the buildings on Beaumont Street which still house the Institute were what Barry inherited in 1972.

Unsurprisingly, for anyone who knows Barry, he devoted considerable energy to the creation of an efficient and modern infrastructure to support excavation and the analysis of finds. First, a conservation lab was created and equipped in the basement of the Institute and a drawing office was established. Along with these improved facilities came a greatly

expanded research programme. The Institute became the base for a number of long-term field projects, many of which were Barry's own, such as his excavations of the Roman baths at Bath and the Iron Age hillfort at Danebury. The building also housed a larger number of research students, working with Barry and others in the Institute. The range of topics pursued by this group is a testament to Barry's desire to support people in fields beyond those in which he was personally involved. Graduate teaching has in more recent years diversified into a series of separate, but linked, Masters courses characterized by maximum flexibility and minimal bureaucracy—hallmarks of Barry's own approach to teaching—enabling each student to tailor the course according to his or her interests. Range and flexibility also characterize the undergraduate degree in Archaeology and Anthropology which was established in 1992, in which students follow both archaeology and anthropology for the full three years, which is unusual compared with such degrees elsewhere. The Institute has now become the focus for the teaching of archaeology in Oxford. Barry has also helped steer the Committee for Archaeology (which has latterly become the School of Archaeology) through administrative and institutional changes both within archaeology and in the University as a whole, ensuring that the net effect of these changes has been to take relatively disparate aspects of archaeology—classical, scientific, prehistoric, and historical—and strengthen their commonalities.

Under Barry's Directorship, the Institute also generated several major publishing ventures. In 1982, in cooperation with Blackwells, the *Oxford Journal of Archaeology* was set up and has over the past twenty-five years become an international vehicle for publishing archaeology, both Classical and non-Classical, from the Palaeolithic to the Middle Ages. The Oxford University School of Archaeology Monograph series was set up in 1984 and has to date published sixty-five volumes of considerable scholarly importance. It is fitting that the team Barry brought together to make the Institute such a productive place has also been involved in producing this volume and we are very grateful to Lynda Smithson for her editorial assistance, Alison (Floss) Wilkins for her work on the illustrations and Ian Cartwright for ensuring the quality of the photographic images. Finally, we owe a special debt of gratitude to Emma Durham for her vital role in coordinating the editorial process and compiling the index. That they have managed to keep their work on this volume hidden from Barry's watchful gaze is truly an achievement.

This volume reflects some—though by no means all—of the range of connections and friendships Barry enjoys and is a token of the affection and esteem in which he is held by his friends and colleagues. All would say how much they have benefited from Barry's support, so freely given and so

often exercised in unobtrusive ways. The success of British archaeology is of course the result of the efforts of countless individuals, both amateurs and professionals. It is, nevertheless, extraordinary how many of them have been, and continue to be, inspired and encouraged by Barry Cunliffe, as author, teacher, excavator, and friend.

Chris Gosden, Helena Hamerow, Philip de Jersey, Gary Lock

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Preface

It is a great privilege, honour and delight to have the opportunity to preface this collection of essays which celebrate the extraordinary contribution that Professor Sir Barry Cunliffe has made to archaeology. Not surprisingly, it has proved a considerable challenge to the editors to commission a set of contributions that adequately reflects the sheer quantity of Barry's research, never mind its chronological, spatial, and thematic range. Chronologically Barry's work is focused in the first millennium BC and the first millennium AD, but with substantial contributions covering the second millennium AD, notably through his work at Portchester Castle, Hampshire which extends into the nineteenth century (1994). Spatially the range is western European laced with the Mediterranean and reflected both in wide-ranging syntheses and substantial fieldwork (fig. 0.1). On the one hand there is the European prehistorian, surveying the Iron Age (e.g. *Iron Age Communities in Britain*, 1st edn 1974; 4th edn 2005) and the worlds of the Celts (e.g. *The Ancient Celts*, 1997), and relations between the Roman and the 'barbarian' world (e.g. *Greeks, Romans and Barbarians; Spheres of Interaction*, 1988), on the other the excavator with a spread of major projects firmly focused in Wessex, but spreading around the Channel Islands and the Atlantic shores of Brittany to the Iberian peninsula and Andalucia and the Rioja. A major theme that pervades much of Barry's work is his interest in the relationships between the developed, urban Classical world of the Mediterranean and the societies to the north and west (e.g. *The Guadajoz Project* vol. 1, 1999). The sea, as expressed particularly by the connections it facilitates from around the British Isles and south along the Atlantic coastline to the Mediterranean, has been the significant medium by which those relations have been investigated in the quest to explain social change in the British and wider European Iron Age (e.g. *Facing the Ocean*, 2001; *The Extraordinary Voyage of Pytheas the Greek*, 2001). Exploring the tensions between indigenous factors, demographics for example, and external drivers of change, such as the manipulation of scarce resources and long distance trade, has been a consistent theme of his research.

Born on the south coast of England at Portsmouth, a major naval base with easy access to the Channel and the eastern Atlantic, it is not, perhaps, surprising that the sea has been a major link between a significant number of Barry's major excavations, and the backdrop of much of his wider writing. First, and foremost, is the great Roman villa at Fishbourne at the

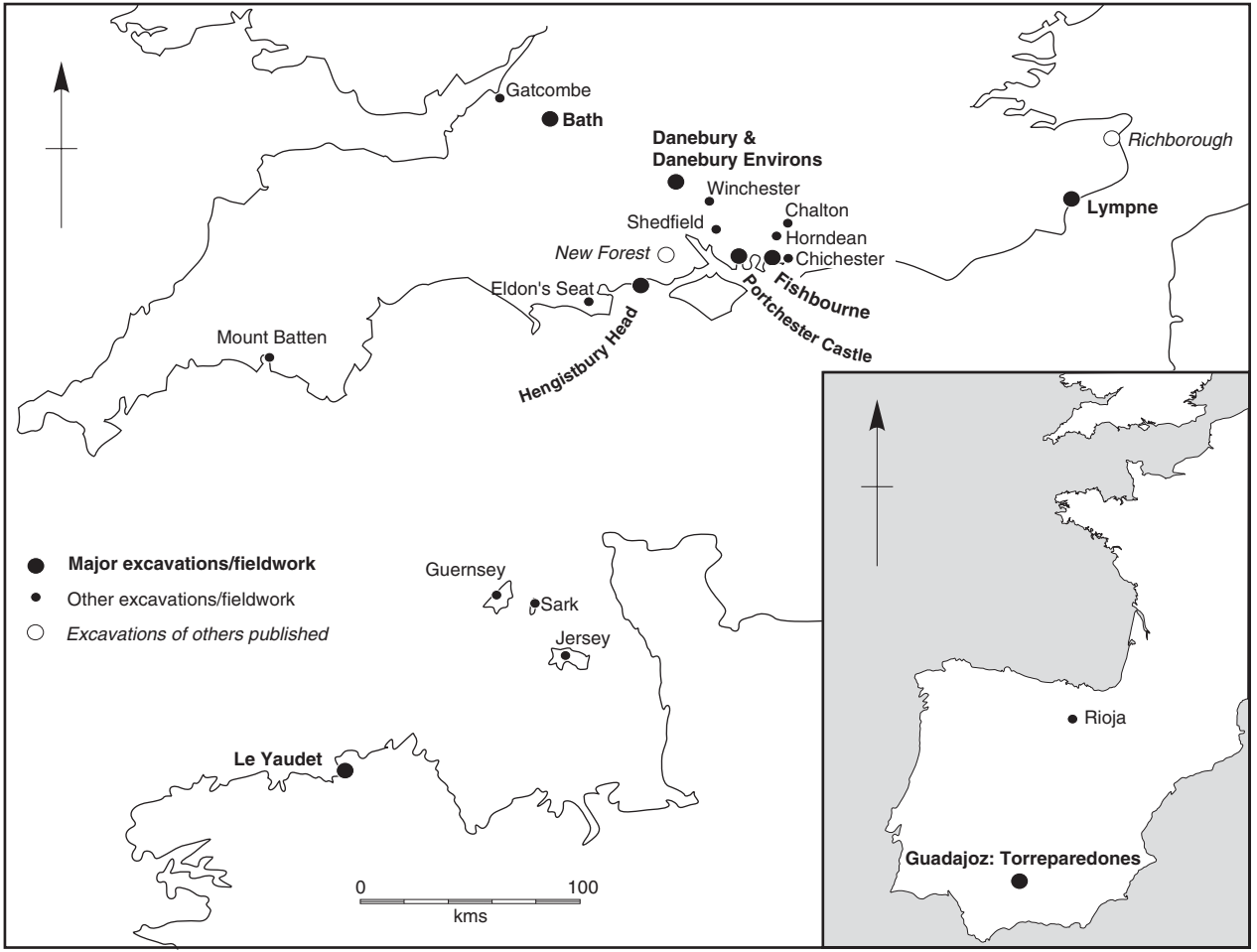

Fig. 0.1 Distribution map of Barry Cunliffe's fieldwork: M. Mathews

head of a tidal creek, a mile west of the centre of Chichester, excavated relatively early in his career (2 vols. 1971). The significance of this site is its scale, which compares well with early imperial villas at the heart of the empire, and its early date, the first phase of palatial building dating within a decade or so of the Claudian landings in the AD 50s, itself a remarkable indication of the level of confidence in investment in the newly conquered province before Boudicca. These aspects of the site have been somewhat overshadowed by speculation about ownership, an issue which has captured a wider imagination and generated a considerable secondary literature because of the possibility of a link with an individual, the *rex magnus*, or client king, Cogidubnus, but which cannot be resolved without written sources.

Of great importance for the understanding of late Roman coastal fortifications, the Saxon Shore forts, are the excavations undertaken at Portchester Castle at the head of Portsmouth Harbour and at Lympne in Kent (1980). The former were undertaken on a considerable scale (1975), building on Bushe-Fox's interwar work at Richborough Castle, Kent, whose publication Barry completed as *Richborough* V (1968), and providing for the first time important, quantified information on the nature of the occupation and its ebb and flow and transition into the early Anglo-Saxon period (1976). Although the Roman period was an important aspect of most of the other coastal settlements excavated by Barry, it is the characterization of the Iron Age occupation at Hengistbury Head, Dorset (also excavated by Bushe-Fox) which commands attention for the insight it has given into the development of regional trade within southern Britain and across the Channel to Armorica, as well as further afield to the Mediterranean world, particularly in first century BC (1987). In fact, capturing the full occupational history of these coastal settlements, from early prehistory (as at Hengistbury Head) through to the modern period (as at Portchester Castle), as far as it is reflected in the excavated samples or standing buildings, rather than the prioritization of a particular period, is a distinctive aspect of Barry's work. This interest in the *longue durée* of settlement is best exemplified by the long-term projects at Le Yaudet on the north coast of Brittany (2004; 2005) and at Portchester Castle, Hampshire, the latter published in five volumes between 1975 and 1994. With excavation beginning at Portchester in 1961, shortly after completing his first degree at Cambridge, the entire project lasted almost thirty-five years, a period in which Barry moved from Cambridge as a PhD student, to a lectureship at Bristol University, to the inaugural Chair of Archaeology at Southampton in 1966, and then on to the Chair of European Archaeology at Oxford in 1972.

As well as the long-term projects on coastal sites like Le Yaudet and Portchester there has been a continuing interest in disentangling the relations between coastal and island communities with a series of lesser-scale, multi-period excavations and surveys along the length of the English Channel. In England this includes Mount Batten, Plymouth, Devon (1988), while in the Channel Islands there has been a series of projects, including on Guernsey (1996), Jersey (1992), and, still ongoing, on Sark.

That single-minded dedication towards, and focus on a single site or a site and its environs, and the associated ability to maintain funding for both excavation and post-excavation, is well illustrated by the Danebury hillfort (Hampshire) project and its successor, the Danebury Environs project. Excavation began at Danebury in 1969 and the second—Roman—phase of the environs project is still ongoing, almost forty years on. Like Fishbourne, Danebury is another household word in British archaeology. The initial project was the very large area-excavation of a Wessex Iron Age hillfort (1984; 1991; 1995), the latter following earlier occupation and dating from the early fifth century BC to the beginning of the first century AD. Here the research built on Sir Mortimer Wheeler's achievements at Maiden Castle, Dorset in the 1930s and, with the newer archaeological sciences of radiocarbon dating, faunal and archaeobotanical analysis, systematically and extensively applied, a completely new characterization of one of these distinctive, landscape settlements of the chalkland of central southern England was achieved. No less impressive is the systematic investigation of several late prehistoric settlements, associated linear earthworks and field systems, in the surrounding landscape, the first Danebury Environs programme, which was published in eight volumes in 2000. Together with the ongoing, late Iron Age and Romano-British phase of the programme, which has focused on the investigation of a series of Romano-British villas, this north Hampshire landscape will be one of the most systematically investigated in Britain for the later prehistoric and Romano-British periods. Together these three phases of project have shed important new light on the character of settlement, the changing structure of society, the agricultural economy, technology, trade and exchange, and behaviour and belief, through later prehistory into the Roman period.

Though there is a tendency to classify an archaeologist as prehistorian, Romanist, Classical archaeologist, medievalist, landscape archaeologist, etc., this is hard to do in Barry's case. While his contribution to understanding prehistoric society in Britain and western Europe is very substantial, representing for many people the equivalent of two or three academic careers, so too is his career as Romanist, where major work on the Roman monumental complex of spa baths, temple to Sulis Minerva and its associated

Fig. 0.2 Barry Cunliffe and Sir Mortimer Wheeler at Fishbourne Roman Palace, 1964

precinct at Bath (*Aquae Sulis*) complements work described above at Fishbourne, the late Roman coastal forts of Lympne and Portchester, and the rural landscape of the Hampshire chalk. In the first instance Barry completed a project at Bath that had been begun by Sir Ian Richmond, but left unfinished at the time of his death in 1965. In *Roman Bath* (1969) he pulled together all the evidence of the surviving remains and the associated finds of temple, baths, other monumental buildings, etc. as well as initiating small-scale, new work. The need to undertake major structural work around the reservoir and the pump room led to new work in 1979-80 on the temple and precinct, and the reservoir which had not been completely excavated in the nineteenth century. Not only did this work provide invaluable new information about the plan and architecture of the temple, the precinct and the reservoir, but the latter produced an exceptionally rich harvest of votive finds including a major collection of curse tablets and over 12,000 coins, all of which shed fascinating and important new light on the behaviour and beliefs of Roman-period visitors to the spa complex.

One suspects, too, that a medievalist would not be too unhappy with a career which consisted mainly of a major piece of research on the twelfth-century and later castle (inner and outer baileys) at Portchester (1977; 1985), not to mention the preceding Anglo-Saxon occupation (1976).

Barry's fieldwork and publication record, somewhat summarily sketched out above, has all been achieved in the context of a full academic career during which he has also played a major part in the development of archaeology as a discipline in Britain, as symbolised by his terms as President of the Society of Antiquaries of London, of the Prehistoric Society, of the Council for British Archaeology, and as a Commissioner of English Heritage, not to mention his contribution to the development of his own University, Oxford, considered by the Editors in their preface.

Barry Cunliffe is truly a European archaeologist and the remarkable breadth of his career is celebrated by the essays in this book presented by colleagues, former students, associates, and friends. Like Barry's career they are firmly focused in European archaeology, most especially in the Iron Age of the British Isles and western Europe, but with a distinct Roman component and with yet further strands going south to the Mediterranean, to north Africa, Jordan, and the contrasting Greek worlds of Classical Athens and Byzantium. The Wessex landscapes in which Barry has worked and the material culture from his excavations have also inspired reflective essays on art and the transmission of ideas.

The publication of this *Festschrift* to coincide with Barry's retirement from the Chair of European Archaeology at Oxford represents a mere, momentary salute to Barry's immensely productive career. It is hard not to believe that there is much more to come, not least because retirement will allow a greater concentration on archaeology freed of other distractions.

University of Reading Michael Fulford
November 2006

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Part I

Travellers, Coastal Trade, and Exploration

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1

Sailing to the Britannic Isles: Some Mediterranean Perspectives on the Remote Northwest from the Sixth Century BC to the Seventh Century AD

John Wilkes

AN EXTRAORDINARY VOYAGE

If you were training to be an athlete you would not spend all your time doing exercises: you would also have to learn when and how to relax, for relaxation is generally regarded as one of the most important elements in physical training. To my mind it is equally important for scholars. When you have been doing a lot of serious reading, it is a good idea to give your mind a rest and so build up energy for another bout of hard labour. For this purpose the best sort of book to read is not merely one that is witty and entertaining but also has something interesting to say.[1]

This advice from the satirist Lucian, sometime itinerant lecturer and at other times a minor government official, seems as valid today as it was in the second century AD. For students engaged in the history and archaeology of Europe in the first millennia BC and AD, I can currently think of no better respite from the structures, models and databases, that are the currencies of modern research, than Barry Cunliffe's monograph on the explorer Pytheas published in 2001. Unencumbered with footnotes and with minimal bibliography, a text of barely 170 pages introduces one of the great mysteries of antiquity, the fantastic voyage of exploration by a citizen of Massalia, the Greek ancestor of modern Marseilles, to the British Isles and beyond to Iceland and the Arctic Circle and then in the direction of the Baltic (Cunliffe 2001). Nothing is known of Pytheas himself and the only reasonably certain fact we have concerning the voyage is that it was undertaken around the time of Alexander the Great (d. 323 BC). No less remarkable is that all we know of

[1] Part of the Preface to *The True History*, trans. P. Turner (1961): 249.

Pytheas' own account of his travels is preserved in later writers, who at the least denigrated his achievement and often branded him a downright liar with considerable vehemence, while still exploiting his detailed account of the lands and seas he saw. Despite this the value of his astronomical observations was recognized by some of the greatest minds of antiquity and as a result his place in the development of the geographical sciences is assured.

Cunliffe's reconstruction begins not with a dangerous and improbable circumnavigation of the Iberian peninsula but with a coastal voyage from his home to Narbonne followed by a crossing of southwest Gaul by the Aude-Gironde corridor via Carcasonne, Toulouse, and Bordeaux. It follows that all his subsequent travel by land and sea was made with the assistance of local communities. Given the extent of his reported travels this seems a more plausible reconstruction than the lone voyage of one or more Greek ships on the model of Jason and his crew of heroes in the Argo seeking the Golden Fleece. From the mouth of the Gironde a coastal voyage around the Brittany peninsula will have depended on the Veneti. A fix on the elevation of the sun was made on the line of Roscoff, or perhaps Le Yaudet (site of one of Cunliffe's excavations). From the north coast of Brittany Pytheas crossed the channel to reach Belerion, the Cornish peninsula, after perhaps making a landfall in the area of Plymouth Sound, perhaps even calling at the coastal station Mount Batten (another Cunliffe excavation). In Cornwall he observed the processing and export of tin, an account preserved by several extant writers. From there he sailed north to Mona (Anglesey) and Monopia (Man), where another measurement of the sun's elevation was made, and then through the North Channel and the Minch, where another fix on the sun was made between Lewis and the mainland. Now he sailed north through the Pentland Firth past the Orkneys, Shetland, and Faroes, to reach Iceland, the ancient Thule, and beyond that the Circle of the Bear (*Arktos*), the latitude beyond which the constellation of the Great Bear never disappears below the horizon.

After tin it seems that Pytheas may have been seeking the source of amber, the fossilized resin from the Baltic so valued in the Mediterranean for its magical and protective powers. He may have found this in Jutland—perhaps on Heligoland—after which he returned home via Britain, Britanny, and southwest France. Back home he composed an account of his travels and of his astronomical observations, some of which were made in his home city, titled *On the Ocean*. The disappearance of Pytheas' own account of Britain and the northwest is a major loss, all the more acute because of the fragments preserved in the later and unsympathetic sources. Around a century after the time of Pytheas there was certainly a copy of his work in the Royal Library of Alexandria, where it was used by the great Eratosthenes (*c.* 285–194 BC), founder of scientific geography. He accepted and incorporated the measurements made by the Massaliot for

his estimate of the length of the northern areas of the inhabited world. Later his calculation using the gnomon that placed Massalia and Byzantium on the same latitude was accepted by the Rhodian astronomer Hipparchus. He drew on the observations of the Babylonians although his treatise on geography, known from citations by the geographer Strabo, was devised as a polemic against the *Geography* of Eratosthenes.[2]

There are hints that the reputation of Pytheas was already being questioned within a generation, when an aside by a Dicaearchus, a pupil of Aristotle, implies already a measure of distrust. At the same time it seems that he was respected by the Sicilian historian Timaeus (*c.* 350–260 BC), whose work was attacked by the Achaean historian Polybius, chronicler of Rome's rise to power over the Mediterranean in the late third and early second centuries BC. The latter's venomous attack on Pytheas appears in Book 34 of his great history (the passage is preserved by Strabo),[3] concerned with geographical topics and apparently a later addition composed following extensive travels to inspect historic locations. He exhibits the open prejudice of an educated (self-styled) gentleman towards one who earned his living by trade. Polybius more than once draws a clear distinction between genuine scientific inquiry and the false and often sensational stories peddled by merchants that never bear scrutiny. Polybius enjoyed a high reputation in the leading circles of his adopted home Rome, to which he had originally been deported as a hostage in 168 BC, when his native Achaea had proved an unreliable ally in the third Macedonian war. Despite his own travels he could never challenge Pytheas as an authority on the northwest, and it seems that this was the cause of his resort to character assassination. Unfortunately the geographical achievement of Polybius was judged later to be significantly inferior, especially in the area of theory, to that of contemporaries such as Hipparchus (Walbank 1972: 52, 126).

[2] On the use of Pytheas by Eratosthenes see Fraser (1972): 537; and for the wider debt of Greek scientific geography to him, Thomson (1948): 206–7.

[3] Strabo II. iv. 1: 'Polybius, in his account of the geography of Europe, says he passes over the ancient geographers but examines the men who criticise them, namely Dicaearchus, and Eratosthenes, who has written the most recent treatise on geography; and Pytheas, by whom many have been misled; for after asserting that he travelled over the whole of Britain that was accessible Pytheas reported that the coast-line of the island was more than forty thousand stadia, and added his story about Thule and about those regions in which there was no longer either land properly so-called, or sea, or air, but a kind of substance concreted from all these elements, resembling a sea-lung—a thing in which, he says, the earth, the sea, and all the elements are held in suspension; and this is a sort of bond to hold all together, which you can neither walk or sail upon . . . 2: Now Polybius says that, in the first place, it is incredible that a private individual—and a poor man too—could have travelled such distances by sea and by land; and that, though Eratosthenes was wholly at a loss whether he should believe these stories, nevertheless he has believed Pytheas' account of Britain . . . (trans. H. L. Jones (1917), *Loeb Classical Library* vol. 1, pp. 399–400.)

THE ROMAN PEACE: THE DECLINE OF SCIENCE AND THE RISE OF FANTASY

No Greek is known to have followed Pytheas to Britain. While the traffic in tin from Britain to the Mediterranean prospered, the window he had opened on the inhabited lands of the remote northwest was shut by a rising tide of scepticism, along with a taste for tales of fabulous lands inhabited by strange creatures in the place of reasoned observation of natural phenomena using scientific method. It is all the more remarkable that this narrowing of the horizons was taking place when Roman armies were advancing far into Europe and annexing vast new territory to the Roman empire. The widespread disbelief in Pytheas' account of inhabitable lands in remote northern latitudes appears to stem directly from a continuing ignorance of the Gulf Stream and its effects. Even today, a modern authority of ancient geography has observed, 'we ourselves do not always remember that Bergen is much less cold in winter than Belgrade, and that our island is on a level with Labrador and Kamchatka' (Thomson 1946: 151).

Julius Caesar's account of his two expeditions into Britain in 55 and 54 BC is embellished with a set-piece excursus on the island and its peoples that is now judged to be authentic rather than a later interpolation. Yet there is little that is new (though his dimensions of the island are an improvement on those of Pytheas) and little in the way of vivid detail that appears to derive from his first-hand acquaintance with southeast Britain and its people. The geographer Strabo came from the city of Amaseia on the north coast of Asia Minor and is not known to have travelled farther west than Rome. All of his account of the northwest is derived from earlier writers, many of whom he quotes by name, including Pytheas. His account of the geography of Britain and Ireland is both muddled and inaccurate because he rejected outright the observations of Pytheas. He describes the Tin Islands as a group of ten islands in the latitude of Britain, whose inhabitants wear long black cloaks and stride about with sticks in the manner of tragic Furies. While the poets of the age celebrated the extension of Roman fame and power to embrace the entire globe, student exercises included such topics as Caesar's prospects of conquering Britain, the nature of the Ocean, whether or not Britain was an island, and even how big it was. Such a mentality was a reflection of that which disdained the likes of Pytheas, even after a Roman emperor had personally invaded the island and claimed for himself the subjugation of its peoples (Thomson 1948:193–6).

During the first two centuries of Roman rule, two emperors passed some time in Britain (Hadrian in AD 122, Severus in 208–11), while the writing tablets from Vindolanda have revealed the complexity of the literate

imperial bureaucracy in full working order at a remote military station in the northwest around the turn of the second century. At the same time the literary accounts of the island produced for the educated classes of the Mediterranean world contain less and less of the reality of conditions of life that will have been familiar in official circles and more of the preposterous fables traditionally attached to the far northwest. Even more sober authorities, such as the geographer Mela, the Elder Pliny and the historian Tacitus, have little interest in Britain. The increased knowledge of conditions in Britain following the Claudian conquest seems not to have percolated to literary circles. Even Tacitus made little use of the information he had obtained at first hand, from his father-in-law Agricola, governor of the province for seven years late in the first century. Some of this can be put down to the fact that most writings were designed to be published through public readings, where descriptive digressions on background detail would not have been appropriate. Moreover, the familiar modern concept of a fresh re-examination of the primary evidence evidently did not repay the effort in the matter of gaining credibility or authority for the writer. The point was made clearly by the Younger Pliny when he contemplated writing history: 'if the period is an old one and others have written about it, the research has been done and the labour will consist simply in collating it' (*Letters* v. 8, 12).[4]

In the second century a window was opened on the true understanding of Britain's geography by the large number of places and other features recorded on the Map of Claudius Ptolemy of Alexandria, though his principal purpose was to establish a coherent system of longitude and latitude. A little earlier Plutarch records his meeting with Demetrius of Tarsus returning from Britain from an inspection of deserted islands off the coast of Britain commissioned by the emperor (probably Domitian). He reported that many of these, probably those which lay off the west coast of Scotland, were named after spirits and heroes, and were regarded as sacred by the local population. One of these, we learn from Plutarch, served as the prison of the ancient god Cronos, a mild and pleasant place where the day lasted 23 hours for an entire month. Far beyond lay another inhabited land from which in each generation envoys were sent to pay their respects to Cronos and on some occasions to the Mediterranean world (Rivet and Smith 1979: 81 (Plutarch) and 103–47 (Ptolemy)). Tales of the Island of the Blessed beyond the setting sun had long circulated in the Greek world, though none appears to have reached the level of fantasy of Lucian's *True History* (part of the Preface is quoted above), in which the hero sails west of the Gibraltar straits to discover the limits of

[4] For a brief account of these and other writers on Britain during the empire see Rivet and Smith (1979): 37–39.

the Ocean. Driven by storms he reaches a wooded island where a river runs with wine. Then follow some amazing adventures, including time in the belly of a whale, a visit to the moon, a sea which suddenly freezes and melts and another of milk in which there is an island of cheese!

It was during the centuries when the Roman empire enjoyed great military success that the decline of interest in exploring and understanding the wider world became apparent. In the Greek world none appeared to carry forward the achievement of Hipparchus, with the notable exceptions of Marinus of Tyre and his follower Ptolemy. The rambling *Geography* of Strabo, dating from the later years of Augustus, includes many valuable citations from earlier works but his disdain for Pytheas ruined his account of the geography of Europe. A generation or so later the Elder Pliny assembled a mass of detail culled from earlier sources but offers little qualification or evaluation. One modern scholar comments that the thirty-seven books of the *Natural History* were most appreciated during the Middle Ages when they provided 'such a rich pasture of confused feeding', and on the period as a whole: 'The spirit of inquiry was flagging badly in a jaded civilization.', and 'The world craved for faith and revelation and several religions were in the field' (Thomson 1948: 324 (Pliny) and 348 (decline of inquiry)).

From the early third century, when an emperor and his court resided there for four years (AD 208–11), and the early fifth when it finally passed out of imperial control, Britain was fairly often in the news, as local usurpers or external threats disturbed the peace, but serious dislocation of the imperial system does not appear to have set in until the 'barbarian conspiracy' when a series of concerted attacks are reported for the year 367. Otherwise writers appear content to re-cycle information from the likes of Mela and Pliny. Pearls and jet are mentioned by the credulous Solinus, who appears never to have heard of Ptolemy, although there is no reference to British tin. Perhaps more to contemporary taste was the arrival of Odysseus in Caledonia, while Ireland continues to be located between Britain and Spain. There is a comment that the seas around Britain were warmer, a compensation for the lack of sunshine that hints at some awareness of the Gulf Stream, while the short and bright nights of northern Britain were known in the sixth century to Jordanes, an historian of Gothic descent who wrote at Constantinople. The shrunken horizons of the east Roman world towards the remote northwest are revealed in the work of Procopius, a contemporary and the leading chronicler of his age.[5] The Brittia of Procopius lies in the Ocean less than thirty miles off the

[5] *Gothic War* IV [Wars, Book VIII]. 20, 42–6: 'Now in this island of Brittia the men of ancient times built a long wall, cutting off a large part of it; and the climate and the soil and everything else is not alike on the two sides of it. For to the east of the wall, there is a salubrious air, changing with the seasons, being moderately warm in summer and cool in winter. And many

coast of the continent opposite the mouths of the Rhine and is possessed by three nations, the Frisians, the Angles and the Britons. In fact Procopius does know of a Britannia but this turns out to be Ireland and lies to the west 'almost on a line with the end of Spain'. By the end of the sixth century Christian writers had cast aside the scientific achievements of past centuries, to the extent revealed in the writings of Cosmas, an Alexandrian merchant and explorer. In place of the globe, the earth is a square, or rather oblong floor of a box or room, while the firmament resembles the vaulted roof of a bathroom. His bombastic tone suggests that he knew of the achievements of ancient science and that he was aware that some still believed them.[6]

ANOTHER EXTRAORDINARY VOYAGE

Antiquity takes its leave of Britain early in the seventh century, with a reference to the 'British metal'—which must surely be tin—by Stephanus of Alexandria (*c.* AD 610–41) in the second of his lectures 'On the making of gold with the help of God' (Penhallurick 1986: 10). A few years earlier came a circumstantial, if not substantial, account of what appears to have been a direct contact between Britain and the eastern Mediterranean involving a cargo of tin. In the early years of the seventh century the great metropolis of Alexandria continued to be racked by religious discord, against the background of a growing external threat from the Persians to the east. More than any other part of the empire Egypt had been the centre of the most fervent resistance to imperial attempts to impose upon it the dogma of orthodoxy, that of the Two Natures in the Incarnate Christ, in place of that of the Monophysite Single Nature.

In 602 the worthy emperor Maurice was deposed and murdered along with his family, and was replaced by the uneducated Phocas whose regime is portrayed as a bloody tyranny. The cities of the empire suffered near anarchy

peoples dwell there, living in the same fashion as other men, and the trees abound with fruits which ripen at the fitting season, and the corn-lands flourish as abundantly as any; furthermore, the land seems to display a genuine pride in an abundance of springs of water. But on the west side everything is the reverse of this, so that it is actually impossible for a man to survive there even a half-hour, but countless snakes and serpents and every other kind of wild creature occupy this area as their own. And, strangest of all, the inhabitants say that if any man crosses this wall and goes to the other side, he dies straightway, being quite unable to support the pestilential air of that region, and wild animals, likewise, which go there are instantly met and taken by death.' (Trans. H. B. Dewing (1928), *Loeb Classical Library* vol. 5, 265–7). The historian goes on to describe how local fishermen convey the spirits of the departed to this solitude, a service for which they are excused tribute by the Franks to whom they are subject.

[6] Thomson (1948): 357 (Solinus), 358 (Jordanes and Procopius), and 361 and 387 (Cosmas).

as a result of fighting between circus factions and, even worse, it is recorded that there was no effective response to the invasions of Roman territory by the armies of Sassanid Persians. Phocas was deposed in AD 610 by Heraclius who advanced on the capital from Carthage, while his kinsman Nicetas advanced from Cyrene to seize Alexandria and Egypt and remained there in the office of Prefect (see Butler 1978: 1–53). For the key post of Orthodox (Melkite or Imperial) Patriarch he chose a Cypriot named John who was also his adoptive brother, and moreover a layman who had been married and had fathered several children, though all his family had died before he ascended the throne of St Mark. In 611 the new Patriarch set out to promote the cause of orthodoxy among his turbulent congregation through sympathy and almost boundless generosity, for which he was later known as Saint John the Almsgiver. His actions were described in accounts composed by the contemporaries Sophronius and Moschus but a fuller account of his many exemplary deeds was composed by his fellow-Cypriot Leontius soon after AD 641.[7] The Life and its Supplement contains a long catalogue of the Saint's actions, in which he is revealed as a champion of the poor and oppressed, and reveals many vivid details of life at Alexandria during the last years of Byzantine Roman rule. The events recorded by Leontius in the Life (L) and Supplement (S) can be grouped under the following headings (numbering refers to chapters in the translation by Dawes and Baynes (1948)).

A. Strictness towards abuse of authority and feigned piety: bribes and 'fees' prohibited (L5); bogus relics rejected (L11); rich candidates for church office rejected (S13); firm action against malicious cleric (S14).

B. Help for victims of Persian invasions: for refugees from Syria (L6); relief supplies and captives ransomed following capture of Jerusalem (L9); refugee priests accepted following declaration of orthodoxy (L12); chapel constructed for relics from Jerusalem (L14)

C. Relief of famine and for poor in general: famine relief and lying-in hospital for women (L7); register of 7,500 poor to receive alms (S2); help after failure of Nile flood (S13); visit to homeless sleeping in vaults (S27)

D. Assistance to specific groups: priest appointed to protect ill-treated boys employed in papyrus-cutting at Lake Marea (L8); appeals heard by Patriarch to speed up justice (S5); help for a victim of burglary (S11); help to accused monk with provision of hostels for orphans (S24); gifts to an impoverished servant (S29); justice for wronged women not delayed (S31); ill-treated slaves granted refuge (S33)

[7] On the composition of the Lives see the introduction to the translation by Dawes and Baynes (1948): 195.

E. Curbs on household extravagance: expensive wine replaced with cheap for church services (L10); expensive coverlet sold for charity and then sold again when returned (s21); gives away expensive clothes, inspired by example of St Serapion (s23)

F. Intervention with imperial authorities: urged emperor to negotiate with Persians to relieve suffering (L13); demands standardization of weights and measures in the city (s3); church money seized by Prefect returned after repentance (s12); dispute with Prefect over market regulation resolved (s15); loans of cash to victims of tax-collectors following failure of Nile flood (s30)

G. Efforts to conciliate heretics: joy at the return of harmony among his flock (s6); saving the heretical 'lost sheep' (s32)

H. Assistance to those who failed in business, etc.: generosity even to fake and ungrateful beggars (s9, s35, s37); man who eloped to Constantinople with nun not judged harshly (s43); reward for pious shoemaker who took care of his less successful rival (s44).

Finally there are two incidents relating to long-distant sea voyages from Alexandria. On one occasion thirteen ships belonging to the church met violent storms in the Adriatic, causing their cargoes to be jettisoned. On their return the captains sought refuge in the church. After reflection John detected the sin of pride in his almsgiving and as a result the wealth of his church increased greatly (s28).

Ships and merchants figure prominently in some of the stories, and there is the clear impression that this wealthy church possessed a fleet of merchant ships and derived profits from their activities. One merchant is described as a 'Gaul-runner' (*gallodromos*), the sort of adventurer often suspected of fraud. The church also appears to have been much affected by the sinking of several ships or the loss of cargoes. The thirteen ships caught in the Adriatic storms had each a capacity of 10,000 *modii* (*modius* = *c.* 8.75 litres). There were also two 'gazelles' (*dorkones*), with capacities of 20,000 *modii* dispatched to Sicily for corn in a time of famine. The cargoes jettisoned in the Adriatic were said to include dry goods (*xerophorta*), clothing (*himatia*), silver plate (*argyros*) and other items of high value with a total value of 34 *centenaria* (3,400 lbs of gold).[8]

The second episode involving ships that illustrates the generosity of the Patriarch concerns a voyage as far as Britain, recorded by Leontius in his Supplement (s10):

There was a foreign captain who had fallen on evil days, he came to the blessed man and with many tears besought him to show mercy to him as he did to all others. So John directed that he should be given five pounds of gold. With these the captain went

[8] The background to this traffic is discussed by Mango (2001: 96–9).

and bought a cargo, and no sooner had he gone on board than straightway, as it chanced, he suffered shipwreck outside the Pharos, but he did not lose his ship. Then trusting to John's good will he again applied to him saying, 'Have mercy upon me as God had mercy upon the world.' The Patriarch said to him, 'Believe me, brother, if you had not mixed your remaining monies with the money of the Church, you would not have been shipwrecked. For you had them from an evil source and thus the money coming from a good source was lost with it.' However he gave fresh instructions that this time ten pounds of gold were to be given him and that he was not to mix other money with it. Again the captain bought a cargo and when he had sailed for one day a violent wind arose and he was hurled upon the land and lost everything, including the ship, and he and the crew barely escaped with their lives. After this from despair and destitution the captain decided to hang himself. But God, Who ever takes forethought for the salvation of men, revealed this to the most blessed Patriarch, who, hearing what had happened to the captain, sent him word to come to him without delay. The latter came before him with his head sprinkled with dust and his tunic torn and in disorder. When the Patriarch saw him in this guise he found fault with him and said, 'May the Lord be propitious unto you! Blessed be God! I believe His word that from today on you will not be wrecked again as long as you live. This disaster happened to you because you had acquired the ship, too, by unjust means'.

He immediately ordered that one of the ships belonging to the Holy Church of which he was head should be handed over to the captain, a swift sailer (*dorkon*) laden with twenty thousand bushels of corn. The captain, when he had received the ship, sailed away from Alexandria and on his return he made a solemn declaration to the following effect: 'We sailed for twenty days and nights, an owing to a violent wind we were unable to tell in what direction we were going either by the stars or by the coast. But the only thing we knew was that the steersman saw the Patriarch by his side holding the tiller and saying to him: "Fear not! You are sailing quite right." Then after the twentieth day we caught sight of the islands of Britain, and when we had landed we found a great famine raging there. Accordingly when we told the chief man of the town that we were laden with corn, he said: "God has brought you at the right moment. Choose as you wish, either one "nomisma" for each bushel of corn or a return cargo of tin". And we chose half of each.' Then the story goes on to tell of a matter which to those who are ignorant of God's free gifts is either hard to believe or quite incredible, but to those who have experienced His marvellous works it is both credible and acceptable. 'Then we set sail again', said the captain, 'and joyfully made once more for Alexandria, putting in on our way at Pentapolis.' The captain then took out some of the tin to sell—for he had an old business-friend who asked for some—and he gave him a bag of about fifty pounds. The latter, wishing to sample it to see if it was of good quality, poured some into a brazier and found that it was silver of the finest quality. He thought that the captain was tempting him, so carried the bag to him and said, 'May God forgive you! Have you ever found me deceiving that you tempt me by giving silver instead of tin?' The captain was dumbfounded by his words and replied: 'Believe me, I thought it was tin! But if He who turned water into wine has turned my tin into silver in answer to the Patriarch's prayers, that is nothing

strange. However, that you may be satisfied, come down to the ship with me and look at the rest of the mass from which I gave you some.' So they went and discovered that had been turned into the finest silver.

(Trans. Dawes and Baynes 1948: 216–18)

The biographer does not record the response of the Patriarch to his captain's account of the voyage. The purpose of dispatching a fast ship fully-laden with corn is not stated. Perhaps the safest course is to follow the majority and treat the account, at least as it stands, as if it were not an actual fiction but an embellishment of a simpler story with earlier tales of miraculous return from a voyage to the far west and beyond. If the miracle of changing tin into silver was a significant element in the tale, the story of a voyage to Britain will have been necessary to account for the origin of the tin that might have convinced some back in his home port, although there will have been others who might have suspected that the cargo of silver had a less wholesome origin. What matters is that the tale of a cargo of tin from Britain must have been credible in Alexandria at this period and furnishes more than a strong hint that maritime connections of some form existed between the greatest port of the eastern Mediterranean and Britain at the edge of the known world.

What has now emerged is some archaeological evidence for such a connection during the middle and latter part of the sixth century with the discovery of amphorae and dishes from the eastern Mediterranean, notable at Tintagel in west Cornwall. The former include wine jars from Greece and Asia Minor, oil jars from Asia Minor and a small quantity of African amphorae. The tableware includes red slipware from Asia Minor (Phocaean) and North Africa. As a recent discussion of this material has concluded, the absence of such material from mainland French sites appears to rule out an overland commerce, while the discovery of similar assemblages in Portugal must be testimony for a direct sea route from the Mediterranean, a suggestion confirmed by finds elsewhere in Britain and Ireland. 'The most convincing model is of eastern Mediterranean ships, with heavy cargoes of amphorae calling at an African port and taking on a small amount of further goods.'[9]

The historical context is surely Justinian's temporary re-conquest of the western Mediterranean, initiating a new pattern of commerce to bring a short-lived extension of eastern Mediterranean trade into the area. Wine and oil were for contemporaries symbols of the civilized Roman way of life, and for that were highly prized. What sustained the commerce is likely to have been the export of tin that, on the evidence of Stephanus (see above), was in

[9] Wooding (1996): 8; with reference to the survey of Fulford (1989).

seventh-century Alexandria known as the 'British metal'. The existence of such a link may have sufficed to give some credence to the captain's account, on oath apparently, in Alexandria. Sadly no such respect was accorded to the account of Pytheas of Massalia, whose achievement was to be all but extinguished by the malign jealousy of the lesser figures that first exploited and then derided his exploration of the British Isles and the remote northwest.

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2

Home Truths from Travellers' Tales: On the Transmission of Culture in the European Iron Age

Daphne Nash Briggs

I must have been one of Barry's first research students in Oxford when he took over supervision of my doctoral thesis in 1973. Central Gaul and its coinage in the late Iron Age were still frontier areas for research for a British student and I had come to them from Classics and Roman history, with a special interest in coinage but with no experience whatever of archaeology. I am eternally grateful to Barry for his kindly and enthusiastic guidance as I completed my thesis on time and for his encouragement to continue afterwards with research into Iron Age economy and society. He invited me to give my first public paper at the landmark *Oppida* conference at Rewley House in 1975 (Nash 1976) and we jointly supervised a number of research students while I was at the Ashmolean Museum as Assistant Keeper first of Roman, then of Greek coins in the Heberden Coin Room, which I left in 1986 to pursue another career as a Child Psychotherapist. I doubt I would have had the energy or self-discipline to return to part-time, freelance study of Iron Age Italy in its wider European setting a few years ago had Barry not greeted a draft of something I had written on French prehistory with, 'Don't stop now!' and sponsored my application for an Honorary Research Associateship at the Institute of Archaeology at Oxford. With this chapter based on work in progress I would like to thank him for all his support over the years, and celebrate a long association.

Re-reading some of Barry's recent books with this paper in mind I found I kept wanting to engage him in conversation in the many places where, with an enviable narrative freedom that it is difficult to imagine in the academic archaeology of thirty years ago, he evokes the reality of people's lives in the past, whether it be Pytheas' journey to the frozen north (Cunliffe 2002) or the Celtic raiding mentality (Cunliffe 1997: 88–9) or wondering whether old

fighters living in the Fayum oasis in the mid-third century BC told 'their incredulous children stories of the fertile Danube plain or the pine-clad slopes of Mount Parnassos remembered from the time when they had camped in its shadow waiting to pillage Delphi' (Cunliffe 1997: 182).

As a graduate student I identified two sorts of Celtic Iron Age economy and society. Raiders—which I then described as warrior societies—were easiest to typify and study, partly because of a conspicuous elite culture that eventually included coinage, but I now think also because in their most organized forms they were a specialized sub-type of social economy that flourished only under specific historical conditions, typically on the margin of agrarian cultures that needed slave labour and were undergoing a phase of rapid elite accumulation. This offered opportunist raiders plentiful booty in cattle and gold (Polybius *Histories* 2.17.8–12), reliable access to external markets for freshly captured slaves, and initiated a phase of their own elite accumulation: an early instance of this in western Europe would be the Aisne–Marne culture of the sixth–fifth centuries BC (Nash 1985: 53–5; Kristiansen 1998: 290–5). When they also became able to meet a demand first in Etruscan Italy and then in the Hellenistic east for their military services, the consequences for Celtic raiding societies in terms of brilliant material culture and migratory expansion are well known (Cunliffe 1997: 68–132). Raiding cultures were always dependent upon and at worst destructively exploitative of settled agriculture—if not their own society's, then someone else's. Their tendency to take rigid codes of honour to extremes made it difficult to terminate cycles of vengeful feuding (Herman 2006: 155–215): Homer's *Iliad* starkly confronts, and laments, the wasteful and pointless consequences of competitive slave-raiding and vengeful feuding in one of early Europe's most celebrated warrior formations.

The other sort of Celtic society, omnipresent in the landscape and predominant in regions with rich and varied natural resources, I referred to originally as agrarian societies for want of a better description, though I now think settled agro-pastoralists might have been more accurate. Stock-rustling probably always occurred among them, for reasons considered below, and all young men from propertied families would have had to 'learn dread Ares' dance in close combat' (*Iliad* 7.241), but their elite economies were not primarily booty-based. It is this type of culture that I picture as typical, for instance, of the HaC–D elites of eighth–sixth-century Gaul. They could absorb and use a lot more human labour than could specialist raiders and could support locally dense populations on their resultant surpluses. Under favourable conditions they served as hubs of regional exchange networks and could host emergent towns. Settled agriculture requires long-term stability, and is promoted by moral values that emphasize restraint: Hesiod

recommends a poor man to avoid violence because even the rich cannot easily bear its burden (Hesiod *Works and Days [Op.]* 213–16; 320; 706–13), while Strabo observed in the early first century AD that Gaul had become enormously productive under Roman administration, which suppressed raiding (Strabo *Geog.* 4.1.2; 4.1.14).

In what follows I will draw upon some of the earliest surviving European literature to offer what I think may be a fairly robust model of a prosperous and settled pre-state agro-pastoral aristocracy at a time of rapid elite accumulation. I am writing mainly with the eighth–sixth centuries BC in mind but I think the model has validity in other periods also, wherever similar aristocracies formed. I want in particular to consider the cultural consequences of their characteristic use of imported rural and domestic labour and to suggest one inbuilt source of their long-term instability. The narrative sources I shall draw on, mainly the Homeric epics and hymns, cast ancient, traditional themes in an eighth-century Mediterranean cultural idiom, and I will attend selectively not to the the rich and tempting repertoire of archaic, traditional material that can illuminate a remoter past but to the colourful contextual asides and imaginative character-developments that are probably drawn from life and relationships as the poet and his listeners would have known them at the close of the post-Mycenean 'Dark Age'. The spontaneous embellishments that mire the task of identifying authentic archaic elements in traditional tales are integral to any living bardic tradition. They are especially valuable for the present task because, despite occasionally important differences in cultural detail, Ionian Greek and many Italian and transalpine elites demonstrably shared values, concerns, and beliefs and created wealth in very similar ways (Nash Briggs 2003, 2006).

All these people lived closer to the margins of subsistence than most of us today can readily imagine. Effective solutions to the problems of how not to starve, how to produce a surplus from a given landscape, and how to prosper, raise children, and extend the family therefore tend to produce variations on a very limited range of themes. The recently discovered Bronze-Age farm at Nola, for instance, destroyed in a Vesuvian eruption in *c.* 1550 BC, was precisely similar, with its several houses, threshing floor, and stockade; its cows, pigs, sheep, and goats, including nine pregnant goats that got trapped in their pen; its guard dog and its population of several adults and children (Livadie 2002: 941–2), to any of the servants' farms on Homer's Ithaca or to the ideal farm that Hesiod recommended *c.* 700 BC for a start-up smallholder in Boeotia (*Op.* 405–617). Hesiod envisaged a rather egalitarian social environment of modest rural smallholdings and insists on the importance of good relations with the neighbours in terms that would be valid in a Mediterranean rural community to this day (*Op.* 342–71).

AN ARISTOCRAT'S ESTATE

> He had a boundless living: no hero either on the black mainland or in Ithaca itself had as much. The stock of twenty men put together would not match it. I will tell you. Twelve herds of cattle on the mainland, as many flocks of sheep, as many herds of pigs, and as many scattered herds of goats, all tended by guest-friends or by his own herdsmen; while here [in Ithaca] fully 11 herds of goats graze the remotest places in the care of excellent men.
>
> (Homer, *Odyssey* 14. 96–102)

Thus Eumaios, his swineherd, described Odysseus' possessions, boasting of herds as the living embodiment of his wealth: the cereals, fruit, and vines on which they all subsisted could be taken for granted. Anywhere in ancient literature an ideal overlord—a Homeric king (*Iliad* 18.550–60; *Odyssey* 19. 109–14), or Celtic Ambigatus (Livy 5. 35ff.), or Irish Conaire (Cross and Slover 1936: 109) is described in precisely similar terms: he presides over peace. Conaire, indeed, was memorable for having succeeded in temporarily banning raiding in his kingdom. An ideal king can attract or command labour for community projects, fields yield their fruit, animals multiply, and the population grows. But at the base of the food chain there always remained the labour-intensive, back-breaking agricultural work of clearing fields of stones, planting trees, making and mending equipment, making enclosure walls and hedges, ploughing, sowing, reaping, and threshing that Homer and Hesiod both mention, the fruits of which were only transformed into food, clothing, and furnishings by equally labour-intensive work in the household. We first meet Homer's Eumaios making himself a pair of sandals (*Od.* 14. 23–4); Hesiod gives advice on how to weave a warm cloak (*Op.* 536–9) and build your own plough and waggon (*Op.* 423–33, 456); and we are reminded that an unmarried subsistence farmer (Eumaios) would only have clothing and furnishings enough for himself and his servants: if a guest needed a cloak or bedding, the host would have to surrender his own (*Odyssey* 14. 513–517). We should also note that nobody kept a house or fed himself alone.

Homer's Ithacan aristocrats were farmers whose wealth and connections had accumulated over several generations. Odysseus' father, Laertes, is pictured as having built his own farm from scratch and planted his own fruit trees and vineyard. He is depicted, aged, widowed, and depressed, clad by choice as a labourer in patched clothing and goat-skin cap, tending his own vineyard (*Odyssey* 24. 226–31)—a salutary reminder of how the fortunes even of a rich aristocrat could be reversed and he could merge into the rural background if, for instance, his son and heir really had been lost at sea.

Laertes' creature needs were met by his servants, all of whom lived in cottages close by, including old Dolios, who had originally been a slave, probably purchased as a boy, but had been rewarded for long service with a Sicilian woman whom Laertes had bought and given to him as a wife. Such servants' grown children formed a new, socially disadvantaged, but vigorous rural population working in the fields and/or serving at table in Odysseus' house, which was being presided over by Penelope during her husband's absence. One of Dolios' daughters was raised affectionately by Penelope (*Odyssey* 18. 320–5) and this daughter and one son (*Odyssey* 17. 256–7) fancied their chances of social promotion by association with Penelope's suitors.

Homer's picture of life on Ithaca has interesting implications for interpreting the settlement archaeology of this sort of Iron Age aristocracy. Odysseus' family had two spatially separate big houses (I shall avoid mention of courts or palaces because of their unhelpful connotations), his own and his father Laertes', each with its own assemblage of dependent farms and servants' cottages, of which some were remote from the big house. Odysseus' house was the later, larger, and richer of the two with 'building upon building' inside a courtyard wall with a coping and stout double doors (*Odyssey.* 17. 264–8). There were numerous other less wealthy aristocrats on Ithaca and adjacent islands, all with similar estates: Eurymachos, for example, mockingly offers to take on a vagrant to work on the borders of his farm collecting stones for walls or planting trees in return for a guaranteed livelihood (*Odyssey* 18. 357–61). The labourer on Hesiod's Boeotian startup farm lives elsewhere in winter (*Op.* 602), and even Homer's aspiring herdsmen had labourers and could offer a beggar some work guarding animals and sweeping pens (*Odyssey* 17. 223–5). It was never difficult to get even heavy work done in return for a good meal (Dietler and Herbich 2001; Nash Briggs 2003: 253–4; ead. 2006: 154–5).

The cottages that servants built could become quite substantial farms: we would not be able to tell the status and origin of their owners from archaeology alone. Eumaios, bought as a kidnapped little boy from the captain of a passing ship and raised as a surrogate son by Odysseus' mother alongside her own youngest daughter, Ktimene, was sent out in his late teens with mantle, tunic, and new sandals to look after his elder foster-brother Odysseus' pigs while Ktimene was sent with a dowry to marry a man at Same on the neighbouring island of Kephallenia (*Odyssey* 15. 361–79). Eumaios prospered, saved up enough from his own hard work to buy himself a man-servant from the Taphians (*Odyssey* 14. 449–53), and is pictured in his prime with four young labourers who tended the pigs by day and slept indoors in the farm at night while Eumaios himself spent the night outside the stockade to protect the boars from dogs and men (*Odyssey* 14. 528–33). A rich man's herdsmen had to live self-regulating lives: Philoitios is pictured taking cattle back and

forth from Ithaca to Kephallenia, and we may note in passing that there was a living to be made as ferrymen wherever there was water to cross (*Odyssey* 20. 209–12). We may also note that these men all had to be armed for defence of their animals: Eumaios went out for the night with sword and javelin, an observation that has implications for interpreting the distribution of weapons in the Iron Age landscape. We cannot always assume that they belonged to high-status individuals. Instead, we are invited to picture a landscape in which large estates contained many farmsteads, some far from small, inhabited by or belonging to settled and sometimes armed and prosperous servants and other dependants, including fugitives who had placed themselves under a rich man's protection (*Iliad* 9. 478–84; *Odyssey* 15. 509–49). Many of these people at any given time were first-generation immigrants to the area. This has obvious implications for interpreting signs of change in a material culture, for instance when we observe the seemingly spontaneous appearance of culturally LTA inhabitants in the vicinity of last-generation HaD3 settlements in eastern Gaul at the end of the sixth century BC (Demoule 1997: 303; Frey 1997: 318–19).

Also in the Ithacan landscape was 'town', a communal place at some distance from the big houses where formal assemblies were held, summoned by herald, to debate matters of common concern and arbitrate disputes (*Odyssey* 2. 6–259, cf. *Iliad* 18. 547–68), where craftsmen could set up independently of any particular big house, and where a frail old man could beg (*Odyssey* 17. 18–21; 18. 363–4). Town may have provided an alternative venue for gainful activity by descendants of settled slaves like Dolios or Eumaios if for whatever reason they did not take to agriculture. Did some, for instance, make dyes or pottery? It is frustrating that we have so little documentary evidence for early potters (Homeric *Epigrams* XIV) and their very humble craft. Higher-status craftsmen are better documented and did evidently work from town. A suitor dining at the big house mockingly asked Odysseus, as he examined his great bow, whether he were a connoisseur and was thinking of making them (Odyssey 21. 397–400). And there was a bronze-smith's forge, an establishment welcome for its warmth in winter (Hesiod *Op.* 493–4) where a traveller could put up at night (*Odyssey* 18. 328–9), doubtless in return for hard work at the bellows. Iron was still a very valuable commodity. Smelting was extremely labour-intensive (Manning 1995: 313) but ingots were easy to work at a forge and Homer described an iron ingot offered as a prize at Patroclus' funeral games as big enough to keep the winner in iron for five years or more even on an isolated farm: his shepherd or ploughman will not have to go to town for iron (*Iliad* 23. 831–5). 'Town' implies a resident population and brings to mind places like Bragny-sur-Saône in sixth-century Gaul (Gran-Aymerich 1995: 55). Towns

were certainly places where strangers stopped and skills could be developed and shared but in the sort of proto-urban environment that Homer portrays in the Ithaca of the *Odyssey* they were not places where the rich landowners lived and were not at the heart of the social economy. Instead, the big houses—not wholly unlike country villas in the later Roman world—were nuclei of sometimes rather large populations, an important part of which was always immigrant. By contrast, imaginary Scherie was fully urban in a rather Etruscan way (*Odyssey* 6. 262–74).

FORMING A HOUSEHOLD

A young man of twenty or so, ready to embark on adult life, was well advised to get a house, a woman, an ox, and a labourer. This woman should be 'acquired, not wed' (Hesiod *Op.* 405–6) and would help him plough and look after his house and probably share his bed until he was around 30 and ready to marry (Hesiod *Op.* 695–7). Thus Telemachus at nineteen was urged to get his mother, Penelope, to go back to her father's house so that she could be married off to one of her suitors. Meanwhile Telemachus should put his own house in charge of a servant woman until he was ready to marry (*Odyssey* 1. 275–9; 15. 24–6). Then a young householder, like the youthful Laertes, would work hard to increase his farm and livestock, only travelling or taking to sea if he could not make a sufficient living on the farm (Hesiod *Op.* 618–694). All being well, he would improve his farm and purchase more slaves for ten years or so until he had the wherewithal to bring home a wife. Hesiod recommended his start-up farmer to marry a local girl in the fifth year after puberty (*Op.* 698). The son of an established aristocrat would look further afield to the daughters of his father's peers. We see nineteen-year-old Telemachus collecting his first high-status personal dependant, Theoklymenos, during his journey back home to Ithaca after visiting Nestor and Menelaus for news of his missing father (Odyssey 15. 271–281), and as he does so, becoming fully adult.

Only a wedded wife's sons could automatically inherit their father's property, but servant women were as numerous as a man could afford in terms of purchase price and upkeep because without them he could not run a hospitable establishment. In Odysseus' house, grander than his father's, we see a three-generation hierarchy among the servant women. Elderly, aristocratic Eurycleia, originally from Laertes' household, had been purchased as a nubile girl for 20 cattle, had nursed Odysseus and Telemachus, and now in retirement remained a commanding matron second only to Penelope. Next came

Eurynome, the current middle-aged housekeeper (*Odyssey* 18. 169–185; 20.4), and then at least fifty younger men and women variously employed (*Odyssey* 22. 419–27). Landowners often had illegitimate children with slaves, some of whom were gladly raised or fostered by his wife as charioteers or supplementary sons (Nash Briggs 2006:158). One does get a strong impression from the Homeric poems of a family system that was both monogamous and polygynous. The wholly polygynous marital system that Julius Caesar observed in southern Britain in the first century BC was probably a regional variation on this theme (*De Bello Gallico* 5. 14; Cunliffe 1997: 109). Homer's aristocratic households were structured as inflated patrilineal families in which household servants counted as socially disempowered and economically disadvantaged supplementary wives (in the case of women) or children (for all others). I do not know if one ever hears of a woman slave's further promotion, but hard-working and trusted male slaves might be rewarded for years of productive work by being raised to the rank of grown-up sons in a sort of adoption: Odysseus promised Eumaios and Philoitios 'I will get you each a wife, make you a grant of property and houses built near to mine, and from that day forth I shall look on both of you as friends and brothers to Telemachus' (*Odyssey* 21. 214–16).

RUNNING A BIG HOUSE AND THE SPREAD OF SKILLS

American servicemen sent to Britain in 1942 were warned, 'if you are invited into a British home and the host exhorts you to "eat up there's plenty on the table", go easy. It may be the family's rations for a whole week spread out to show their hospitality' (Anon. 2004: 26). British servicemen sent to occupied France in 1944 were likewise reminded that 'buying food at a farm may quite likely mean preventing some child in the nearest town from getting a meal' (Anon. 2005: 10). The house of a dominant aristocrat in Homer's day was a monstrously expensive place to run, with a permanent staff, mainly of women, with dependent children, and with nonstop guests. Even sending one well-connected guest on his way with supplies for his journey and valuable gifts meant recouping its cost in levies on dependants (*Odyssey* 13. 7–15). Feeding a whole ship's crew for twelve days in an emergency could be crippling (*Odyssey* 19. 185–202). In Telemachus' generation, modelled perhaps most closely on Homer's own, we are invited to picture late-night feasts extravagantly lit by wood-fed braziers. Surplus clothing was handed out to honoured guests after a warm bath on arrival, and gifts including patterned textiles were given to many when they departed. Unlike the ephemeral,

special-purpose feasting space famously made by Louernios, a comparably rich Arvernian aristocrat in mid-second-century Gaul (Athenaeus, *Deipnosophists* 4.37; Cunliffe 1997: 106), these big houses were permanent establishments, known from afar, and engines of a dynamic local economy. Anyone could turn up and expect to be fed, though always in return for a service: bringing news (true or false); singing songs; telling the future; or simply helping to clear up and wash the dishes. This was obviously one way in which skills and knowledge were disseminated over potentially very great distances. Homer lists some socially useful skills that might make a wandering stranger welcome: a seer, a physician, a carpenter, or a glorious bard who gives pleasure with his songs (*Odyssey* 17. 384–5), and we cannot discount the influence that a widely shared European repertoire of hero-stories, told both in formulaic languages and in vernaculars, must have had in propagating values, ideas, and beliefs.

When considering the movement of people in late prehistory it is tempting to think mainly in terms of the more conspicuous sorts of traveller: well-connected individuals who got about on their own initiative and large organized groups (colonists, raiding bands, and mercenary soldiers). Here I would like to consider the role of the household staff of slaves (another term unfortunately freighted with unhelpful anachronistic connotations)—Homer's *dmôoi* and *dmôai*, literally house-males and house-females. These were omnipresent at times of rapid elite accumulation and disproportionately concentrated around the dominant big houses. They were all immigrants, of mixed and often distant origin, including some who were highly skilled and extremely valuable, purchased from passing ships' captains or at external markets known to sell slaves, including Lemnos, Crete, Libya, Egypt, and Sicily (Nash Briggs 2003; ead. 2006: 159–61). No aristocratic household anywhere in Europe at this time could have functioned without a staff mainly of women—and I have raised elsewhere the possibility that some luxury slaves in sixth-century Etruscan households may have originated in northern Gaul as captives of endemic raiding (Nash Briggs 2003: 254–7; ead. 2006: 162–8).

This has obvious implications for interpreting geographical patterns of spread of characteristically female skills, whether at the loom (and textile patterns may be reproduced on pottery), in the kitchen (with favoured shapes of water-container, food preparation vessels, and cooking pots), or in aspects of funeral provision. Of these skills, complex weaving with coloured wools was of especial importance (Nash Briggs 2006: 156–7 with references). Weaving was by far the most time- (and therefore labour-) consuming of all household occupations, and women from Phoenicia and Asia Minor were highly prized in Homer's world for their beauty, their pedigrees, and for their skills in wool-working and fancy weaving. Girls everywhere must, then as

now, have learnt to spin and weave by watching their mothers and older women, absorbing exotic patterns, and probably the alphabet, in the process. Keeping track of intricate weaving patterns is a complex feat of memory that can be assisted by notation. Some of the earliest known Etruscan letters are on five impasto bobbins from late eighth- or early seventh-century Veii, and it has plausibly been suggested on this and other grounds that its use by textile-working women assisted the westward spread in this period of what was originally a Levantine alphabet (Gleba 2002; Haynes 2000: 65–7).

Whenever Eurykleia or one of numerous Homeric wives are dismissed from male company it is therefore with orders to go and teach the women their work and get on with it themselves. Because women who could make cloth 'such as goddesses like to weave' (*Odyssey* 10. 222–3) were so valuable and a source of pride, and because their work was everywhere on view as garments and furnishings, something we glimpse in sixth-century Etruscan painted tombs (Steingräber 1985), textile patterns were understandably reproduced to embellish items of lesser inherent value, like ceramics. Woven motifs certainly seem to lie behind the geometric patterns and linear images widely represented on pottery and metalwork in this period (e.g. Kristiansen 1998: 221–2). We hear of Helen weaving narrative images of episodes in the Trojan war (*Iliad* 3. 125–7) and of there being memorable animal motifs on the borders of multicoloured, lozenge-patterned Ionian garments (Athenaeus *Deipnosophists* 12. 525), all of which can be matched in ceramic imagery. We should, indeed, seriously consider the possibility that the entire repertoire of European textile design at that time was developed and passed on primarily among women and that the Orientalizing motifs so widespread in elite decorative repertoires from the late-eighth to early-sixth centuries BC likewise spread with ongoing trade in technically skilled Oriental women slaves. It is natural enough, from a modern perspective, to think nonspecifically of craftsmen in workshops as bearers of decorative traditions, and we are probably right to assume that most metalsmiths were men. But Homer also mentions in passing the crimson dye a Maeonian or Carian woman might use to stain the precious ivory cheekpiece for a horse (*Iliad* 4. 141–5). If we found such a piece in a grave, would we guess that the decoration was 'women's work'?

The same considerations apply to the spread of more mundane traditions. Women washed and laid out the family dead for funerals, just as they had cared for their bodies in infancy, and they led the lamentation (*Iliad* 6. 497–9; 18. 29–31). Penelope would have been disgraced had she not finished weaving his shroud before her father-in-law, Laertes, died (*Odyssey* 2. 99–103). Logically, the shape and choice of urn in which cremated ashes were placed should likewise have been entrusted to the women of the household. If this were so,

long-range displacements of women as wives and household servants might help to account for the occasionally uncanny similarities in form and decoration of widely separated clusters of hand-made cremation urns in our period, for instance between Latium or Etruria and Pommerania (Kristiansen 1998: 233–40; Nash Briggs 2007: 164). It could also plausibly account for the likely spread, not just to the big houses of the elite but outside them to the places where settled servants lived, of incoming women's preferences in kitchenware. Homer proposes inexpensive Sicilians as credible wives for promoted servants on Ithaca. Could the puzzling appearance in Boeotia around 1200 BC of southern Italic shapes of locally made cooking wares, mainly in places that had lost a previously centralized elite source of domestic pottery (Lis 2006) reflect the presence already on the Greek mainland of cheap household servants from the Central Mediterranean? The dissolution of individual Mycenean centres must have released numerous household dependants to make their own livings in the countryside, while on a reduced scale the rich continued to purchase slaves from established sources.

And then there is the question of vernacular language. The very word we use for it derives from Latin *verna*, a home-born slave. What did an Aegean man and his Sicilian wife speak among themselves on Ithaca, or a Phoenician slave woman sing in to soothe her Italian master's babies? At home among themselves, and with animals and children, people everywhere tend to use their mother dialect, and we can safely assume that widely ranging Iron-Age aristocrats were all functionally multilingual. Aphrodite, for instance, posing as a Phrygian princess, understands Aeneas' Trojan speech because she had been raised by a Trojan nurse (Hom. *Hymn to Aphrodite*: 113–15). I wonder whether the written languages of early Europe's educated archaic elites are ever representative of what country people, and even many aristocrats, actually spoke among themselves at home.

CYCLICAL INSTABILITY AND POPULATION DISPERSAL

There was an inbuilt instability in the sort of aristocratic economy under review because the integrity of a given estate was dependent on the personal success and longevity of its individual head. It was laborious building up an estate big enough to subdivide even among a few legitimate heirs. Hesiod recommends a man to have one son to feed his father's house so that wealth will increase, but to be sure to live to be old if he raised two (*Op.* 376–8). At a regional level eighth-century elites had few political and no military means of forcibly holding large multi-family polities together. This is implicit, for

example, in the famous account given by the Roman historian Livy of what probably was an authentic sixth-century Gaulish tradition about king Ambigatus, who ruled the Bituriges and 'by his personal qualities, aided by the good fortune that blessed both himself and his people, had attained to very great power. Under his rule Gaul became so rich and populous that it became difficult to control. Since he had grown old and wished to relieve his kingdom of the burden of its excess population, he announced that he would send two sons of a sister, . . . adventurous young men, to find such new homes as the gods might indicate . . .' (Livy 5.35ff). Nobody at this time could afford to support indefinitely large numbers of unproductive people, and if a household had exceptional expenses on account of its size or the status or sheer number of long-term guests, as would certainly have been the case with a figure like Ambigatus, it meant making heavy demands upon an aristocrat's own farms and taking levies from his senior dependants, which in turn obliged them to increase demands on their own dependants' farms (*Odyssey* 13. 14–15, 22. 55–9, 23. 357–8). We also hear of intensified stock-rustling when Odysseus planned as a matter of course to recoup the losses that Penelope's suitors had inflicted on his herds by raiding someone else's (*Odyssey* 23. 357). It was all too easy for an aristocratic estate to fall apart, and when it did, some of its originally immigrant population would disperse, taking their culture with them.

Philoitios, Odysseus' stockman, considered simply walking away with the herds if it turned out that Odysseus really was dead (*Odyssey* 20. 218–25). Eumaios, the swineherd, had long since bought a servant from his own surplus and made a good living on his farm: he liked contact with Penelope, getting the news and a meal at the big house, and taking a bit extra back to the farm, 'such things always gladden slaves' hearts' (*Odyssey* 15. 376–9), but was more than self-sufficient; if these and other dependants on a noble's estates became dissatisfied because he could not gratify their need for that extra bit, or made repeated unacceptable demands upon them; or if the landowner died and his heirs and dependants were in dispute (*Odyssey* 14. 199–226), or were arrogant and demanding like Penelope's suitors, there was little to fall back on but a self-defeating attempt to employ violence to oblige settled dependants without unpaid debts to stay on their farms and continue to supply the big house. Resentment about uncompensated labour is one of the oldest and most convincing of reasons to rise against authority. It is difficult to find a folk tradition anywhere without cautionary tales both for lord and for labourer on some version of the theme. A good ruler never defrauds his workers. If pushed too far people will desert, pursue life on their own terms, and the 'big house' will lose its function. Periodic dissolutions of two- to three-generation aristocratic estates may well have been a frequent occurrence in late prehistory,

only appearing to coincide in a seemingly orchestrated pattern at times of exceptionally swift and untenable elite accumulation, as at the close of the Bronze Age or during the transition between HaD3 to LTA in Gaul.

A particular inbuilt source of instability in this kind of European agro-pastoral aristocracy, that may help to account for their apparent tendency over time to oscillate between periods of settled accumulation and periods heavily given over to warfare and raiding, was the status of livestock and metalwork as seemingly universal components in the prices paid for slaves and for wedded wives. A bride would bring a dowry with her: Penelope's father also gave her a maid, Aktoris, as a wedding-gift (*Odyssey* 23. 228–9), but in these early aristocracies her husband had paid an even larger sum to her father (e.g. *Iliad* 11. 241–3). This arrangement made simple economic sense: the girl's father had to be compensated for the cost of her upbringing (e.g. Hesiod *Op.* 187–91; *Theogony* 603–7), for the loss to his household of her weaving and housekeeping skills, and for the permanent loss to his household of her offspring. Bride-prices, however, could become grossly inflated. It enhanced a woman's social value to be competed for, and we hear of extreme bride-price bargaining, for instance competition by proxy for Helen (Hesiod, *Cat. Women and Eoiae* 28–100), or Agamemnon trying to placate Achilles by offering to excuse him the usual price on his daughter (*Iliad* 9. 289–90), or the high prices that Penelope's suitors offered for a putative widow who was past her fertile prime (*Odyssey* 18. 284–303). These traditions probably include elements of authentic Bronze Age tradition, but they remained in circulation for centuries thereafter and reflect ongoing issues. Odysseus' servant, Eumaios, could hope for his master to reward him by buying him a bride 'whom many woo' (*Odyssey* 14. 64). If we consider the proportionately rather numerous high-status women buried in sixth-century Gaul with rich funeral accoutrements, including the famous Vix princess (Cunliffe 1997: 58–9), or the breathtaking extravagance with which a late Villanovan woman was buried in the Regolini Galassi tomb at Cerveteri in the second quarter of the seventh century (Haynes 2000: 75–9), we are entitled to wonder what on earth their husbands had had to pay for them when they were wed, and at what cost to their dependants and neighbours they assembled the price.

Wherever there was competition to purchase wives and slaves livestock rustling, bloodshed, and feud among unmarried and recently married men were probably inevitable. Raiding must have been a routine phase in many young men's transition to adult status, even in settled agro-pastoral environments, and is frequently mentioned in the Homeric repertoire. Old Nestor of Pylos and even Odysseus reminisce about prodigious exploits on under-age cattle-raids, none of which would be out of place in the early Irish tales. The Homeric *Hymn to Hermes* is a rollicking tale of half-sibling rivalry and

cattle-raiding bravado that is of more than passing interest here because Hermes (known to Romans as Mercurius) was also, under whatever local appellation, nominated as the first-century Gauls' favourite deity, with especial efficacy in protecting trade and getting wealth (Caesar *De Bello Gallico* 6.17.1), and I think we can assume that Caesar's informants will also have known him as a venerable patron of cattle-raiders.

Raiding could, however, lead into in a vicious cycle of violence and disruptions: Nestor had lost eleven brothers by the time he went on his own successful cattle-raid (*Iliad* 11. 670–761). No settled society could be expected to thrive under such conditions, obliging dominant aristocrats with ambitions to extend their rule either to curb raiding (like Conaire and perhaps the senior HaD3 aristocracy) or to move towards a collective process of state formation with inbuilt checks upon elite accumulation and expenditure, as is attested in archaic Greece and Italy and can be inferred in second- or first-century BC Gaul (Nash 1976: 111–14; Nash 1987: 51–5). 'There is surfeit in everything—in sleep and love and sweet music and the perfect choral dance, things one would far rather be sated with than with war' (*Iliad* 13. 636–9).

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3

Questions of Context: A Greek Cup from the River Thames

Richard Bradley and Amy C. Smith

The anthropologist Mary Helms has argued that in traditional societies access to exotic items is often a source of prestige (1988: chs. 3 and 4). So is knowledge of the appropriate ways in which to use them. This idea plays a central role in a new study of the European Bronze Age which postulates long-distance links between Scandinavia and the East Mediterranean and suggests that they were a source of political power (Kristiansen and Larsson 2005: ch. 5).

Similar attitudes can also be found in studies of the Iron Age. In the graves and hillforts of Hallstatt C and D there are Mediterranean amphorae, Greek and Etruscan bronze vessels and Attic (Athenian) pottery, some of which were most probably acquired through the port of Massalia. Their distribution extends over a large area north of the Alps and has been discussed by Barry Cunliffe on several occasions. As he says 'It is difficult to resist the conclusion that the presence of the Greek trading port created a demand for commodities from the north and that this led to the emergence of powerful chiefdoms in the core of the barbarian area, able to command the flow of luxury objects from the south' (1988: 24–5). Such interpretations emphasize the significance for Iron Age people of access to imported goods.

Individual artefacts travelled even greater distances, with a major concentration of Etruscan beaked flagons in the Middle Rhine (Kimmig 1982: Abb. 32), but much further to the north and west the distribution of imports virtually runs out. That raises a serious problem. What are archaeologists to make of the few examples which have been found beyond the areas that were in regular contact with the Mediterranean? Here it is important to consider questions of context.

SOME EVIDENCE FROM SOUTHERN ENGLAND

There have been a number of reviews of the evidence for Mediterranean imports in Iron Age Britain, but they have all had one feature in common. They have catalogued a series of artefacts which were made in the Mediterranean. The first major study was by Harden, and this has been followed by accounts by Harbison and Laing and most recently by Jope (Harden 1950; Harbison and Laing 1974; Jope 2000: 10–16 and 225–8). Most of these writers consider the same range of material and they treat it in a similar way: all the authors discuss sources of individual artefacts and their chronology. The circumstances in which these artefacts are found present a greater difficulty, for very few of the discoveries were witnessed by archaeologists and most accounts of their provenance are vague.

There have been two ways of treating these observations. The earlier writers were aware that few, if any, of these finds came from an archaeological context and were prepared to consider them as quite recent losses, perhaps of inferior material discarded from private collections. For example, Boon writes of a Greek cup dredged from the River Thames: 'It is not impossible that the vase arrived in the Thames during prehistoric or even Roman times, but naturally a find of this nature cannot well be distinguished from a relic of the grand tour or of a collection' (Boon 1954). Harbison and Laing take a rather different approach, which to some extent they share with Jope (Harbison and Laing 1974: 18–29; Jope 2000: ch. 2). They consider the chronology of these separate finds and observe that it emphasizes the sixth and fifth centuries BC. There are finds of later date, but there is no suggestion that they belong to a single period. This observation is important as the finds from Britain tend to cluster in the period in which exports from the Mediterranean have the widest distribution on the Continent.

An important point was first raised by Timothy Champion in discussing some Iron Age pottery from the Chilterns whose characteristic decoration recalls the handles of Etruscan stamnoi (Champion 1977). He admits that metalwork of this kind has never been found in Britain but suggests that it is because there was no tradition of burial with grave goods. The contexts in which the Continental finds were made lack any equivalents in Britain. He also observed that instead of being associated with human remains, the fine metalwork of this period was normally deposited in rivers. It was a tradition that had already been important for eight hundred years: 'A river or a bog is a perfectly proper archaeological context for finds of rich Iron Age metalwork, and such a provenance might even be held to support the authenticity of such

objects' (Champion 1977: 93). This has implications for some of the exotic artefacts discussed by earlier writers.

There are five major finds that seem to belong in this category, all of them fine metal or ceramic vessels. The chronology of these pieces has been considered by other authors and they all seem to have been made between the seventh and fifth centuries BC. Their discovery is not well documented, but it is clear that a Greek cup to be discussed below (figures 3.1–3.2) was dredged from the River Thames. An Etruscan flagon was recovered from the bed of the River Crouch (Harbison and Laing 1974: 8–10). Two other artefacts came from deposits of gravel on the banks of major rivers: an Italic cup from Barnes, again on the Thames (Harbison and Laing 1974: 3; Jope 2000: 15), and a Corinthian jug found in the construction of Chatham dockyard on the River Medway (Harbison and Laing 1974: 5). The only artefact whose discovery is recorded in any detail is the cordoned situla from Weybridge which was excavated from a deep deposit close to another river (Harbison and Laing 1974: 10–11; Jope 2000: 228). It was found just outside a major settlement of the same period and, like the find from Chatham, it may have occupied a former channel (Harbison and Laing 1974: 5). The cup from Barnes poses more of a problem, for Harbison and Laing quote a letter from Christopher Hawkes which says that 'the gravel in which it is said to have been found may have been brought from the Pool of London by the Thames Conservancy Board'. On that basis they describe its authenticity as 'doubtful' (1974: 3). Had it originated in the Thames, that would support a quite different conclusion.

These artefacts were made over a restricted period and have a limited distribution. In principle, modern collectors might have discarded their spoils anywhere in the British Isles, but not only did they favour major rivers for the purpose, those rivers are confined to a small area of southern England, focusing on the Thames, its estuary and one of its tributaries. That is precisely where metalwork of local origin was deposited. The main concentration of finds has been mapped by Barry Cunliffe (1993: fig. 7; adapted here to figure 3.3). Most deposits of Early Iron Age swords are found in one length of the Middle Thames, but similar finds extend as far upstream as Reading and as far east as the Medway. Again the frequency of such deposits decreases after the fifth century BC.

It is surely straining coincidence to interpret all these finds as recent losses. The hypothetical collectors would have discarded this material in an archaeological context of which they were entirely unaware. They would have been dumped these artefacts in rivers only within the area where the same practice had been followed in prehistory. That seems most unlikely. It is easier to accept that some of these items were ancient imports.

Fig. 3.1 Profile view of a Greek cup attributed to the Pithos Painter, *c.* 500 BC, found in the River Thames. Reading Museum Service inv. REDMG: 1953.41.1

Fig. 3.2 Top view of the tondo of a Greek cup attributed to the Pithos Painter, *c.* 500 BC, found in the River Thames. Reading Museum Service inv. REDMG: 1953.41.1

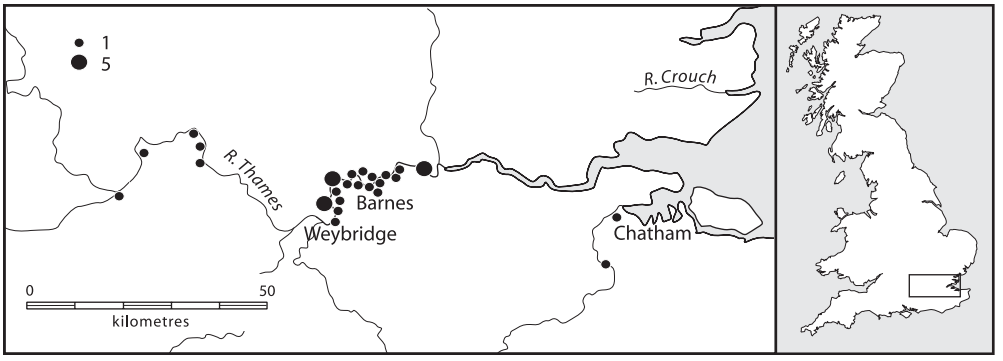

Fig. 3.3 Map showing distribution of finds of Early Iron Age swords and possible imports from the Mediterranean in and around the River Thames
Drawing: Margaret Mathews. Sword distribution based on Cunliffe 1993, fig. 7

It is worth pursuing this argument in more detail in the case of a Greek cup found in the River Thames and now in Reading's Riverside Museum at Blake's Lock. The style of this particular vessel sheds light on some of the same issues.

A GREEK CUP FROM THE RIVER THAMES

The Cup

The cup (also called a *kylix*) shown in figures 3.1–3.2 has received even less attention from scholars of Greek antiquity than from those interested in Iron Age Britain (see Smith 2007: pl. 14.1–2). This results less from the obscurity of its present location—it is the only Greek vase on display at Blake's Lock, where it is appropriately shown in the context of other river finds—than from the infamy of its supposed creator, the 'Pithos Painter' (Paleothodoros 2003; Lissarrague 1996: 99–105). Charitable connoisseurs look on the Pithos Painter's figural style as abstracted but with 'almost an appeal of its own' (Boardman 1975: 62) while others hesitate little in citing him as the worst of the Attic vase painters (Johnston 1991: 203). Sir John D. Beazley saw his work as 'exceedingly coarse' in potting as well as painting and thus relegated him to the 'Coarser wing' of early red-figure cup artists at Athens (*ARV*^{2} 140.25). Undeniably the quality of his work is low by the standards of Attic vase painters of his era and it is worth noting that the figure on the cup found in the Thames River is among the most abstract of those attributed to the Pithos Painter.

The shape is a variant of the type C cup with concave lip, the most common and sturdy of Attic cups (Sparkes and Talcott 1970: 91–2; Bloesch 1940: 111–36). Type C cups were usually small and decorated with lustrous black glaze. As Takashi Seki notes, the structure of individual type C cups exhibits less rigour, on the part of potters, than other Attic cups, perhaps because of their relatively small size (1985: 92). They sometimes had figures in the *tondo* (at the bottom of the bowl), as on the Thames River cup, but never on the outside of the cup. The plain black cups were exceedingly popular as export items (Gill 1986: 361–9). Yet the red-figure design might have found an interested foreign audience *c.* 500 BC: this technique had only been invented a quarter century before. So perhaps the Pithos Painter was hedging his bets: his type C cup could be sold easily to those who preferred plain black-glaze—they could hang it on the wall, put it on a high shelf, or keep it filled with wine so no one would even see the figural design—yet satisfy those who wanted a red figure.

The decoration as well as the shape of this and many of the Pithos Painter's cups relate to aspects of *sympotic* culture. By the end of the sixth century BC small parties of aristocratic men had become formalized, even ritualized, in the *symposion* at Athens. At least three features of these *symposia* might have seemed interesting to foreigners: serving wine out of clay cups (at least as large as the Thames River cup); drinking wine diluted (rather than neat); and dressing up as foreigners. The Thames River cup alludes to all of these eccentricities of the Athenian *symposion*. The latter two will be revealed through an analysis of the image that decorates the tondo of the cup.

The red figure found at the bottom of the bowl of the Thames River cup (and on 67 other cups attributed to the Pithos Painter) is a male figure—perhaps a youth, as suggested by the absence of a beard—seated with his back slightly towards us. He wears a pointed and/or floppy hat or *kidaris*, which was associated by Greeks and subsequent cultures with Easterners, especially Scythians (Paleothodoros 2003: 67). He holds a drinking horn, known in Greek as a *keras*, which also comes from the East, and probably more specifically from Scythia. The youth's pose could be called 'cutting edge' for 500 BC: the 'Pioneers' introduced the three-quarter-rear view to Attic vase painting in the period from 520–500 BC (Williams 1991: 291–2).

The identity of this youth is debated. The simple reading on the basis of attributes, *kidaris* and *keras*, is that the youth is Scythian (Fehr 1971: 101). 'Scythians' are found on Attic vases from the middle of the sixth century BC, and reach their peak later that century (Bäbler 2004: 115), when our cup was made. The varied iconography of Scythians was liberally and variably used by Athenian vase painters for generic and mythic archers, even Herakles (Ivanchik 2004: 105). Aeschines and others tell us that, after the Battle of Salamis in 480 BC, Athenians purchased Scythians to be used in their city as armed

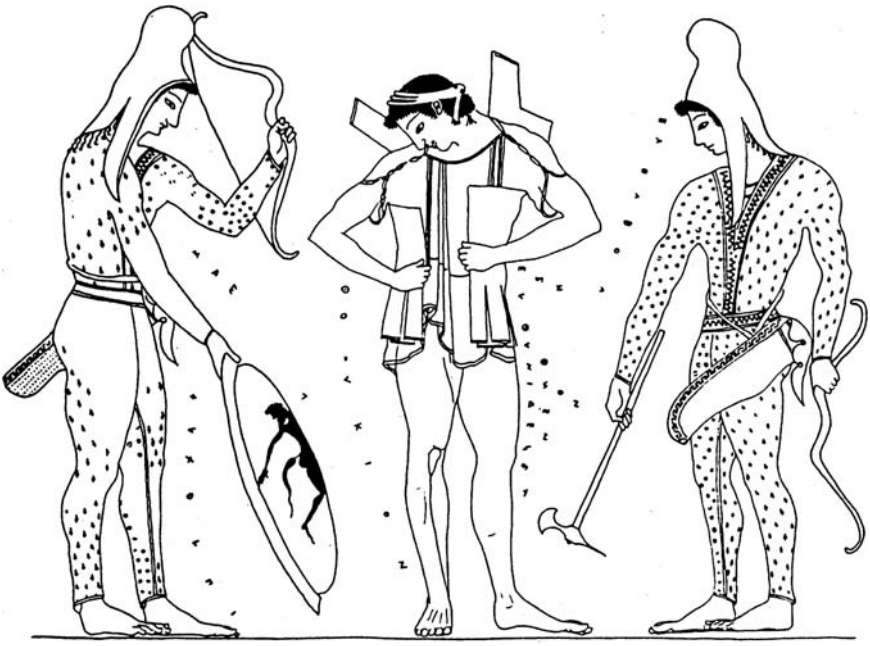

Fig. 3.4 Two Scythian archers helping a Greek warrior to arm, on the front of a Greek amphora, attributed to Euthymides, *c.* 500 BC. Munich, Antikensammlung 2307. Drawing after Lissarrague 1990b: fig. 18

public slaves: civic guards or watchmen, commonly but perhaps erroneously called a 'police force' (Aeschines 2.173; Andokides 3.5 adds that they were archers). While there is little evidence of Scythians at Athens before that time, it is in their capacity as warriors or attendants to warriors that Scythians are usually shown in Greek art, as on Euthymides' amphora in Munich (figure 3.4), contemporary with the Thames River cup.

The attributes of our youth suggest his interest in activities that distance him from the usual Scythian archers. The *keras* is not elsewhere connected in Attic vase painting with Scythians and is new to Athens at the end of the sixth century BC. As François Lissarrague has suggested, however, the *keras* is a symbol of the Scythian way of drinking (1990a: 90–1): neat according to the lyric poet Anakreon (Athenaios, *Deipnosophistai* 10.427a–b). Thus as part of a cup decoration it might be a gentle reminder of the effects of alcohol to the man who has already drained his cup. It might just as easily refer to drinking and/or rituals associated with the wine god Dionysos, as well as, or instead of, Scythia. Margaret Miller interprets our youth as an Athenian *symposiast* (Miller 1991: 78–81). The visual evidence certainly supports her argument.

Fig. 3.5 Asianizing *symposiasts* on the interior of a *sympotic* Greek cup, *c.* 525 BC. Oxford, Ashmolean Museum inv. 1974.344

Some Athenian vases dating from *c.* 530–470 BC show men in long gowns and boots wearing Oriental headgear (*kidaris, mitra, tiara, kurbasia*...). The turbaned men on the interior of a cup in Oxford (figure 3.5), for example, are almost certainly not meant to be transvestites but rather men dressed up as Easterners. Attributes such as the *barbitos* or Lydian lyre (which is shown just behind two of the turbaned men in figure 3.5) further connect these *symposiasts* with the luxury that Greeks associated with the East. Oriental imagery is highly appropriate for *sympotic* cups, whether or not *symposiasts* actually dressed up in this manner: the *symposion* was both an experiment in luxury and the appropriate context in which to contemplate/discuss the differences between Greeks and others: Scythians, Lydians, Persians, or even Amazons. Perhaps the *kidaris* had a more practical function: Paul Jacobsthal suggested that it might have been used to visually distinguish the *symposiarchos*, or leader of the drinking, from among fellow drinkers at the *symposion* (1912). Regardless, the *kidaris* and *keras* had become icons of *sympotic* Orientalizing by 500 BC: this much might have been clear to the Pithos Painter's audiences. Keith de Vries has called the export of such *sympotic* images east—to the Achaemenid (Persian) Empire—a misguided Athenian attempt to cater to foreign interests (1977: 48). Yet the abstract, inferential figures by the Pithos Painter would have been intelligible to the foreign audiences who wouldn't have been sticklers for detail.

The Export

As it turns out the Pithos Painter's products were popular abroad. His wares have been found in a remarkably wide range of locations (many in controlled excavations). Findspots are known for more than 70 per cent of his overall wares and nearly 90 per cent of the cups like ours, decorated with the 'Scythian *symposiast*'. An overwhelming 77 per cent of provenienced cups with 'Scythian *symposiast*' were found abroad (as opposed to only 70 per cent for the Pithos Painter's total output): four in the Black Sea area; one in Turkey; ten in Syria; two in Israel; four in Rhodes; one in Albania; two in Africa; seventeen in Italy; one in the UK. The distribution indicates a distinct preference for this iconic *sympotic* image abroad, and especially in Turkey and Syria, in both of which it is the only type of the Pithos Painter's images to have been found. This iconographic type accounts for roughly half of the Pithos Painter's works found in Albania, the Black Sea, Israel, North Africa, and Rhodes, but was somewhat more popular in Italy. The Reading example is by far the farthest travelled. While he ignores the ramifications of the Reading provenience, Paleothodoros infers rightly that the wide dispersion of the Pithos Painter's works was 'due to the success of the motif of the Scythian symposiast' (2003: 68). Whereas exports to the West were fewer than those to the East, the Pithos Painter's cups have been found as far West as Spain. The distribution of the Pithos Painter's wares gives us no hints as to precise trade routes through which the Reading cup may have travelled, yet it discourages any conception of Etruria as a conduit for these 'exotic' wares: few of the Pithos Painter's 138 works were found in Central Italy, and none at Vulci or Tarquinia, the most common Etruscan proveniences for Attic pottery.

As a creator of export items, the Pithos Painter had three advantages: quality, shape, and technique. His first advantage is the mediocre quality of his works. Most Greek trade was conducted at sea and the high risk of sea travel dictated that medium to poor quality goods were preferred as ballast or fill on boats that went in search of return cargo—foreign goods such as grain—in the chance of returning a profit (Hesiod, *Works and Days* 1.67). Archaeological evidence seems to support this idea (Gill 1991). There is thus an inverse correlation between the quality of craftsmanship and distant findspots (Johnston 1991: 203). The Pithos Painter's second advantage is his chosen shape, the cup. Throughout antiquity—certainly from the seventh century BC—drinking cups were the most commonly exported Greek vessels: they are found in just as large quantities abroad as at home. Their stackable quality and small size made type C cups excellent ballast: many could be squeezed inside a large open-shaped krater and thus occupy no additional

space. Third, the red-figure technique was second in popularity only to black-glazed wares. While peaks in the export of black-glazed cups are found at the end of the sixth century and the middle of the fifth century, cups decorated in the red-figure technique enjoyed international popularity continually, from the beginning of the fifth century: a large cache of early fourth-century red-figure cups, for example, was found in a wreck off the South coast of Majorca (Cerda 1987: 51–92; Arribas *et al.* 1987).

The Deposit

Could this humble Attic cup have been transported to the British Isles and deposited in the River Thames shortly after 500 BC? In 1991 Alan Johnston poetically asked such questions regarding the loss of this cup (1991: 203):

> When was it decanted into the river?
> How, or more pointedly, why did it get so far?
> Was its loss felt?
> How many more are there down below?
> What happened to all the others like it?

His less thoughtful answer—'The feeling nowadays is that the cup was thrown off a bridge in the last century' was based on 'the intrinsic unlikelihood that a Greek pot reached Britain in the fifth century BC' (1991: 203). Still, he set the odds at 'ten to one against [such] a piece being found in controlled excavations in this country' and those seem to us to be rather propitious odds. A strong enough chance, in fact, to investigate further. This evidence lies primarily in the cup itself—its condition and value—but also in the deposition of special artefacts such as weapons in similar contexts in Iron Age Britain.

The most notable aspect of the cup's condition is the intact river sediment, which is substantial enough to indicate a very ancient deposition into the river. The pitting on the reserved areas of the interior (i.e. where the glaze has been reserved so that the original 'red' of the Attic clay emerges to show a figure) is less remarkable and indeed consistent with burial of any sort. Salts and other corrosive chemicals 'eat away' at the clay where it is not protected by a hard finish. Yet the glazed surfaces also suffered erosion: scratches on the interior of the bowl and the lip suggest a period during which the cup might actually have been used. Perhaps these marks were caused by the careless use of a metal wine ladle. Or could a non-Greek have used it as a soup bowl?! One cannot be certain, but these scratches strongly indicate that the cup was used and abused prior to its deposition in the river. Furthermore, one cannot

ascertain whether this (ab)use was inflicted in Greece, in Britain, or at an intermediary location. But how and why did it travel? Was it (a) a gift; (b) a prized belonging that travelled far with its owner; (c) an item created for export abroad? Its low intrinsic value warns us against the first two suggestions, and our conclusions from the foregoing analysis strongly encourage our adoption of hypothesis c, that it was intentionally made for use overseas.

Another reason for taking this view is that the cup had been deposited in the River Thames. It is in the Lower and Middle Thames that a series of weapons of similar age has been found. Although little is known about their original contexts, it is generally agreed that such material had been placed there intentionally. They form part of a wider series of votive deposits associated with watery locations in Britain and Continental Europe (Torbrügge 1971). There is less evidence for the special treatment of ceramics in British rivers, but the occurrence of no fewer than four vessels of Mediterranean origin in the Thames or its tributaries may be more than a coincidence. The discovery of the Weybridge bucket in what was surely an archaeological context adds weight to the argument.

CONCLUSION

The Greek cup in the Reading Museum Service is of a particular form that is especially well travelled and may have been designed for use outside the Mediterranean. The example found in the Thames may be remote from its source, but this particular form has a wide distribution. It could have been among a small number of bronze and pottery vessels deposited in the rivers of Southern England during the Early Iron Age. If so, they formed part of a more general tradition of votive offerings with its emphasis on locally made weapons.

Of course there are other artefacts of Mediterranean origin which may have been imported to Britain and Ireland during the Pre-Roman period, but they are more widely distributed through space and time than the five that have been considered here. In some cases little or nothing is known about the provenance of those pieces. In others, the available information is sparse or contradictory.

The first writers on this subject would not have thought of rivers as an archaeological context, nor would the people who collected Classical antiquities during the Grand Tour, for it is only recently that the distinctive character of water finds has been appreciated in British archaeology. Perhaps that is one reason for accepting the credentials of vessels like the Greek cup in the

Museum of Reading. Barry Cunliffe once wrote a study of *Greeks, Romans and Barbarians* and he has published a major work on *Iron Age Communities in Britain*. This account of a little known artefact from the Thames brings those subjects closer together.

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4

Pre-Roman Iron Age Boats and Rocks in the North: Reality and Reflection

John Coles

This chapter is offered to Barry Cunliffe as a token of the respect that I have for his immense contribution to studies of the European Iron Age. Our research interests have sometimes overlapped, at the Glastonbury and Meare Lake Villages for example, but in general we have pursued different lines and areas of enquiry. Yet he has been unfailing in support of numerous projects undertaken in foreign fields and none, perhaps, more foreign than the study of rock carvings in northern Europe, a long way from his beloved Atlantic lands.

In 2003 an important documentation on north European late first millennium BC boats appeared, ably assembled and in part authored by Ole Crumlin-Pedersen and his collaborator Athena Trakadas. The boats, dated to the Pre-Roman Iron Age of the north, have been named after a famous discovery at Hjortspring, on the island of Als in southern Denmark. Here, in 1880 or thereabouts, fragments of planking were revealed by peat-digging, along with iron and bone spearheads; all were either burnt on the spot or discarded by the finders, and there the matter rested until a local antiquarian heard of the discovery and alerted the authorities. This led in the 1920s to a remarkable excavation, far ahead of its time in the technical recovery of the surviving evidence, in the documentation of stratigraphy and context, and in the conservation procedures devised.

The history of the Hjortspring boat and its huge array of equipment need not delay us here as it is well set out in the primary report (Rosenberg 1937), in a recent analysis (Randsborg 1995) and in the book noted above (Crumlin-Pedersen and Trakadas 2003). What has intrigued me, and I hope will intrigue Barry, is the location of the Hjortspring deposit, the boat lying not by the present or the Iron Age seashore of the island of Als, but near one of the

I thank Steve Minnitt, Bo Gräslund, Peter Jackson, and Bryony Coles for assistance on site, and Lasse Bengtsson for information from the archives at the Vitlycke Museum.

highest points on the island, and well inland. It was deposited in a pond, now a small peatbog some 50m in diameter, about 40–45m above sea level, and some two km from the eastern seaboard and about five km from the Als Fjord on the west. In other words, well inland and upslope, so the boat could not have been floated into its place of deposition, and destruction, but was somehow dragged there. Its weight is estimated to have been a half tonne or more.

Once in place, the Hjortspring boat was systematically broken up, and masses of warlike equipment were deliberately damaged, and thrown or dumped in and around the boat's carcass, along with several pole-axed animals; various parts of young animals (calf, lamb, puppy) marked the edge of the sacrifice area.

All of this is clearly set out in the 2003 report, along with details of two aspects relevant to this paper. The first is that full-scale replicas of the Hjortspring boat, about 19m in length, have been made and tested, and demonstrate a capability of holding 25–30 humans, plus equipment, and achieving a range of about 80–90km per day paddling in good to moderate weather. The second is that analyses of the weaponry and other gear deposited with the boat suggest that it began its final journey northwards with three other vessels, and a total of perhaps 100–125 armed men who were assembled from communities of the north European plain or the southern Baltic, exact location still not resolved. Upon arrival on the shores of southern Jutland or Funen, a confrontation with the local groups took place, and the invaders were annihilated, their weaponry captured, and at least one of their boats seized intact. This boat, and the army's weaponry, were thereupon sacrificed at Hjortspring, in the upland pond well away from the accessible shoreland. In a final act of despoliation, hundreds of waterworn stones were hurled into and against the boat, and the agency of such an action might have involved not only the triumphant defenders but also members of the local community invited to witness the ultimate sacrifice of those who had dared to invade; their bodies lie undisclosed at present. The date of this event lies in the mid-fourth century BC on the basis of the equipment and radiocarbon analyses of the boat timbers.

What intrigues those of us who study the rock carvings of southern Scandinavia is that, in a specific and restricted area of western Sweden, some 400 km to the north of the island of Als, a series of clear images of the Hjortspring boat-type appear, along with other carvings of the same age (figures 4.1 and 4.2). These carvings were in fact discovered on the rocks some years before the boat itself was detected in 1880, and were reported by Baltzer (1881: Taf. 39–40,3), but of course there could be no linkage made between boat and images until 1937 when Rosenberg's excavation report appeared.

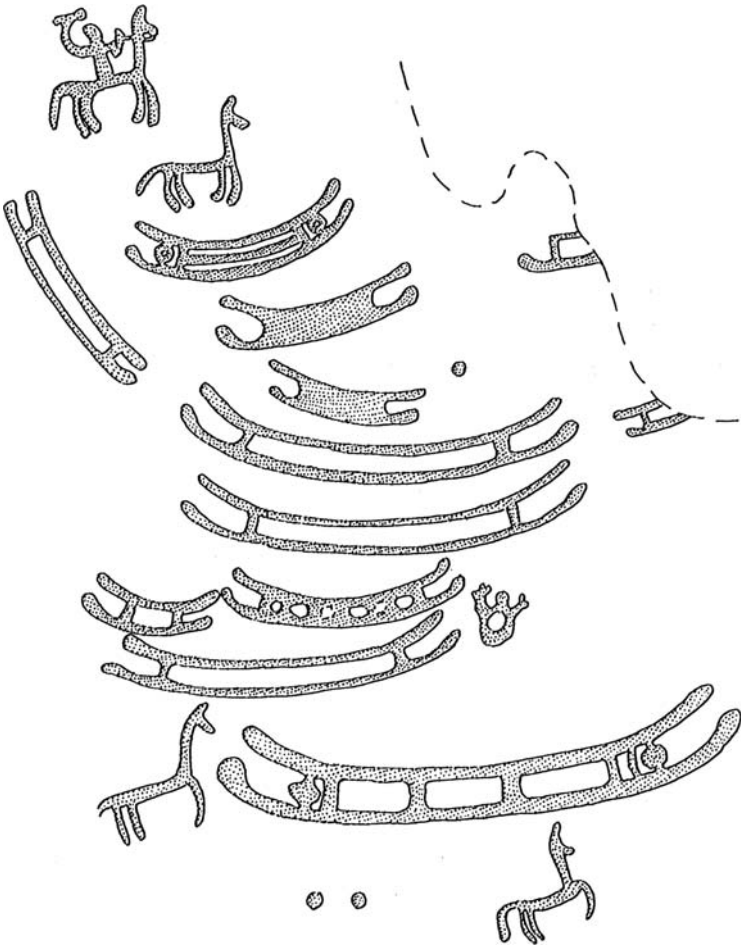

Fig. 4.1 Images of Hjortspring boats on the rocks at Halvorseröd, Bohuslän. The lowest of the boats is one metre long

It is generally believed, rightly, that the vast majority of rock carvings of southern Scandinavia are of the Bronze Age, from perhaps 1500 BC to about 500 BC. The images on the thousands of sites are dominated by boats, in great variety and, importantly, mostly occupied by crews, or upright lines called strokes, and often these have round heads, and some may be accompanied by clearly defined humans, large and bearing weapons. Images of boats like these appear on well-dated bronze objects such as razors, tweezers, and knives, and these grave-goods allow a clear chronological sequence of Bronze Age boat designs to be promoted (e.g. Kaul 1998). It is important to note that

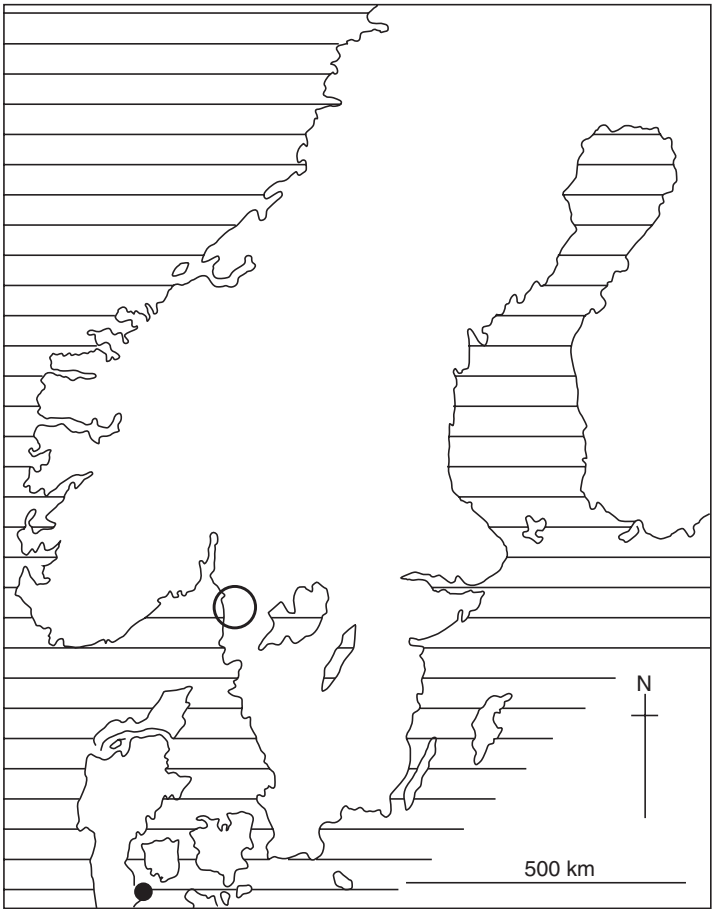

Fig. 4.2 Southern Scandinavia. Black dot: the site of Hjortspring on the island of Als, Denmark. Open circle: area in northern Bohuslän, Sweden, where Hjortspring boat representations are found

the majority of these boat images have crew strokes, and the boats' direction of travel, grouping, and general flow allow a measure of confidence in their existence as active parts of a society occupying a landscape dominated by the sea.

Within this great body of images the Hjortspring-type boats stand out as distinctly different, including the general absence of crew aboard the vessels, and although the boat itself at Hjortspring has been the subject of much speculation, the carvings have received only sporadic and incidental mention.

One site in particular may offer some new elements to the story. The rock carving site of Halvorseröd (Tanum 208 in the regional site record) was first seen by Baltzer probably before 1850. He recorded much of what still exists today on a sloping rock overlooking a narrow valley (figure 4.3). Already, however, the exposed granite rock had been partly quarried away and he did not pursue the detached blocks that lay nearby, many already removed for building purposes. It is quite likely that the quarry operations were terminated when someone realized that carved images on the rock surface were being destroyed. The drill holes used in the work of detachment still remain on the scatter of blocks near the site (figure 4.4), and are wide enough to suggest that the technique used to quarry the blocks was of the nineteenth century, and involved drilling, filling with water, and then awaiting the formation of winter ice and nature's power.

In the mid-twentieth century, the site was explored by Torsten Högberg, and he recorded not only the intact surface seen by Baltzer but also one of the huge detached blocks that still lay near its original place beside the site. His plan, in the archive at the Vitlycke Museum, was reproduced in a catalogue of his work (Bengtsson and Olsson 2000: 15–16) but not shown in the correct alignment. In 2004 we made a new recording of the site, with near-total rubbings of the whole surface, including the detached blocks, and all of the carved surfaces were then re-assembled in a plan that may still have problems of joining (Coles 2005: figure 179) (figure 4.5); in 2006 further work allowed more details to be found on the separate block of granite (figure 4.4), and this investigation continues.

The site must have once been large and complex, and of its seventy images so far recorded, all but one or two fall clearly within the compass of the Pre-Roman Iron Age, twenty-nine boats of Hjortspring type, twenty thin-bodied animals, four horse-riders, and six other humans including spear and shield-bearers. Only on the southeast of the surface is an image of a Bronze Age boat, with crew strokes and a shape unlike that of all the other boats.

This site is one of a small number of Pre-Roman Iron Age sites so far identified in northern Bohuslän. Perhaps as few as forty sites only are known that belong to this episode of rock carving, and through the Hjortspring boat itself and the other pieces of evidence—weaponry, horse-riding—it is likely that we are dealing with an activity of the fourth century BC or thereabouts. The sites so far known are concentrated in a small area of northern Bohuslän of about 3km west–east, and 5km north–south, with a very few outliers farther to the south; current explorations may well reveal more. Almost all of these sites lie low in the landscape today, 15–20–25m above present sea level. This means that at the time of carving, the chosen rocks lay near the contemporary sea. Furthermore, of these forty surfaces, about thirty were

Fig. 4.3 The small exposed rock surface at Halvorseröd, with many images of Hjortspring-type boats and other designs. The rock overlooks a narrow valley with stream and a former wetland some 50m or so from the carvings. A small spring flows sporadically across the surface. Beyond the far edge of the surface is the quarried area

already inscribed with images of the Bronze Age, and sometimes only one or two Pre-Roman Iron Age images were added, sometimes many more.

The well-known site of Litsleby, for example, only one km to the east of Halvorseröd, has about fifty late images added to a surface already carved with eighty Bronze Age forms. Another adjacent site at Tegneby has nearly one hundred images of the Pre-Roman Iron Age, mostly thin-bodied horses, and very few earlier forms. Some of these sites are set very low in the landscape, on shallow-sloping surfaces next to streams or meadows, and very close to former shorelines, in a region once wholly dominated by the sea where major inlets allowed passage for boats into areas now lying 10km or more from the shoreline of today.

What sets Halvorseröd apart from all of this is its own setting in the landscape of the first millennium BC. The site lies at an altitude of 40m above present sea level; that is about 20m higher than all of its contemporaries,

Fig. 4.4 Some of the quarried blocks, several barely moved from their original position. The intact rock surface lies at bottom right of the photo. Drill holes may be seen on the block being inspected. The horizontal surfaces of two of the blocks have carved images, as does the vertical face of the block in front of Bo Gräslund

insofar as the records indicate, and it is in fact almost 30m higher than a contemporary site just to the southeast. Halvorseröd is also unusual in its remoteness, with barely any contemporary or near-contemporary sites anywhere in its surrounds. A few cupmarks lie to its south, a couple of burial mounds far to the east, but little else has been recorded (figure 4.6).

The site is on a small spur of rock projecting out towards a stream that flows northwards to join a major flow of water (figure 4.3). Along the stream course is a flattened area once a marshland, now wooded but still wet The stream cuts through this, exposing water-worn pebbles of considerable size.

The landscape of Halvorseröd is clearly an unusual one for such a site. And the carvings themselves also have features unmatched elsewhere. There appear to be two main groups of images. At the north end is an orderly array of boats surrounded by horses and an armed rider (figure 4.1). The eastern cluster on the rock surface carries a more confused array with a line of humans and a scatter of detached pieces of boats, and three unique images noted below

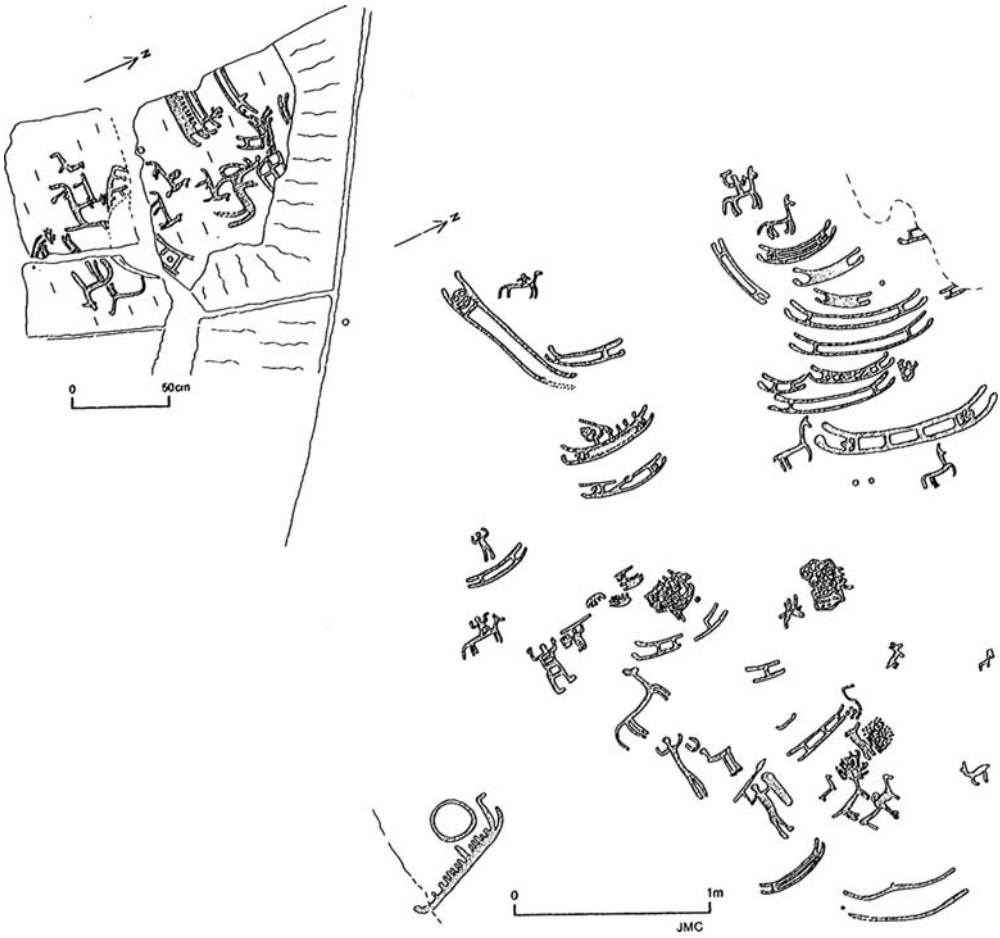

Fig. 4.5 Plan of the Halvorseröd site with the quarried blocks re-assembled in an alignment based on surface striations of the granite, the block at upper left moved (figuratively) into place

(figure 4.7). Above these are two boats one of which seems to have collapsed along its gunwale; this image is very unusual and must surely be a deliberate representation of a boat rendered worthless as a craft for transport.

Almost all of the non-boat images are characteristic of the Iron Age of the region, warriors with spear and shield, and horse-riders, some armed. Three other images are less easily identified. One, near the eastern edge, is a cluster of about seventy tiny round depressions pecked into the surface, and the other two are more complex, wavy lines bordering and outlining uncarved ovals,

Fig. 4.6 The site of Halvorseröd (A) lies at about 40m above sea level, much higher than any of its contemporary sites, and remote from any other sites other than small cupmarks on a rock to the south (black dot). Other cupmark sites lie to the east and south. Over the valley to the north-east are two burial cairns on an eminence (open circles)

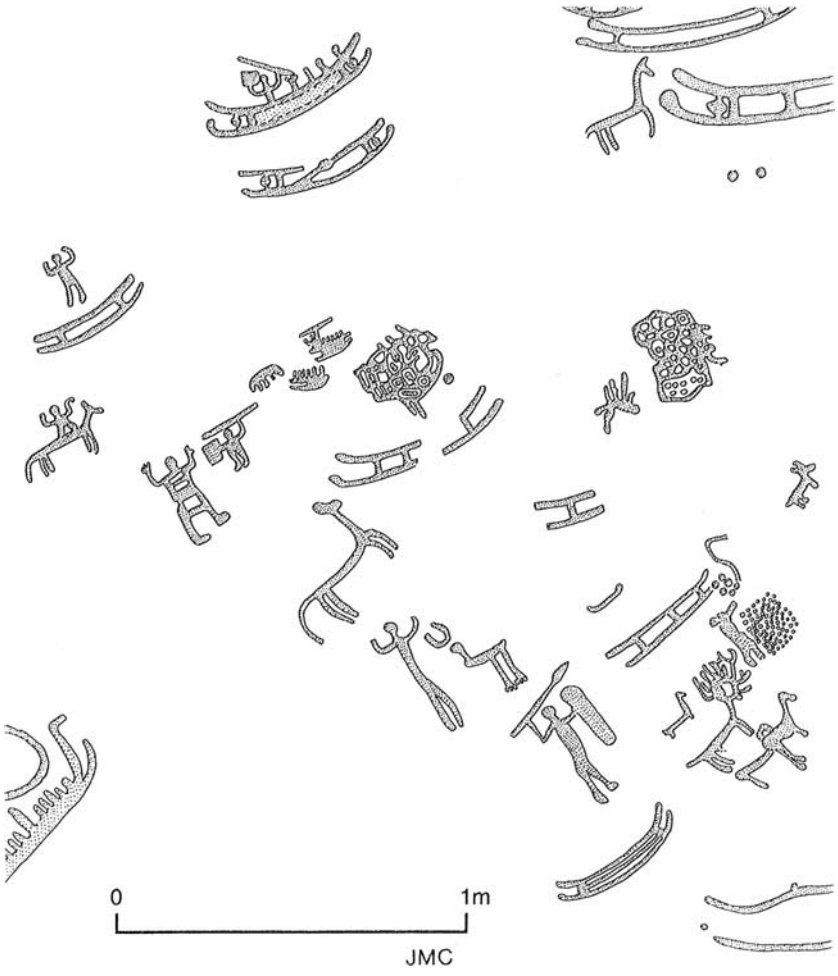

Fig. 4.7 The eastern part of the site at Halvorseröd, with Pre-Roman Iron Age boats, horses and warriors, and complex designs

circles and other shapes. It may not be too far-fetched to suggest that the seventy circular pecks might represent an array of pebbles, and the others might be some sort of emblem or insignia, or even indicate a stacking of weaponry awaiting deposition.

The theory advanced here will by now be obvious, that on the rock are the remembrances of the Hjortspring story, the boats stacked or assembled in an orderly way, and guarded (on the north of the site), and the destruction of

boats and the deposits of weaponry and stones (on the east and south). The images on the detached blocks on the southwest are a part of this scenario, and although much detail has been lost from this area, the recent work has already added five horses and several boats and other impenetrables to the assembly. It may well be that the Hjortspring episode, far away in the south, was more complex than we understand at present. And of course the Hjortspring boat-type must have been one of the dominant vessels of the coastal waters of the north European plain in the mid-first millennium BC, even if only one example has survived. As an aside, not a single example of the Bronze Age boats whose images are carved in the thousands on the rocks, is so far known from Scandinavia.

Below the site at Halvorseröd, some 25m away, is the stream and an abandoned wetland which might just contain additional evidence relative to the Hjortspring boat and its lost companions and deserves some further exploration. At the very least the rock carvings reflect the reality of the boat and perhaps its fate, and also the communities involved in events in the mid-first millennium BC. Further enquiries will doubtless continue, as they always do, a practice that has kept Barry engaged in his own productive research ever since, as an undergraduate, he entered my room in the Department of Archaeology at Cambridge some forty-five years ago.

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5

Coasting Britannia: Roman Trade and Traffic Around the Shores of Britain

Michael Fulford

A major theme of Barry's research has been the investigation of the relations between the Roman world and western Europe, particularly Britain. While, as we shall see below, his fieldwork has contributed very substantially to this theme, there have been several major synthetic treatments (e.g. Cunliffe 1988; 2001a). He has also sailed vicariously the seaways of the Atlantic and the British Isles through reconstructing the voyage to northern waters of Pytheas, the Greek 'discoverer of Britain' in the fourth century BC (Cunliffe 2001b). This contribution explores a little further maritime activity around Britain's shores in the Roman period, particularly in the period of the first century BC to third century AD, and the ideas expressed by Barry in his *Facing the Ocean* (Cunliffe 2001a: 417–21; 443–6).

Between the last quarter of the first century BC and the mid-third century AD Britain was in receipt of tens of, if not hundreds of thousands, conceivably millions of consumer goods and containers of wine, olive oil, etc. from the Roman world, mostly from the provinces of Gaul and Spain, but also Germany and from across the Mediterranean (Fulford 1991). Universally among military sites of this period, and almost ubiquitous among sites in 'lowland' Britain, are finds of Roman coins, originating mostly from the mints of Rome and Lyons, samian pottery from Gaul and, among amphorae, sherds of the olive-oil-carrying Dressel 20s from the Guadalqivir valley of Baetica. How did this material reach Britain?

Considerable evidence has been amassed for the location of Roman ports and harbours around the coast of Britain, either indirectly on the basis of, for example, extrapolating the line of a Roman road heading towards an unidentified or lost site on the coast, or directly on the basis of the remains of harbour works such as quays and piling, but were these all of equal importance throughout the period in question (e.g. Brigham 1990; Cleere 1978; Fryer 1973; Milne 1985)? Many categories of material have distributions

across Britain, though the incidence of finds is usually greater in the 'lowland' southeast, rather than in Wales or in the northern counties south of Hadrian's Wall, or between the Hadrianic and Antonine frontiers. Nevertheless, the quantitative data are not such that they point in any particular direction(s) as to the port(s) of origin (e.g. for samian, cf. Hartley 1972: figs. 1–3). The road and, to a lesser extent, river networks of Britain ensured effective distributions, while the prioritization of the military market on the frontiers has meant that there is little evidence of distance-decay in the distribution patterns of imported goods.

A few wrecks and wreck sites have been identified and excavated, for the most part from harbours or estuarine locations (e.g. London, Marsden 1994: 1–129), but from only one location, that on the eponymous Pudding Pan sands in the outer Thames Estuary, have quantities of any one type (Central Gaulish samian) of these classic, Roman consumer goods been recovered in quantity (Hartley 1972; Hill, *et al.* 2001) (Fig. 1). For the most part the pottery vessels recovered date to the Antonine period. This is in marked contrast with the evidence of wrecks from the Mediterranean, particularly from the coasts of Spain and Narbonensis, packed with cargoes of transport amphoras, table wares (both among the most archaeologically visible of the materials recovered from terrestrial excavation) and other goods (Parker 1992). The distribution of Mediterranean finds can certainly be correlated with the differential intensity of recreational diving and the limited wreck evidence from the south coast of Britain may well reflect a relatively less intense history of diving in the colder waters of the Channel as well as poorer visibility under water.

Given these issues is it possible to make further progress in trying to determine the relative importance of particular cross-Channel routes? Does it matter how the material reached Britain? In the first place much more is known about the total distribution patterns of certain artefact types, particularly of ceramics, so that it is possible to assess the British presence against the continental context. This is particularly helpful in distinguishing between the role of Atlantic-borne as opposed to cross-Channel trade. We also have a great many more published assemblages of material culture from late Iron Age and Roman sites around the shores of southern and eastern Britain which allow the possibility of a greater definition of probable route ways. We also have considerably enhanced our knowledge of the role of London as a port, notably through the publication of waterfronts and their associated finds' assemblages (e.g. Miller, *et al.* 1986). The distribution patterns of the major pottery producers within Britain, such as of Mancetter-Hartshill mortaria and Verulamium-region mortaria and white wares (Tyers 1996: 123–4, 132–4, 199–201), will also be helpful in our analysis.

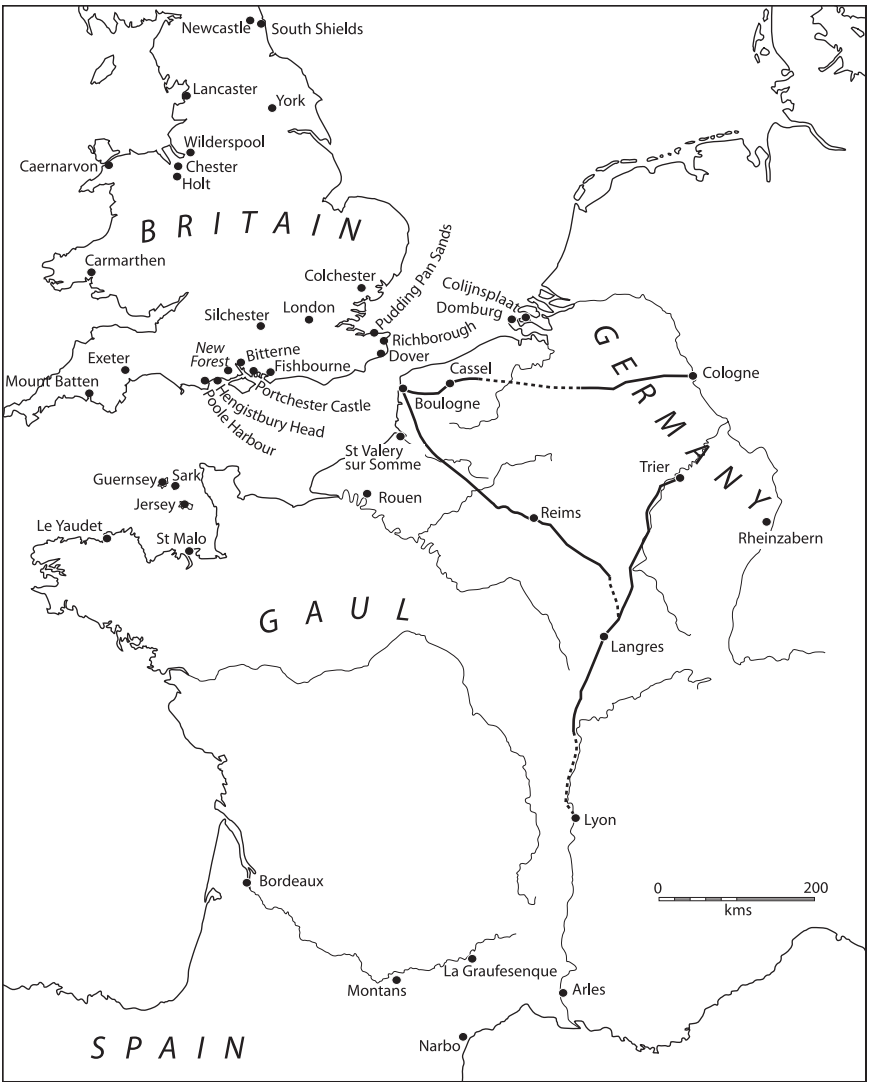

Fig. 5.1 Location of places mentioned in the text: M. Mathews

Why does it matter? There is continually accumulating evidence from the Roman world that a considerable amount of economic activity was dedicated towards meeting the perceived needs of the state, in particular in supplying the armies of the frontiers and in feeding the population of the imperial capital at Rome. There is abundant evidence now for example, to demonstrate how goods were drawn from the Mediterranean to service the German and

British frontiers (examples in Tyers 1996: *passim*; Fulford 1992; Whittaker 1983; 1994: 98–131). But how closely was it directed? Was there a multiplicity of routes to Britain, or was traffic much more closely controlled? In the case of the former, it would suggest numerous ports of more or less equal weight, particularly around the continental-facing coasts. In the case of the latter the focus would be on a few. In each of these crudely contrasting cases the challenges of distributing cargoes inland would be very different. There is also the question of how and where commodities destined for the civilian market were separated out from those intended for the army and the office of the procurator. Overall any conclusions will have a significant bearing on understanding the social and economic history of Britannia, and the provinces of the Gauls and the Germanies.

There is a further important factor. Since Duncan Jones' estimation of the relative costs of transport by land, river, and sea (1974: 366–9), there has been a widespread assumption that Roman economic behaviour would favour transport by sea, wherever possible, secondly by exploitation of rivers and, finally, the road system. On this basis one might expect, on the one hand, intense use of direct sea routes from the Mediterranean to Britain, on the other, the use in Gaul of the shortest combinations of road and river routes to the Channel coast. In reality, the Atlantic seaways seem to have been avoided and no obvious economies were taken in the transport of Gaulish goods and commodities to Britain. As has been pointed out, the location and relative importance of the great samian factories in central and east Gaul make no sense in terms of their distance from their principal consumers (e.g. King 1981). By whatever route taken to Britain, Lezoux samian was at least twice as expensive to transport as its east Gaulish counterparts. The implication is that, whatever cost was passed on to the consumer, it did not include the transport cost. In this scenario the choice of route is no longer important provided that there was infrastructure, presumably the *cursus publicus*, to support the passing traffic. Although choice of routes is often difficult to prove, there is continually accumulating evidence for transport of goods by road, particularly from Britain, and without obvious impact on the cost of the goods being transported.

The location of the vast majority of Barry's excavations has been well located to help address these, and related questions about maritime traffic and trade, principally between, or around Gaul and Britain, being concentrated either on, or close to the south coast of England, the Channel Islands and the north coast of Brittany, and these individual projects have also contributed significantly towards the larger picture (figure 5.1). His excavations in southern England at Mount Batten (Plymouth) (Cunliffe 1988b), Hengistbury Head (Cunliffe 1987), Portchester Castle (Cunliffe

1975), Fishbourne (Cunliffe 1971a and b), Le Yaudet (Brittany) (Cunliffe 1995) as well as Jersey (Cunliffe 1992), Guernsey (Burns, *et al.* 1996) and, currently, Sark in the Channel Islands, have all contributed significantly to our understanding of cross-Channel trade between the Iron Age and the Roman period. The final report on the excavations at Richborough, Kent, edited by Barry, not only contains important information about the economic relations of the site, but also a perceptive essay on the *classis Britannica* (Cunliffe 1968).

For the beginning of our period, when total quantities of material imported into Britain were relatively small, it is possible to discern different patterns of trade with some clarity. From Iron Age sites like Mount Batten and Hengistbury Head, for example, a picture emerges of both short-distance, cross-Channel trade between Armorica and southern Britain and a long-distance Atlantic traffic from the Mediterranean, perhaps via Bordeaux, carrying, among other cargoes, wine in Italian Dressel 1A and Spanish Pascual 1 amphoras in exchange for metals and other commodities (Galliou 1984; Tyers 1996: 89–90, 92–3). A variety of ceramic and coin finds attests the north–south traffic between the Breton coast and the south of England (Cunliffe and de Jersey 1997). One source of the long-distance trade can reasonably be adduced on the basis of wreck sites off the Brittany coast and terrestrial distributions in Britain and Gaul (including Armorica), but how much of the traffic was carried on boats sailing directly from the Mediterranean, rather than from Bordeaux, is far from clear. Within southern Britain, however there are two distinct concentrations of these early finds—central southern (Dorset, Hampshire) and eastern Britain (Essex, Hertfordshire, Kent), the latter perhaps suggesting a second area of entry focused on the Thames Estuary and probably originating from ports between the Rhine delta and the estuary of the Somme.

Following the surge in the volume of imports from the last quarter of the first century BC it becomes increasingly hard to identify how material arrived in Britain, but it would seem that the shorter crossings between the Thames Estuary and the corresponding continental coast became much more important. This is evident in the distribution of Gallo-Belgic pottery (*c.* 20/10 BC—*c.* AD 70), whose principal source was close to Rheims, and whose continental distribution does not extend much further south than the Seine valley (Tyers 1996: 161–6). While the bulk of British finds concentrates among sites in the Thames Valley and in adjacent counties to the north, clusters of finds around the Solent and the coast of central southern England suggest the possibility of ports as far south as the mouth of the Seine also contributing to this traffic (figure 5.2).

From the Claudio-Neronian period, the ubiquity of certain finds such as South Gaulish sigillata and amphorae of Dressel 2–4 and Dressel 20 types

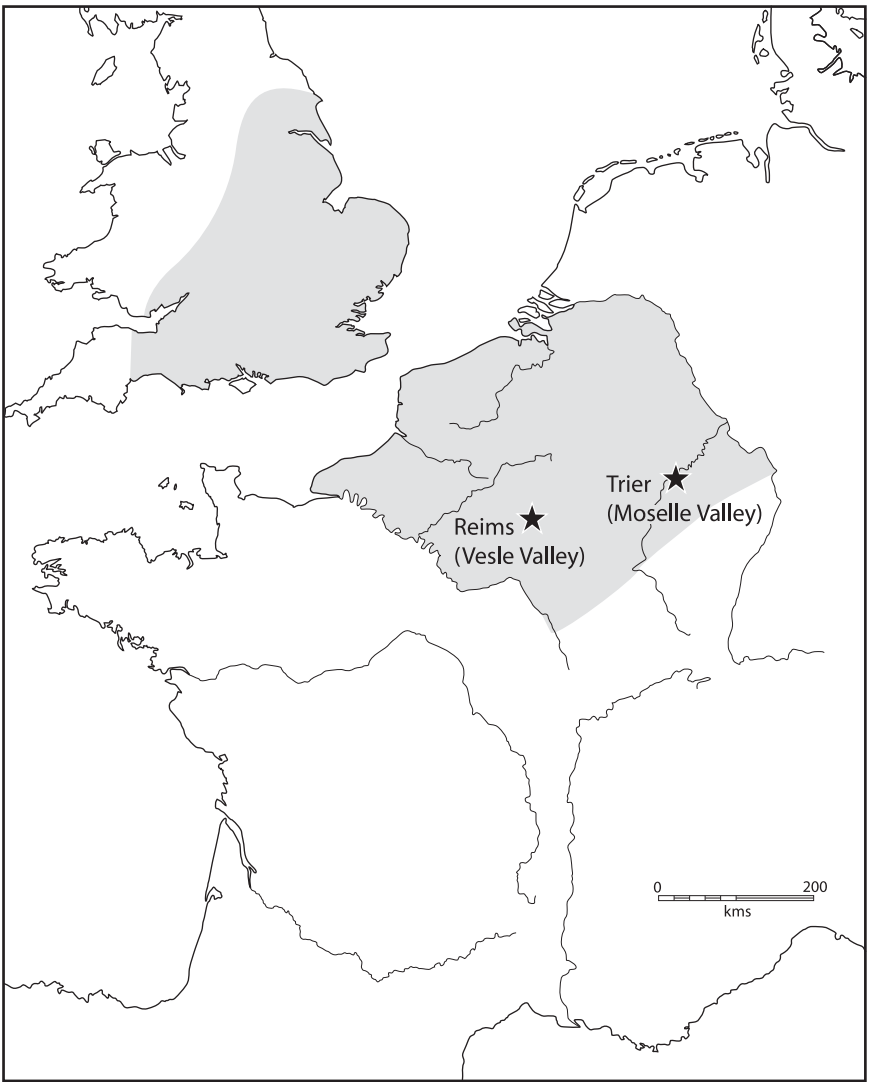

Fig. 5.2 The principal distribution areas of Gallo-Belgic wares (after Tyers 1996, fig. 200): M. Mathews

both in Britain and Gaul makes it much harder to distinguish the relative importance of different routes. There are, however, some pointers. In the case of South Gaulish sigillata it is noticeable that the Montans production is not only relatively rare in Britain, but its distribution is clearly skewed to the southern and western seaboards (*ibid.*, 112–13). This mirrors the coastal

distribution in Gaul itself, which gives weight to Bordeaux, where it is relatively more abundant than sigillata from La Graufesenque, as the major port of export. More extraordinary is the distribution pattern of the sigillata from the adjacent potteries at La Graufesenque, just over the watershed of the Garonne, whose principal mode of distribution would seem to be southwards to the *via Domitia* and then via Arles to the Rhone and northwards into Gaul, then by road and river (Moselle) to the German frontier (*ibid.*, 112) (figure 5.1). Although its distribution in Britain, Gaul and Germany is pervasive, the probability of the Rhone-Rhine axis being the most important for its distribution is supported by those of other types of vessel, notably Baetican amphorae carrying olive oil and fish-sauce. Both the Dressel 20s and the Dressel 7–11 types are found in wrecks along the coasts of southeast Spain and southern Gaul and are ubiquitous in Britain, Gaul and Germany (*ibid.*, 87–9, 98–9). As they are rare as site finds in Portugal and northern Spain, this emphasizes the importance of the route via the Mediterranean and the Rhone to the Rhine. A study of the distribution of the stamped handles of Dressel 20s in Britain shows the concentrations distributed between London and the southeast and the frontier garrisons in Wales and the north (Monfort and Funari 1998). Although only a small sample, it strongly emphasises the Kent coast and Dover-Richborough, and the Thames Estuary and London, as principal points of entry (*ibid.*, figures 26–30) (figure 5.3). The distribution of all these artefacts seems counter-intuitive in relation to Britain in that, what on the face of it seems the obvious, cheaper route, by sea around the Atlantic shore from Baetica was ignored at the expense of a cumbersome river and land route through the centre of Gaul. However, this route had originated in relation to the supply of the Augustan armies campaigning across the Rhine in Germany and the subsequent development of the Rhine frontier in the early first century AD. To supply Britain (from AD 43) they might sensibly be expected to build on the existing route from the Mediterranean. In this case crossing the North Sea to the closest ports in Britain would be a simple extension of supplying the forts along the lower Rhine. With most of the army destined for Britain being drawn from Germany, it is likely that at the outset the Rhine was the immediate point of origin for supplies consumed in Britain. The question is whether this arrangement changed as systems matured between the mid-first century AD and the mid-third century AD. If so, at what point in the trans-shipment of these goods was the decision made to despatch particular elements of cargoes to Britain? Did this happen in central Gaul, perhaps at Langres, with some goods being transferred to the Seine and across to southern Britain, or all the way by road via Rheims to Boulogne and across to Dover or Richborough (figure 5.1)? Or, if decisions continued to be made about distribution in Germany, where did this re-routing take place? One

possibility might be Cologne, which was the last point on the Rhine where a choice could be made between transport by road to Boulogne, or by river to the mouth of the Rhine and then across the North Sea to London, Colchester or Richborough. Finally, there is the question of when and where did these long-distance goods filter from the state-organized supply system into the private market.

It is relevant to observe that the bulk of the epigraphic evidence which records traders with connections with Britain, either *negotiatores Britanniciani* or *negotiatores cretarii Britanniciani*, was recovered from the Rhine/Scheldt delta at Colijnsplaat and Domburg in the form of dedications to Nehalennia (figure 5.1). These represent a small proportion of more than 150 dedications recovered from the two sites and made by a variety of traders, sometimes distinguished by their particular specialisation (whether in alec (fish-based

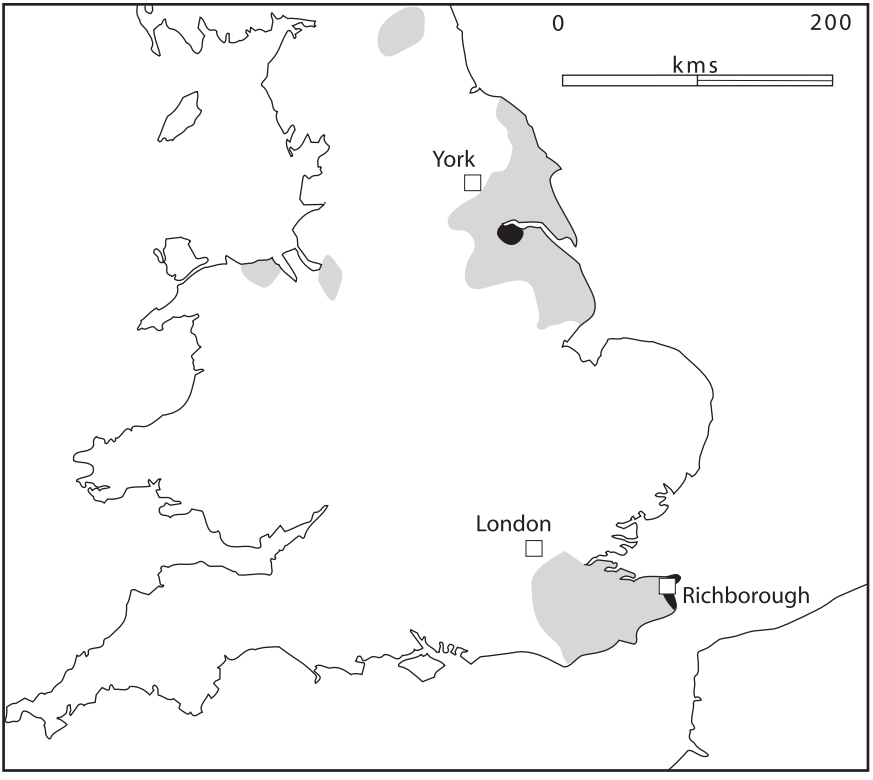

Fig. 5.3 Areas with the highest density of Baetican Dressel 20 stamped amphora handles (after Monfort and Funari 1998, fig. 26): M. Mathews

relish), salt or wine), sometimes by their place of origin, giving thanks for a safe landfall (Stuart and Bogaers 1971). The date range of these pieces is difficult to establish, and the coin evidence suggests that both sites were occupied between the Flavian period and the late third century. Nevertheless, Hassall suggests that the majority perhaps belong to the period between the late second and the early third century (Hassall 1978: 44). No other site in Britain or the coast of Gaul and lower Germany has produced anything approaching this number of inscriptions referring to trade or sea-faring in some respect. Further inscriptions referring to traders specifically associated with Britain have been found in Bonn and Cologne on the Rhine and from Cassel, on the road from Cologne to Boulogne, in the north of Gallia Belgica in modern-day Belgium (*ibid.*: 43). Further to this, Bogaers' reading of one of the Colijnsplaat inscriptions, *negot(iator) Can[tianus]... Geserecan...*, merchant trading with Cantia and Gesoriacum, specifically introduces a triangular relationship of the Scheldt, Kent and Boulogne (Bogaers 1983: 13–15), while the recent find from London of a dedication by Tiberinius Celerianus, *moritix*, (= sailor, or shipmaster, etc.), described as a *civis Bell(ovacus)*, provides a further link with northwest Gaul (Tomlin and Hassall 2003: 364–5). While the last two inscriptions broaden the relationship to Scheldt, Thames/Kent, and Boulogne/northwest Gaul, the rest of this category of evidence might lead one to believe that the east–west crossing between the Thames Estuary and the ports of the Scheldt/Rhine delta was the most important in the movement of goods to and from Britain. Whether there were frequent voyages from the Rhine/Scheldt estuary to more distant ports up the east coast of Britain is unclear, but an inscription from York recording a *L(ucius) Viducius*, of the tribe of the Veliocassii (tribal capital at Rouen on the Seine) and a *negotiator Britannicianus* recalls a dedication to Nehallenia from Colijnsplaat by a *Placidus Viduci fil(ius) cives Velocassinius negotiator Britannicianus*. Opinion considers that these refer to the same person (Hassall 1978: 46–7; Bogaers 1983: 21–4). Dedications to Oceanus and Neptune from Newcastle-upon-Tyne (*RIB* 1319; 1320) are linked with *RIB* 1322 which commemorates the arrival of reinforcements from the two Germanies in the mid-second century, so implying they arrived by sea direct from the continent (cf. Bogaers 1983: 24–7).

Before attaching too much importance to this epigraphic evidence, especially in the absence of abundant, reciprocal material from Britain, we should consider further the role of Boulogne, a port, like Dover, which has not yielded epigraphic evidence of the kind recorded from Domburg and Colijnsplaat, and the *classis Britannica*, for which, *mutatis mutandis*, no epigraphic evidence is known from the sites in the Rhine/Scheldt estuary. We should not privilege the remarkable evidence from the estuaries of Rhine and Scheldt

when we can reasonably infer from the brick stamps a zone in which the *classis Britannica* certainly operated (Peacock 1977). Goods transported by road from central Gaul, or from Cologne could have been shipped across from Boulogne to Dover, both bases of the fleet, as well as Richborough, either through private merchants, or through the offices of the fleet (see below) (Fig. 5.4).

From London and Richborough there is considerable, respective evidence for them functioning as major ports up to the mid-third century and end of the second century AD. Extensive remains of successive waterfronts dating between the later first century and the mid-third century AD have been recorded from London, particularly along the north side of the Thames in the last thirty years (Brigham 1990; Marsden 1994: 15–32, 105–8)). Much of the evidence of chronology derives from the timbers, the majority of whose felling dates are determined by dendrochronology to be between the late second and early third century, with the latest dating to the second and third quarter of the third century. Associated with the dumps of material

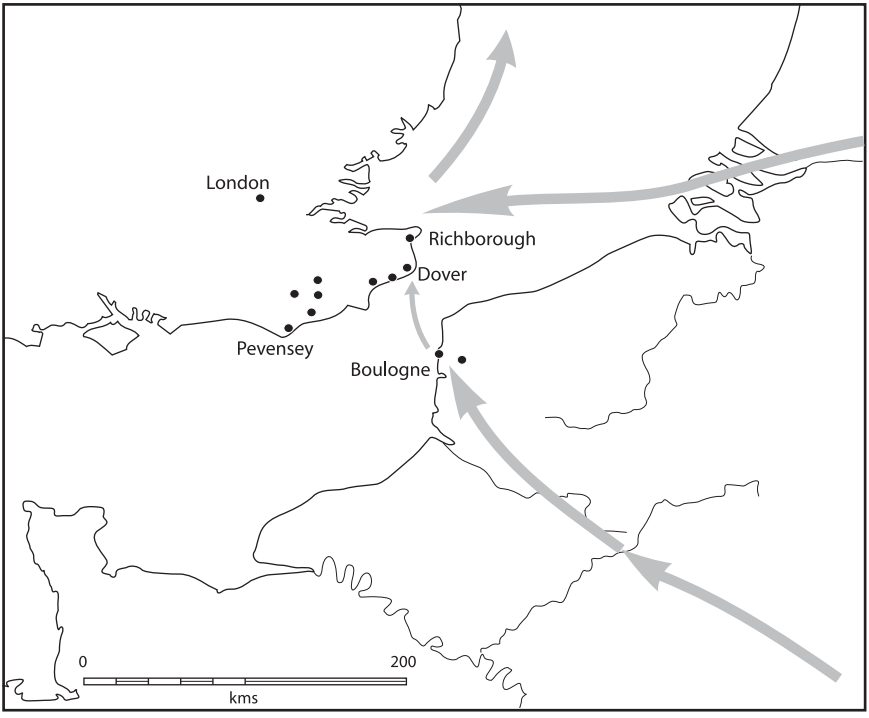

Fig. 5.4 The distribution of stamped tiles of the *classis Britannica* (Peacock 1977): M. Mathews

laid down to consolidate the ground behind the revetments are quantities of imported goods, the majority of which are table and drinking wares imported from Gaul and Germany. There are also coarse wares from both North Gaul and the Rhineland, e.g. at St Magnus House (Miller, *et al.* 1986). At Richborough, however, the evidence of samian stamps suggests decline in the port's activities by the end of the second century (Dickinson *et al.* 1968: 148).

On the basis of the evidence for a falling tidal regime and the generally, flat-bottomed character of the remains of ships recovered from the Thames at London and on reconstructions of tidal regimes it has been suggested that sea-going vessels unloaded their cargoes at Richborough or Dover whence they were taken in smaller, shallow draught vessels to London (Milne 1995: 78–81). Whether or not this was so, it is certainly true that Richborough has produced a similar range of imports as London, though only the amphora, mortarium and samian stamps have been subjected to any form of quantitative study (in Cunliffe 1968). The similarities appear closest in the second half of the first century when the presence of quantities of North Gaulish (Pas de Calais) mortaria as well as other wares strongly suggests that Boulogne was a major point of departure (Tyers 1996: 125–7). Subsequently, from the later second century (as also at Dover), the rarity at Richborough of types of East Gaulish samian produced on the Moselle at Trier, or on the Rhine at Rheinzabern, which are much more abundant in London, emphasize the differences between the two sites and thus point up the role of ports in the Rhine estuary serving London direct.

That Boulogne, Richborough, and Dover were in close contact with each other is emphasized by what is known of the activities of the *classis Britannica* as represented by the unit's tile stamps which are particularly well represented at Dover and are products of both British and Gaulish workshops. The distribution of these stamps in Britain is limited to the southeast between Pevensey on the south coast and London, with a concentration associated with iron-making sites in the Weald (figure 5.4). On the Gallic side of the Channel, only one other, inland find-site is known other than Boulogne (Peacock 1977). Beyond this confined area of the Channel and Thames Estuary, the fleet is otherwise only certainly associated with the construction of Hadrian's Wall (*RIB* 1340, 1944 and 1945). The short crossing of the Channel was also exploited to send building stone from the quarries at Marquise near Boulogne for use at Richborough (K. Hayward, pers. comm.). Its use is only rarely attested elsewhere in the southeast of Britain.

In many ways the axis of the short-crossing between Boulogne and Dover and Richborough represents a kind of break-point in the evidence for the way the coastal waters of Britain were navigated in the Roman period. To the north we find evidence of the distribution of the North Gaulish grey wares along

the east coast of Britain to the northern frontier; the same wares are rare westwards along the Channel coast (Tyers 1996: 154–5). Likewise the distribution of the Pas de Calais mortaria, and indeed the Soller mortaria produced southeast of Cologne, would suggest that London was the central point of distribution within Britain (*ibid.*: 126, 131). We have already noted that the major East Gaulish producers at Rheinzabern and Trier are rare at Richborough and Dover and that the main trend in their distribution, as of East Gaulish wares in general, is northwards along the east coast to the northern frontier (*ibid.*: 113–14; Dickinson and Hartley 1971: 128–32; Bird 1995). These distributional patterns are reinforced by those of British wares, produced along the shore of the outer Thames Estuary (BB2) or at Colchester (mortaria) (Tyers 1996: 119–20, 186–8), and the movement of stone (Allen and Fulford 1999). Examples of these goods are only rarely found westwards along the Channel beyond the Straits of Dover. That this 'break-point' was permeable is indicated by the celebrated altar from Bordeaux dedicated in 237 by M. Aurelius Lunaris, a sevir Augustalis of York and Lincoln, and carved from millstone grit of probable, north British origin (*J. Roman Stud.* 11 (1921), 101–7).

The predominance of cross-Channel traffic as opposed to east–west movements along the Channel coast is borne out by other evidence, both positive and negative. We have already drawn attention to the links between Brittany and Normandy in the Iron Age and the presence of South-East Dorset Black-burnished pottery (BB1) in this region, particularly from the second century onwards, attests to the continuity of north-south links (Allen and Fulford 1996: 248–9, fig. 11). Indeed there is a larger picture of a trading route which cuts across the southwest peninsula of Britain to south Wales (cf. the inland distribution of BB1 (Allen and Fulford 1996: figs. 1 and 8)), just as there may have been a route southwards across the neck of the Brittany peninsula from St Malo on the north coast of Brittany to the mouth of the Loire. Similarly there is periodic evidence for the use of the crossing from the mouth of the Seine to the Solent and elsewhere. This evidence is both ceramic in the form of Gauloise twelve amphoras which were probably produced in Normandy and in the presence of particular building stone (calcaire grossier) used in the construction of the Flavian palace at Fishbourne and the Great Monument at Richborough. It originated from the valley of the Oise (pers. comm. K. Hayward). The amphorae, however, cluster in their distribution around the lower Thames and Thames Estuary, not the Solent or the south coast (Tyers 1996: 70–1). Whether this means that voyages headed northwards from the Somme, or that more northerly ports up the Gallic coast, such as Boulogne, were the point of departure remains unclear. We might also note the find of a Neronian stamped lead pig of *legio ii Augusta* from St Valéry-sur-Somme (*RIB* 2404.24) and

perhaps also others from Châlons-sur-Saône and Lillebonne (Gowland 1901: 379). On the British side there are two finds of Vespasianic lead pigs from Bitterne (Clausentum) at the head of Southampton Water (*RIB* 2404.5, 6), perhaps destined for shipment across the Channel.

Evidence that captures the character of the east–west navigation of the Channel comes from the Guernsey shipwreck which contained a small pottery assemblage. This included a few vessels originating from western Gaul (céramique à l'éponge) and southern Spain (Almagro 55), as well as vessels from Britain—BB1 from Poole Harbour, Dorset, Nene Valley colour-coated wares and East Anglian grey ware (Rule and Monaghan 1993). The contacts are wide-ranging, but no particular ware or region is predominant. This is reflected in the evidence from settlements along the south coast of Britain. There were two major producers of pottery on or close to the south coast, the manufacturers of BB1 around the shores of Poole Harbour and the late Roman New Forest potteries within 20km of the sea. We have noted the continental distribution of BB1, particularly in Brittany and Normandy, but also extending to Boulogne and beyond. Along the south coast of Britain, it is rare west of Exeter, where its distribution is almost mutually exclusive of that of the local, South Devon burnished ware (Tyers 1996: 197), and the distribution declines east of the Solent harbours (figure 5.5). At the late Roman shore-fort of Portchester Castle, only about 45 miles (70km) east of Poole Harbour, in the late third and fourth centuries the ware accounts for about 20 per cent by weight of the assemblage (Fulford 1975: 298, fig. 158). Although assemblages are not quantified at either Dover or Richborough, BB2 contributes overwhelmingly to the cooking ware assemblages at these sites, and in Kent generally, in the second and third centuries (Pollard 1988: 80–138). The same appears also to be the case at Boulogne (cf. Fulford 1977: 78–9). Ratios of BB1 in excess of 20, or even 40 percent, and thus greater than at Portchester, or sites accessible by sea further to the east, can be commonly found at distances greatly in excess of forty-five miles from the production centre in assemblages in south Wales and Gloucestershire, where distribution would have been either totally or, taking account of crossing the Bristol Channel/Severn Estuary, partly overland (Allen and Fulford 1996). Despite the proximity of the potteries to the sea, the production was largely exported northwards, and in quantity as far as the northern frontier. In the case of the New Forest potteries, distribution was concentrated within a radius of about 50km of the kilns with only small quantities of finds to indicate a coastwise dispersion, either eastwards towards the Straits of Dover, or south to Brittany and Normandy (Blaskiewicz 1992; Fulford 2000; 1977) (figure 5.5).

As well as the production of ceramics close to, or on the coast, there was also the quarrying of stone and, in particular, Purbeck 'marble', on the Dorset

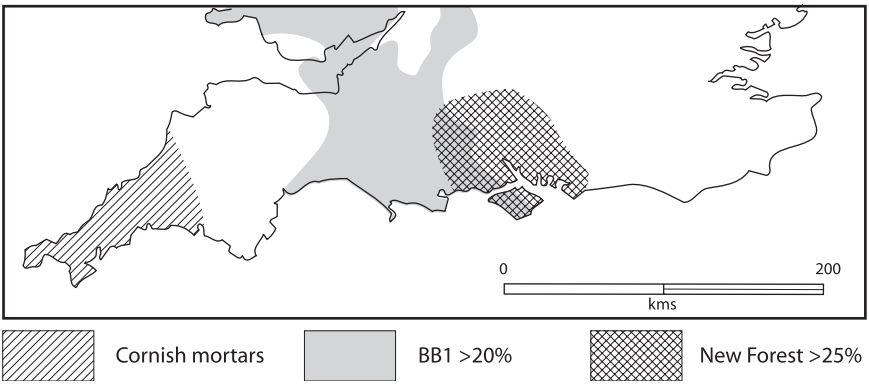

Fig. 5.5 Principal areas of circulation of Cornish mortars, South-East Dorset BB1 and New Forest pottery in southern England

coast. Like BB1, Purbeck Marble seems to have been exported by road with large quantities at inland, urban sites like Silchester, e.g. in the Forum Basilica (Fulford and Timby 2000: 94–9). The material was commonly used in southern Britain in the first and second centuries in the form of polished slabs for decorative purposes and inscriptions, but it was also employed for mortars. It was used in abundance in both the pre-Flavian and Flavian phases at the grand villa of Fishbourne (Cunliffe 1971b), where it could have been delivered by sea, and it is abundant in London (Pritchard 1986). Given its rarity at coastal sites between Chichester and the inner Thames Estuary, its arrival in London is likely to have been by wagon overland, a further 70km (45 miles) or so from Silchester. In support of this we can note the absence to date of this material at Dover and its rarity from the very extensive excavations at Richborough. Only two fragments of slabs were noted in contexts earlier than the Flavian Great Monument where it might be expected to have been used extensively (Dunning 1968: 111). Although its limited presence in association with the Monument was observed by earlier investigators, the only surviving pieces of marble cladding and moulding reported by Strong are of Carrara marble ('several thousand fragments') (Strong 1968: 64). Additionally, two further fragments of Purbeck marble, possibly derived from the Monument, were found in a fourth-century pit. In respect of portable items, of the eleven stone mortars reported on by Dunning (1968), only two are of Purbeck Marble.

Curiously, Purbeck was not the only source of stone mortars on the south coast of Britain. From the southwest in Cornwall there is evidence for the manufacture of bowls and mortars in local elvan and greisen, but the distribution does not extend beyond Devon with two exceptions—single examples of bowls are known from Richborough and London (Pudding Lane)

(Quinnell 2004: 129–38). The distributions of the Cornish and Purbeck bowls and mortars are therefore mutually exclusive (figure 5.5). Had east-west traffic along the south coast been of any volume, it is possible that one production, probably Purbeck, would have dominated the market.

Though finds like the Cornish stone bowls and the Guernsey shipwreck demonstrate that east–west navigation of the Channel took place, the opportunities for sea transport along the Channel do not seem to have been significantly exploited. The contrast with the evidence for the movement of goods up the eastern seaboard to the northern frontier is striking. Whether some, or a significant proportion of the archaeologically visible traffic along the east coast was driven by the needs of supplying the northern frontier, it is likely that, without that impetus, the east-west working of the Channel was largely in the hands of independent merchants and ship-owners.

This is likely also to have been the case with the navigation of the western seaboard into the Irish Sea where there is no clear evidence for the systematic transport by sea of archaeologically visible commodities of southern British origin (Allen and Fulford 1996; Holbrook 2001). It could be argued perhaps that high proportions of Dorset BB1 at sites like the town of Carmarthen (Brennan 2003) in southwest Wales or the fort of Caernarvon (Webster 1993) in the northwest could have arrived by craft originating from, respectively, ports on the Welsh side of the Severn Estuary, and from the legionary fortress at Chester on the Dee. More surprising, perhaps, if there had been regular traffic around the coasts of Wales, is the comparative rarity of Severn Valley wares at both of the above sites which have large pottery assemblages. Just as sailing around the southwestern peninsula seems to have been avoided, so, too, does the navigation around the larger peninsula of Wales. That there was some long-distance traffic from the Atlantic is indicated by the distribution of, for example, Montans samian, but the bulk of military supplies and traded commodities probably moved by land, or perhaps by river up the Severn, to Wroxeter and then overland to Chester.

In support of this apparent preference for land-based routes, or very short coastal voyages, it is interesting to note that neither the legionary ware manufactured at Holt, nor the mortaria produced at Wilderspool, appear to have taken advantage of the possibilities of transport by sea to distribute their wares in bulk to the northern frontier; their distributions are essentially local (Tyers 1996: 134–5). In some contradiction to this picture the location of the legionary fortress at Chester on the Dee and the presence of other coastal forts in Wales and north Britain imply that there was a certain level of seaborne traffic and trade. Indeed the location of the legionary fortresses on navigable rivers and the epigraphic evidence of the ship-wrecked *optio* from Chester (*RIB* 544), a legionary *gubernator* at York (*RIB* 653) and the units of *barcarii* from Lancaster (*RIB* 601)

and later at South Shields (*Not. Dign. xl*, 22) are firm evidence for military engagement to some degree with the sea. Defence against raiders, rather than the fortification of trading ports would seem to be the best explanation for the coastal forts of the northwest. Further negative evidence for the use of the western seaways by British-based merchants comes from Ireland, where the rarity of Roman material culture as a whole, and certainly from Britain, rather than Gaul, in particular, is quite remarkable (cf. Bateson 1973). This is in marked contrast with the relative abundance of Roman material culture, including that from Britain, from coastal settlements across the North Sea in Frisia in Germania libera (Van Es 1972: 203–11; Fulford 1977: 81–2).

The evidence, therefore, for the principal directions of traffic between Britain and the continent in the Roman period, particularly between the first and third centuries, suggests that it was concentrated between London, the Thames, and ports on the Rhine delta, and between Boulogne and Dover/Richborough/London. Just as much of the material brought to Britain probably reached the Channel coast by road, so, too, distribution by road from London was the principal means of dissemination within Britain. Except for the exploitation of the eastern seaboard with good ceramic evidence for seaborne, as opposed to landborne traffic emanating from the Thames Estuary, especially between the mid-second and the mid-third centuries, there is little evidence for extensive, British-based, coastal traffic, along either the Channel or the west coast of Britain. However, there is good evidence for the continuation of a low-volume, long distance Atlantic traffic, originating from the Mediterranean, the coasts of Spain and, particularly, Gaul. It is this which explains, perhaps, the distribution of Montans sigillata in the early Roman period, or the céramique à l'éponge in the later Roman period (Galliou *et al.* 1980), while the distributions of North African and Phocaean red-slipped wares, as well as African and east Mediterranean amphorae and other imported Gaulish wares affirm it in the post-Roman period (cf. Tyers 1996: 80–2). The continuation of these routes through the Roman period is all but drowned out by the volume of imperially driven traffic between the first and fourth centuries AD.

The distribution of late Roman coastal fortifications around the shores of Britain mirrors well the established pattern of maritime connections between the island and the provinces of Gaul and Germany, and the most frequented routes which originated from within Britain: from Pevensey on the Channel coast through the cluster protecting the Kent coast and Thames estuary to Burgh and Brancaster, northwards on the East Anglian coast (figure 5.6). Further west along the Channel there is protection at Portchester Castle, where there is precious little evidence of cross-Channel contacts (Cunliffe 1975), but, as the events of 296 indicated, sound military reasons for defence. In contrast, only a little further to the west at Poole Harbour, however, which the evidence of BB1

Fig. 5.6 Third–fourth century coastal forts and walled towns around Britain

indicates as a fairly significant port of departure for crossings to Brittany and Normandy, there is no evidence for protective fortification. Military considerations aside, the scarcity of coastal fortifications west of the Solent and around the western shores of Britain mirrors the negative evidence for the exploitation of the western seaways either through long distance trade or local *cabotage* generated from within Britain during the Roman period.

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6

The Production Technology of, and Trade in, Egyptian Blue Pigment in the Roman World

Michael Tite and Gareth Hatton

Egyptian blue was first used as a pigment on tomb paintings in Egypt from around 2300 BC, and during the subsequent 3,000 years, its use both as a pigment and in the production of small objects spread throughout the Near East and Eastern Mediterranean and to the limits of the Roman Empire. During the Roman period, Egyptian blue was distributed in the form of balls of pigment up to about 15mm across, and appears to have been the most common blue pigment to be used on wall paintings throughout the Empire.

Egyptian blue was both the first synthetic pigment, and one of the first materials from antiquity to be examined by modern scientific methods. A small pot containing the pigment that was found during the excavations at Pompeii in 1814 was examined by Sir Humphrey Davy. Subsequently, x-ray diffraction analysis was used to identify the compound as the calcium-copper tetrasilicate $CaCuSi_4O_{10}$, and to establish that Egyptian blue and the rare natural mineral cuprorivaite are the same material. Examination of Egyptian blue samples in cross-section in a scanning electron microscope (SEM) revealed that they consist of an intimate mixture of Egyptian blue crystals (i.e. $CaCuSi_4O_{10}$) and partially reacted quartz particles together with varying amounts of glass phase (Tite, Bimson, and Cowell 1984). At this stage it should be emphasized that, in the literature, the term Egyptian blue tends to be used to describe both crystals of calcium-copper tetrasilicate and the bulk polycrystalline material that is used as the pigment and is sometimes referred to as frit. In this chapter, the suffix 'crystal' or 'mineral' will be added when the former meaning applies, and the suffix 'pigment', 'sample', or 'frit' will be added when the latter meaning applies.

For the current study, a small group of Roman Egyptian blue samples were examined using scanning electron microscopy (SEM) with attached analytical facilities. Using the chemical compositions of the samples, together with the description of the manufacture of Egyptian blue given by Vitruvius (Morgan 1960) at the beginning of the first century BC in his Ten Books on

Architecture, an attempt is made to identify the raw materials used in the production of Roman Egyptian blue. In addition the description given by Vitruvius is compared with the production debris resulting from the manufacture of Egyptian blue at the Egyptian site of Memphis, near Cairo, excavated by Petrie (1909) in the early 1900s. The extent of long-distance trade in Egyptian blue within the Roman Empire is then assessed.

DESCRIPTION OF SAMPLES AND EXPERIMENTAL PROCEDURES

The Egyptian blue samples analysed were found at Memphis in Egypt, at Delos in the Aegean, at Pompeii and Rome in Italy, on a shipwreck off the coast of Malta, and at Hertford and Colchester in England.

The Memphis samples which date to somewhere in the period from the third century BC to the third century AD consist of ceramic vessel fragments excavated from an industrial area of the site by Petrie (1909). These vessels, which are either globular or cylindrical in shape, are lined with a white slip, up to 2–3mm in thickness, to which a layer of Egyptian blue frit, up to about 9mm in thickness, adheres. Small balls of Egyptian blue frit, up to about 15mm in diameter, are embedded in this layer.

The Delos samples which date to the second century BC are balls of Egyptian blue frit which were found in ceramic vessels and which would have been ground up for use as pigment. The Pompeii samples which date to the first century AD are ground up Egyptian blue pigment contained in small pots and found at various locations around the site. The Rome samples which date to the second century AD are mosaic tesserae made from Egyptian blue frit, and the English and Malta samples which date to the first and third centuries AD respectively are again balls of Egyptian blue frit which would have been ground up for use as pigment.

The Egyptian blue samples were all examined in polished cross-sections in a Cameca analytical SEM (SU30) using the backscatter detector mode with which the different phases present can be distinguished on the basis of their atomic number contrast (e.g. quartz appears dark compared to the higher atomic number Egyptian blue crystals and glass phase). The bulk compositions of the Egyptian blue samples were determined by analysing areas approximately 0.3 mm × 0.3 mm using the energy dispersive spectrometer (EDS) attached to a JEOL SEM (JSM-840A)(table 6.1). The resulting analytical totals were normalized to 100 per cent to eliminate the effects of differences in porosity. Because of the overlap of sodium and copper peaks, the measured soda contents

Table 6.1 Bulk Egyptian blue frit compositions—EDS (normalized 100 per cent)

			SiO_2	Na_2O	K_2O	CaO	MgO	Al_2O_3	FeO	CuO	SnO_2	PbO	TiO_2
Memphis	Ball	Mem16	71.8	2.3	0.2	9.4	0.5	0.5	2.5	8.5	1.2	2.9	0.2
Memphis	Ball	UC47305b	68.8	3.7	0.1	9.2	0.1	2.0	3.0	9.8	<0.1	3.3	<0.1
Memphis	Ball	UC47310	58.5	3.6	0.3	13.7	0.5	0.8	2.5	10.7	3.1	6.0	0.2
Memphis	Ball	UC47311	62.2	2.7	0.3	13.8	0.5	0.9	2.9	10.2	0.7	5.6	0.2
Memphis	Layer	Mem17	75.4	1.7	0.3	9.9	0.6	0.4	0.8	9.4	0.5	0.9	0.1
Memphis	Layer	UC47288	76.0	1.4	0.2	11.0	0.5	0.6	1.9	6.8	0.5	1.0	0.1
Memphis	Layer	UC47300	66.6	2.1	0.4	12.4	0.5	1.0	2.3	9.3	2.9	2.2	0.3
Memphis	Layer	UC47305	72.6	2.2	0.1	10.5	0.4	0.3	1.6	8.6	0.7	2.8	0.1
Delos	Ball	EB1	68.7	1.3	<0.1	9.4	0.6	0.4	1.5	15.1	0.5	2.4	0.1
Delos	Ball	EB2	68.0	2.0	0.1	8.7	0.7	0.3	3.2	11.6	0.9	4.4	0.1
Delos	Ball	EB3	67.9	1.6	0.1	10.4	0.5	0.2	2.4	11.2	1.8	3.7	0.2
Delos	Ball	EB4	76.8	1.5	0.1	7.6	0.5	0.4	1.4	8.5	0.6	2.5	0.1
Pompeii	Powder	9533	67.5	5.3	2.1	6.9	1.2	3.4	1.5	3.9	0.1	7.9	0.1
Pompeii	Powder	3991a	64.9	5.7	1.3	7.7	0.8	3.4	1.3	10.0	0.2	4.4	0.2
Pompeii	Powder	9524	68.2	3.1	1.0	15.4	1.1	3.1	0.8	4.2	0.6	2.3	0.1
Pompeii	Powder	9567	68.1	2.5	0.4	14.2	0.8	0.6	0.7	10.9	0.3	1.4	0.1
Pompeii	Powder	Mte Col	67.6	3.2	0.5	13.5	0.9	2.5	0.9	10.4	0.1	0.2	0.2
Pompeii	Powder	9534	73.5	4.0	2.3	5.8	0.7	4.6	1.3	7.5	0.1	0.1	0.1
Pompeii	Powder	90181	71.6	3.1	0.6	10.1	0.9	1.8	0.6	10.9	0.2	0.1	0.1
Pompeii	Powder	9517	73.6	4.1	0.8	7.7	0.8	2.4	1.0	9.1	0.2	0.1	0.2
Pompeii	Powder	18114	74.5	3.2	0.7	8.6	1.3	2.6	0.9	7.5	0.2	0.3	0.1
Pompeii	Powder	2085	77.8	2.5	0.5	10.1	0.5	1.1	0.6	6.5	0.3	<0.1	0.1
Rome	Mosaic	14122	67.6	4.3	1.0	9.4	1.2	1.8	0.8	13.5	0.3	<0.1	0.1
Rome	Mosaic	14124	71.0	2.8	1.2	12.0	0.6	1.9	0.8	9.0	0.5	0.2	0.1
Hertford	Ball	13982	61.7	2.0	0.1	17.4	1.1	0.4	0.4	16.7	0.1	0.1	<0.1
Colchester	Ball	2708	74.1	2.5	0.5	8.5	0.5	0.9	0.4	12.0	0.4	0.1	0.1
Malta	Ball	14121	76.2	3.3	0.1	7.4	0.1	0.6	0.5	11.7	0.0	<0.1	0.1

Table 6.2 Glass phase compositions—WDS (normalized to 100 per cent)

			SiO_2	Na_2O	K_2O	CaO	MgO	Al_2O_3	FeO	CuO	SnO_2	PbO	TiO_2	Na_2O/K_2O
Memphis	Ball	Mem 16	52.65	6.71	0.66	6.16	0.59	1.51	7.97	9.43	2.41	11.59	0.33	10.2
Memphis	Ball	UC47305b	57.19	3.62	1.39	1.57	0.34	3.63	8.38	6.51	1.09	15.65	0.63	2.6
Memphis	Ball	UC47310	52.19	6.07	0.66	8.86	0.27	1.18	3.98	7.90	4.38	14.34	0.17	9.1
Memphis	Ball	UC47311	49.39	5.69	1.30	2.15	0.28	2.39	8.24	8.18	1.88	20.10	0.40	4.4
Memphis	Layer	Mem 17	60.36	4.75	1.16	2.90	0.79	3.54	4.80	5.69	1.22	14.33	0.46	4.1
Memphis	Layer	UC47288	60.80	4.59	1.79	1.36	0.22	6.28	5.32	5.88	0.34	13.20	0.21	2.6
Memphis	Layer	UC47300	60.18	4.72	1.69	2.75	0.08	5.88	6.86	4.16	0.55	12.77	0.37	2.8
Memphis	Layer	UC47305	54.87	6.39	0.98	1.73	0.49	2.37	6.57	6.71	1.01	18.56	0.33	6.5
Delos	Ball	EB2	60.84	3.33	0.41	5.57	0.33	1.48	3.96	10.37	1.39	12.12	0.18	8.1
Delos	Ball	EB3	61.49	3.18	0.43	7.02	0.23	1.50	3.96	11.19	0.80	9.99	0.20	7.4
Delos	Ball	EB4	60.35	3.55	0.54	1.72	0.40	2.39	4.71	6.78	1.16	18.19	0.22	6.6
Pompeii	Powder	Mte Col	68.27	6.49	3.55	2.24	0.80	7.46	2.15	8.61	0.01	0.04	0.37	1.8
Pompeii	Powder	9534	69.21	5.80	4.79	2.40	0.53	8.88	2.71	4.97	0.01	0.30	0.39	1.2
Pompeii	Powder	90181	66.55	7.48	4.36	1.26	0.93	7.38	2.33	9.31	0.01	0.07	0.33	1.7
Pompeii	Powder	9517	72.07	6.76	1.84	2.02	0.97	6.14	2.40	7.43	0.01	0.05	0.32	3.7
Rome	Mosaic	14122	69.13	7.76	2.14	1.67	0.96	5.22	1.76	10.52	0.29	0.26	0.28	3.6
Rome	Mosaic	14124	68.94	8.06	4.16	1.15	1.13	6.04	2.48	5.58	0.85	1.25	0.36	1.9
Colchester	Ball	2708	64.04	10.85	2.98	2.98	1.15	5.70	2.16	8.85	0.60	0.30	0.38	3.6

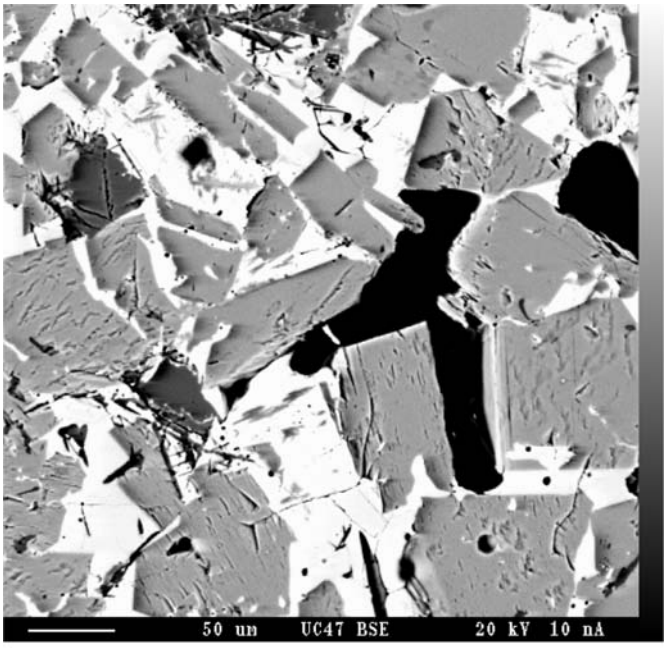
are too high. Also because of overlapping peaks, the detection limit for tin is no better than 0.3 per cent. The glass phase when present in the Egyptian blue samples was analysed using the wavelength dispersive spectrometers (WDS) attached to a JEOL superprobe (JXA-8800R)(table 6.2), a beam diameter of 5–8 μm being used.

RESULTS OF SEM EXAMINATION AND THEIR INTERPRETATION

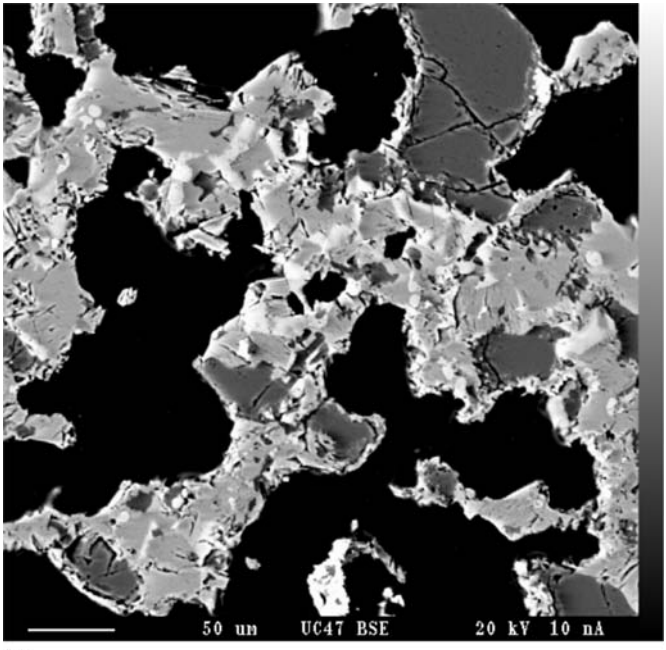
Microstructures

In the absence of weathering, the solid Egyptian blue samples (i.e. balls, layers, tesserae) consist of clusters of Egyptian blue crystals intermixed with more occasional partially reacted quartz particles, and all bonded together by a glass phase (figures 6.1–6.3). However, as a result of weathering, the glass phase has been lost from one of the Delos balls (EB1) and from the Hertford and Malta balls. Thus the microstructures of the Hertford ball (13982)(figure 6.3b) and the Rome tessera (14122)(figure 6.3a) are very similar except for the absence of any glass phase in the former case. In the Memphis and Delos samples, the glass phase contains considerable amounts of lead oxide. Therefore the atomic number of the glass phase is higher than that of the Egyptian blue crystals, and as a result, the glass phase appears brighter in the SEM than the Egyptian blue crystals (figures 6.1 and 6.2). In contrast, when the glass phase does not contain lead oxide, as is the case for the Rome tesserae and the Colchester ball, the Egyptian blue appears brighter in the SEM than the glass phase (figure 6.3a).

The Memphis balls are characterized by a dense microstructure with limited porosity and only very occasional surviving quartz particles (figure 6.1a). In contrast the layers of Egyptian blue frit adhering to the ceramic vessels have a much more open microstructure (figure 6.1b). The rectangular Egyptian blue crystals in the frit layers (up to 40 μm) are smaller than those in the balls (up to 100 μm) whereas the surviving quartz particles tend to be larger (up to 160 μm as compared to 80 μm in the balls). High temperature silica polymorphs, either cristobalite or tridymite, are present in both cases. The Delos balls are similar to the Memphis balls in having a dense microstructure with large rectangular Egyptian blue crystals (up to 140 μm) (figure 6.2). However the surviving quartz particles in the Delos balls are much more abundant and significantly larger (up to 200 μm). Both the Rome tesserae and the balls from England and Malta are characterised by a microstructure with large euhedral Egyptian blue crystals (up to 200 μm in length) that grow in a



(a)



(b)

Fig. 6.1 SEM photomicrographs of cross-sections through (a) Egyptian blue ball (UC47311) and (b) Egyptian blue layer (UC47288) from Memphis, Egypt showing abundant Egyptian blue crystals (light grey) intermixed with occasional quartz particles (dark grey), and all bonded together by a glass phase (white). Porosity appears black

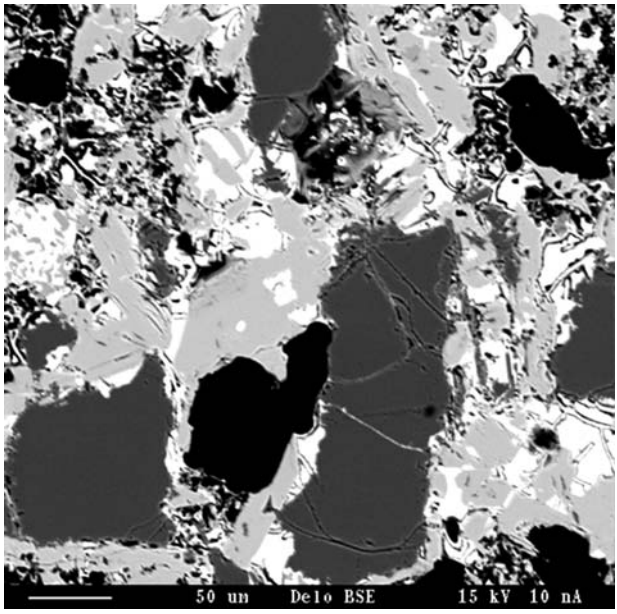
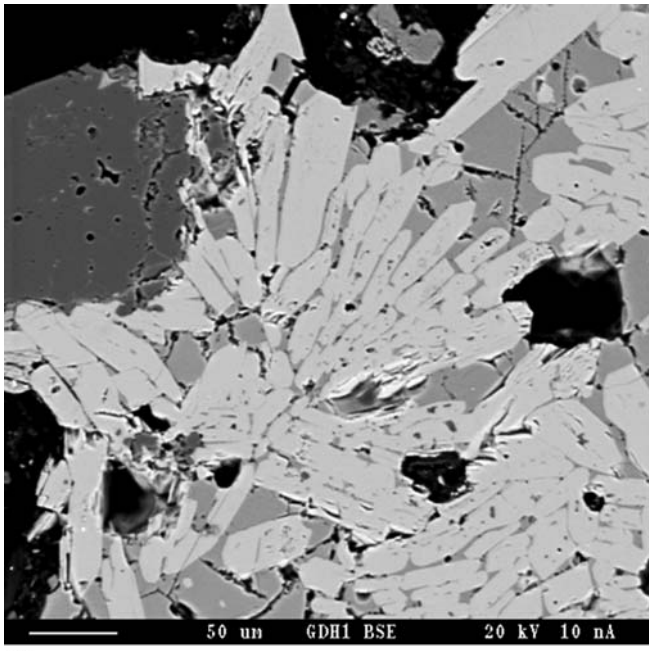


Fig. 6.2 SEM photomicrograph of cross-section through Egyptian blue ball (EB4) from Delos showing abundant Egyptian blue crystals (light grey) intermixed with occasional quartz particles (dark grey), and all bonded together by a glass phase (white). Porosity appears black

radial pattern around large partially reacted quartz grains (figure 6.3). Because of the similarity in their microstructures, it seems probable that the mosaic tesserae were produced by cutting the Egyptian blue balls into the desired shape.

The microstructures of the ground pigment samples from Pompeii lack the long range continuity of the solid samples (figure 6.4). Instead the ground samples consist of scattered clusters of Egyptian blue crystals and partially reacted quartz particles that, when it has survived weathering, are bonded together by a glass phase. The ground pigments are also characterized by considerable variations between the microstructures of the different samples. Thus the Egyptian blue crystals vary from 25–75 μm across, and the clusters from 150–300 μm across. These differences could reflect different degrees of grinding in order to produce pigments with different shades of blue, the finer particle size resulting in a paler colour. In addition, four of the pigments (9533, 3991a, 9524, and 9567) contain a scatter of high lead areas (figure 6.4b) some of which are bonded to partially reacted quartz particles and some of which constitute the glass phase bonding together the Egyptian blue crystals.



(a)

(b)

Fig. 6.3 SEM photomicrographs of cross-sections through (a) Egyptian blue mosaic tessera (14122) from Rome and (b) Egyptian blue ball (13982) from Hertford showing abundant Egyptian blue crystals (light grey) intermixed with occasional quartz particles (dark grey). The Egyptian blue crystals and quartz in the tessera (a) are bonded together by a glass phase (mid-grey), but this phase has been lost from the ball (b) as a result of weathering. Porosity appears black

Raw Materials

Laboratory replications have established that Egyptian blue pigment can be readily produced by firing a mixture of quartz, copper oxide and lime together with a small amount of alkali flux (typically 0.2–5 wt per cent soda (Na_2O)) at a temperature in the range 900–1000°C (Chase 1971, Tite, Bimson, and Cowell 1984). During the firing, the alkali reacts with the quartz and lime to produce a glass phase from which the Egyptian blue mineral crystallises (Pradell *et al.* 2006). The result is typically a coarse textured, friable block or ball of polycrystalline Egyptian blue frit which can then be ground to a powder for use as a pigment.

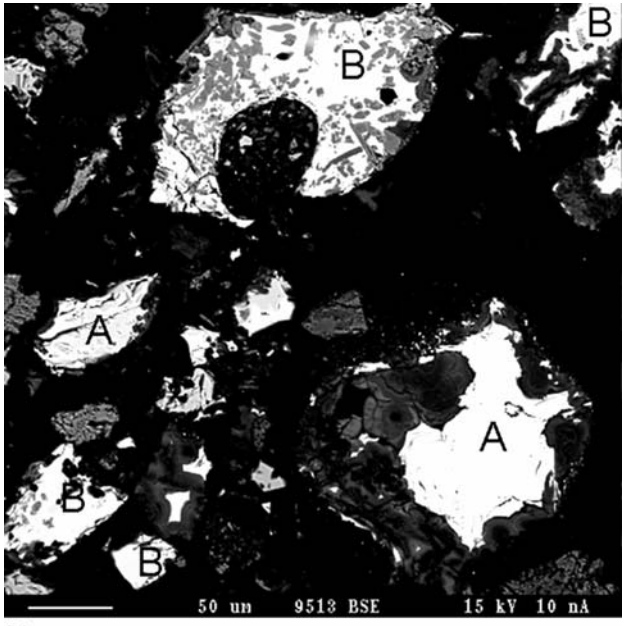
On the basis of the chemical compositions of the bulk Egyptian blue samples (table 6.1) and the glass phase (table 6.2), where this survives weathering, together with the microstructures as observed in the SEM, it is possible to infer the sources of the quartz, copper and alkali flux used in the production of the pigments. A valuable further source of information in the identification of these raw materials is the following description of the manufacture of a blue pigment, which is clearly Egyptian blue, given by Vitruvius (Morgan 1960) in his Ten Books of Architecture:

> Methods of making blue were first discovered in Alexandria, and afterwards Vestorius set up the making of it at Puzzuoli. The method of obtaining it from the substances of which it has been found to consist, is strange enough. Sand and the flowers of Natron are brayed together so finely that the product is like meal, and the copper is grated by means of coarse files over the mixture, like sawdust, to form a conglomerate. Then it is made into balls by rolling it in the hands and thus bound together for drying. The dry balls are put in an earthern jar, and the jars in an oven. As soon as the copper and the sand grow hot and unite under the intensity of the fire, they mutually receive each other's sweat, relinquishing their peculiar qualities, and having lost their properties through the intensity of the fire, they are reduced to a blue colour.

Quartz

The source of the quartz could either have been crushed quartz pebbles or quartz sand. Crushed quartz pebbles are characterized by very high purity, typically containing less than about 0.05 per cent each of lime, alumina and iron oxide (Brill 1999: vol. 2, 474). In contrast, although very variable in composition, most sands contain several per cent of lime, and at least 0.3 per cent of alumina with a high proportion containing a few per cent (Turner 1956; Brill 1999: vol. 2, 474–5), the latter impurity being associated typically with feldspars present in the sands. Similarly, with the exception of the very pure sands used in modern glass production, most sands contain at least 0.4

(a)



(b)

Fig. 6.4 SEM photomicrographs of cross-sections through two ground Egyptian blue pigment samples from Pompeii. (a) Sample 9517 is dominated (lower right) by a cluster of Egyptian blue crystals (light grey) and quartz and a high temperature silica polymorph (dark grey), bonded together by a glass phase (mid-grey). (b) Sample 9533 is dominated by scattered high lead areas (white) some of which (marked A) are bonded to quartz particles (dark grey), and in some of which (marked B), Egyptian blue crystals (light grey) are embedded. Porosity appears black

per cent iron oxide, associated with titanomagnetite impurities present in the sand. In addition the quartz particles derived from crushed quartz pebbles will be angular in shape whereas those derived from sand will tend to be well rounded or at least sub-rounded.

Since the alumina and iron oxide contents of the bulk Egyptian blue pigments are respectively in the ranges 0.2–4.6 per cent and 0.4–3.2 per cent (table 6.1), quartz sand was most probably the source of the quartz. This conclusion is reinforced by the fact that, for the Memphis and Delos pigments, there are good correlations between the potash and alumina contents (figure 6.5) which suggest that both are associated with potassium feldspar which in turn is most likely to have been incorporated with a sand. Also, the surviving partially reacted quartz particles observed in the SEM tend to be rounded (figures 6.1–6.4), and although some rounding of the quartz particles will have occurred as a result of their reaction in forming a glass phase, the lack of any obvious angularity again suggests the use of sand rather than crushed pebbles. Finally, it should be noted that the use of sand is consistent with the description of the manufacture of Egyptian blue given by Vitruvius.

Copper

The source of the copper could either have been a comparatively pure copper ore such as malachite or azurite, or the copper oxide scale produced by roasting scrap copper metal or its alloys. On the basis of the chemical composition of the Egyptian blue pigments, it is not possible to distinguish between the use of copper ore and the scale produced from copper metal. However, the use of scale produced from bronze or leaded bronze can be identified by the presence of small amounts of tin and lead.

Since the Egyptian blue pigments from Memphis and Delos contain both tin and lead as well as copper (table 6.1), leaded bronze scale was the most probable source of the copper. On the basis of the normalization of the combined copper, tin, and lead contents to 100 per cent, the tin and lead contents of the bronzes used would have been typically in the range 3–11 per cent and 6–34 per cent respectively, which is consistent with the compositional range of leaded bronzes in use within the Roman Empire (Craddock 1977). The use of bronze scale is also consistent with the description given by Vitruvius which states that 'copper is grated by means of coarse files'. Although laboratory replications have shown that the Egyptian blue frit produced using metal filings is very inhomogeneous and of poor quality (Hatton 2005), it is entirely possible that Vitruvius was referring to the removal only of surface scale.

For the majority of the Egyptian blue pigments from Pompeii, Rome, England, and Malta, the tin content is below the detection limit of 0.3 per

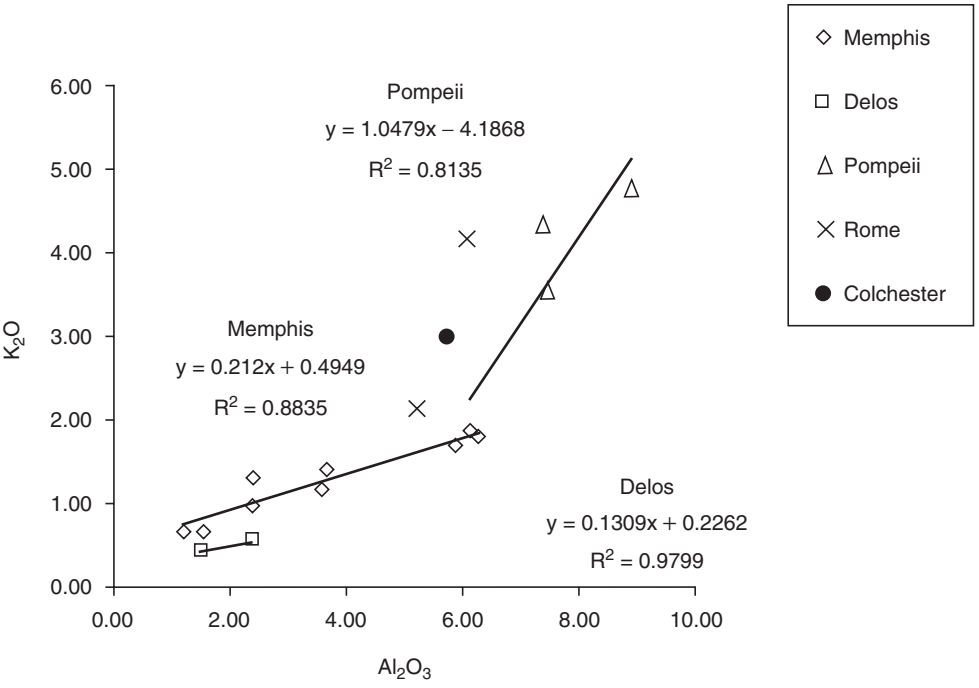


Fig. 6.5 Plot of potash versus alumina contents for glass phase (table 6.2—WDS) present in Egyptian blue samples. The trend lines for Memphis, Delos, and Pompeii, together with their associated formulae and correlation coefficients (r^2) that provide a measure of the fit of the straight lines to the data are included

cent so that either copper scale or copper ore could in principle have been used, but given the description by Vitruvius, the former is much more likely. In the case of the ground pigment samples from Pompeii containing high lead areas, either some lead oxide, perhaps produced by roasting scrap lead metal, has also been added or the scale included some from leaded copper.

Alkali

The source of the alkali could either have been natural evaporitic deposits containing sodium carbonate and sodium bicarbonate, referred to as natron, or soda-rich ashes produced from halophytic plants, such as *Salsola soda*, growing in coastal or desert regions. Natron, the best known deposit of which is the Wadi Natrun in Egypt, is characterised by high purity typically containing less than 1 per cent each of potash, lime and magnesia (Brill 1999: vol. 2, 480). In contrast, although very variable in composition, soda-rich plant

ashes contain several per cent each of potash, lime and magnesia (Tite *et al.* 2006). In attempting to distinguish between the use of natron and plant ash on the basis of the chemical compositions of the Egyptian blue frits, the magnesia contents are of limited use since magnesia may also be present in the source of the lime. Therefore the most useful distinguishing parameter is the soda/potash ratio (Na_2O/K_2O) which for natron itself is equal to about 90, and for soda-rich plant ashes is typically in the range 2–8.

For the Memphis and Delos Egyptian blue samples, the Na_2O/K_2O ratios in the glass phase are in the range 2.5 to10 (table 6.2) which would suggest a plant ash as the source of the alkali. However, the observed correlation between potash and alumina (figure 6.5) suggests that a high proportion of the potash is associated with the feldspar that was incorporated into the frit with the sand. Using the trend lines associated with the potash versus alumina plots for the Memphis and Delos samples, the potash contents of the alkali are estimated to be equal to 0.49 and 0.23 per cent K_2O respectively. Therefore the corresponding corrected Na_2O/K_2O ratios for the alkali itself are in the ranges 7–14 and 14–16. Although significantly less than those for natron, these corrected ratios are higher than those that have been observed for plant ashes. Therefore, natron seems a more probable source of the alkali used in the Memphis and Delos Egyptian blue frits than plant ash, a conclusion which is again consistent with the description of the manufacture of Egyptian blue given by Vitruvius which states that 'Sand and the flowers of Natron are brayed…' In addition, for Memphis, a technological study of contemporary faience from the site similarly suggests that natron was again the probable source of the flux in the glaze (Shortland and Tite 2005).

The situation for the Egyptian blue samples from Pompeii, Rome, England and Malta in which a glass phase survives is more ambiguous. The observed Na_2O/K_2O ratios are in the range 1 to 4 (table 6.2) which would again suggest the use of plant ashes. However, since both the potash and alumina contents are significantly higher than for the Memphis and Delos samples, these lower Na_2O/K_2O ratios could be due to higher amounts of feldspar in the sand. Unfortunately, because the trend lines for the potash versus alumina plots give negative potash values for the zero alumina content (e.g. −4.2 per cent K_2O for the Pompeii samples) (figure 6.5), it is not possible to estimate the potash content associated with the alkali for these samples.

Lime

The lime which is essential for the production of Egyptian blue could have been added as a separate component in the form of crushed limestone or shell, or it could have been incorporated with the sand. On the basis of the

chemical composition of the Egyptian blue pigments, it is not possible to distinguish between these two possibilities. However, since there is no mention of the addition of lime in Vitruvius' description of the production of Egyptian blue, it seems more probably that the lime was incorporated with the sand. Certainly many coastal and river sands contain sufficient lime for the production of Egyptian blue frit, a classic example being the Belus River sand, mentioned by Strabo (Jones 1930: vol. 7, 271) as the source of the sand for the production of Roman glass, which contains up to about 15 per cent lime (Brill 1999: vol. 2, 474).

Production of Egyptian Blue at Memphis

The production debris excavated from Memphis is consistent with the description of the manufacture of Egyptian blue given by Vitruvius in which the mixture 'is made into balls' and 'The dry balls are put in an earthern jar, and the jars in an oven.' Thus, at Memphis, balls were produced from a mixture of sand, leaded bronze scale and natron. The balls were then placed in either globular or cylindrical ceramic vessels which, on the basis of their chemical composition as determined by EDS analysis in the SEM, were made from non-calcareous, iron rich Nile silt. The interior surface of the vessels were coated with a white, lime-rich slip layer which, in turn, was separated from the balls by a layer of a similar sand, leaded bronze scale and natron mixture.

As evidenced by the presence of balls sometimes adhering to their undersurface, the vessels were then stacked one above the other in a kiln with a ceramic lid closing the top vessel. During the firing, the three components in the balls and in the layer coating the interior of the vessels reacted to form Egyptian blue frit. In a successful firing, the Egyptian blue balls would have been removed from the vessels leaving the adhering Egyptian blue layer. It would seem that the lime-rich slip and the Egyptian blue layer acted together in protecting the Egyptian blue balls from contamination by and adhesion to the ceramic vessels. Further, the example of vessels with only an Egyptian blue layer and no obvious white slip suggests that the ceramic vessels were re-used and that, during re-use, the Egyptian blue layer slowly consumed the lime-rich slip.

The denser microstructure and more limited porosity of the Egyptian blue balls (figure 6.1a), as compared to the underlying Egyptian blue layer (figure 6.1b), is most probably due to the higher proportion of glass phase in the former, as evidenced both in the SEM photomicrographs, and by the higher lead oxide contents of the balls (3–6 per cent PbO) as compared to the layers (1–3 per cent PbO)(table 6.1). When molten, the surface tension produced by

the glass phase would have tended to draw together the Egyptian blue crystals and occasional surviving quartz particles to achieve the observed dense microstructure and limited porosity.

THE TRADE IN ROMAN EGYPTIAN BLUE PIGMENT

The above results suggest two traditions in the selection of the raw materials used in the production of Roman Egyptian blue pigment. In the eastern Mediterranean (i.e. Memphis and Delos), a lime rich sand was mixed with scale produced from leaded bronze, and natron was probably used as the flux. In the use of leaded bronze scale and natron, this tradition matches the production of contemporary faience at Memphis (Shortland and Tite 2005). In contrast in the west, copper scale was normally used and it is less clear whether natron or soda-rich plant ash was the source of the flux. Both these traditions are essentially consistent with the description of the manufacture of Egyptian blue pigment given by Vitruvius who also refers to production in both the east and the west; that is, respectively, Alexandria in Egypt and Puzzuoli close to Pompeii in Italy.

The question that next needs to be considered is at how many centres within the Roman Empire was Egyptian blue pigment being produced? That is, should one visualize a limited number of production centres for Egyptian blue pigment with extensive trade from these centres, or was Egyptian blue pigment being produced at a large number of different centres more or less as required for use for wall paintings?

In principle, the different production centres can be distinguished on the basis of the different raw materials used, as evidenced by the chemical compositions of the Egyptian blue pigments. The use of copper, bronze, or leaded bronze scale, and natron or plant ash are possible criteria for distinguishing production centres. However, the choice of copper, bronze, or leaded bronze scale could vary depending on the scrap metal available at the time of production, and the use of natron or plant ash cannot always be readily distinguished. Therefore, as when trying to distinguish between centres of Roman glass production (Freestone, Gorin-Rosen, and Hughes 2000; Freestone, Ponting, and Hughes 2002), it is the differences in the composition of the sands used that has the greatest potential.

In spite of some overlaps in composition, one can distinguish four groups (i.e. Memphis, Delos, England plus Malta (i.e. Balls), and Pompeii plus Rome) on the basis of plots of potash versus alumina, and iron oxide versus alumina for the bulk composition of Egyptian blue samples (figure 6.6).

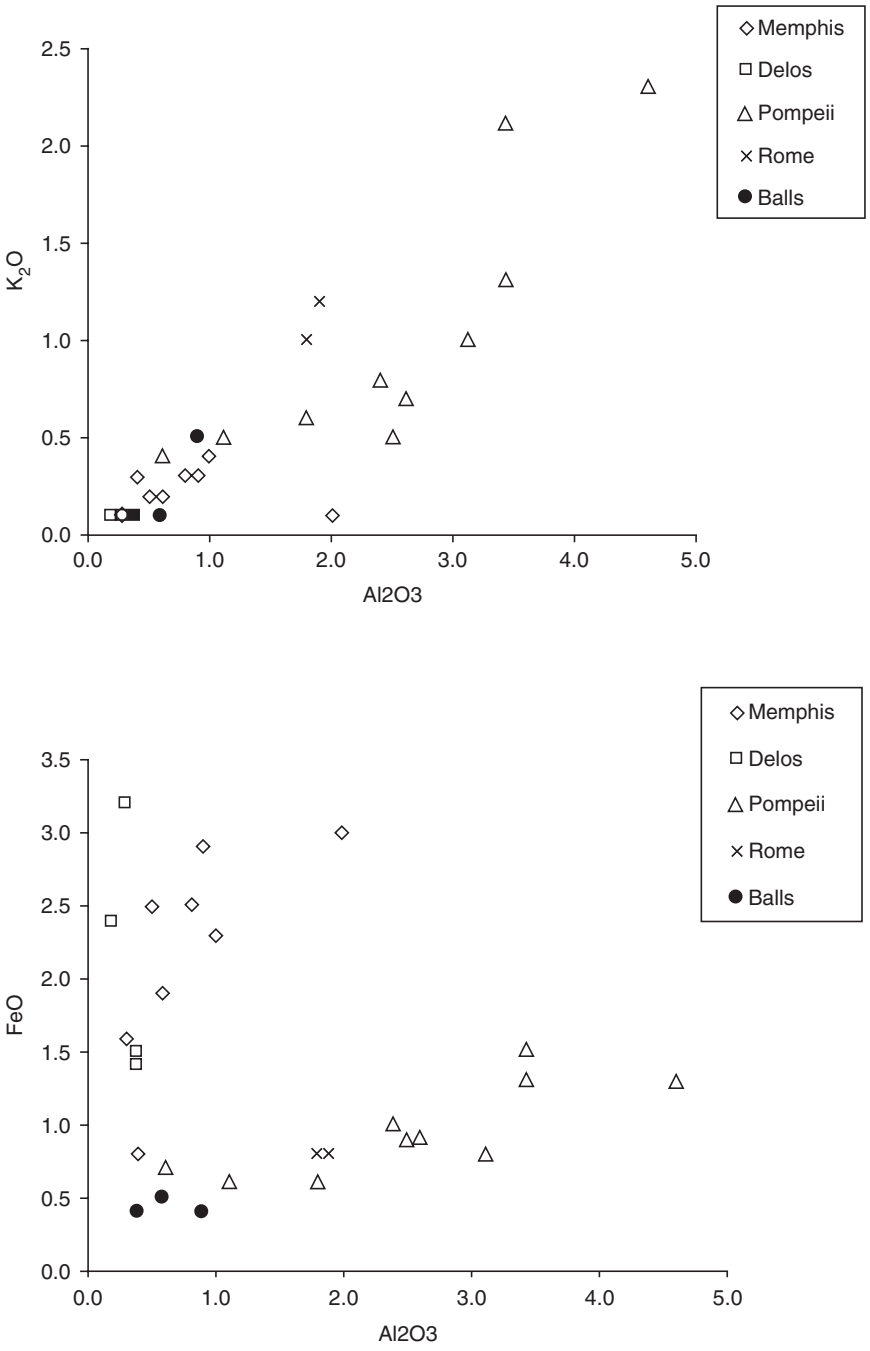


Fig. 6.6 Plots of (a) potash versus alumina, and (b) iron oxide versus alumina for bulk compositions (table 6.1—EDS) of Egyptian blue samples. 'Balls' in the key refer to the three samples from Hertford, Colchester, and Malta

Memphis and Delos samples are distinguished by their low potash and alumina, and high iron oxide contents, with Delos being distinguished from Memphis by its even lower potash contents. England plus Malta samples are distinguished by their low potash, alumina, and iron oxide contents, and Pompeii plus Rome by their high potash and alumina, and low iron oxide contents. The Pompeii samples are further distinguished by their high magnesia contents (0.5–1.3 per cent MgO) as compared to the majority of the other samples. Since the Pompeii samples, in which either lead oxide or leaded copper scale appears to have been used, overlap with the other samples in terms of the sand composition, this by itself could merely reflect the type of scrap metal available at the time of production rather than indicating a different production centre. However, the spread in alumina values for the Pompeii pigments does suggest that more than one sand source was used, and therefore that the pigments were probably obtained from more than one production centre.

Thus, on the basis of the chemical compositions, at least four different centres appear to have been used in the production of the twenty-seven Roman Egyptian blue pigments studied in the present chapter, two of which were in the eastern Mediterranean and two in the west. These data are clearly not sufficient to make any reliable prediction as to the overall number of centres producing Egyptian blue pigment within the Roman Empire. However, the fact that the pigment appears to have been produced throughout the Empire in the form of small balls, all of similar size, suggests some form of central control, with production probably being confined to a relatively limited number of centres. Certainly at Memphis, which is the one identified Roman centre for the production of Egyptian blue pigment balls, the debris found indicates that production was clearly on an industrial scale. Further, the fact that pigment balls have been found on Roman shipwrecks within the Mediterranean provides direct evidence for trade.

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Part II

‘On the Edge’. At the Fringes of Europe

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7

Cores and Peripheries Revisited: The Mining Landscapes of Wadi Faynan (Southern Jordan) 5000 BC–AD 700

Graeme Barker and David Mattingly

One of Barry Cunliffe's major areas of research interest has been societies in transition, especially in the context of core/periphery relationships between expanding states and societies on their margins. Much of this work has been on the relationships between Rome and the Iron Age societies of southern Britain on the northwestern margins of the empire, and the subsequent pathways of resistance, interaction, and transformation. In this chapter we focus on events and processes on the opposite margins of the Roman empire in the Levant, where the Nabataean state was formally incorporated into the Roman imperial system some sixty years after the Claudian invasion of Britain. We draw on the results of the Wadi Faynan Landscape Survey (1996–2000), an interdisciplinary and diachronic investigation of evidence of environmental and climatic change, settlement pattern, and human activity in the Wadi Faynan in southern Jordan (figure 7.1).

Situated about 40 kilometres from the Nabataean capital of Petra, the Wadi Faynan lies in the hot and hyper-arid Jordanian Desert, at a distinctive and spectacular mountain front that reaches 1500m above the desert floor. This landform marks the eastern margin of the desert lowlands of the great Jordanian rift valley, with the trough of the Wadi 'Arabah to the south and west, and the highlands of the Mountains of Edom and the Jordanian tablelands to the east and north (Bienkowski and Galor 2006). The mean summer temperature on the Jordanian tablelands is in the order of 17°C, compared with winter temperatures of about 12°C (Bruins 2006; Rabb'a 1994). Winter temperatures on the desert floor in the Wadi Faynan are much the same as on the plateau, but in summer temperatures frequently reach 40°C. Seasonality is strong, with most rain falling between December and March and virtually no precipitation occurring between June and September. Annual rainfall in the lower Wadi Faynan is around 63mm and

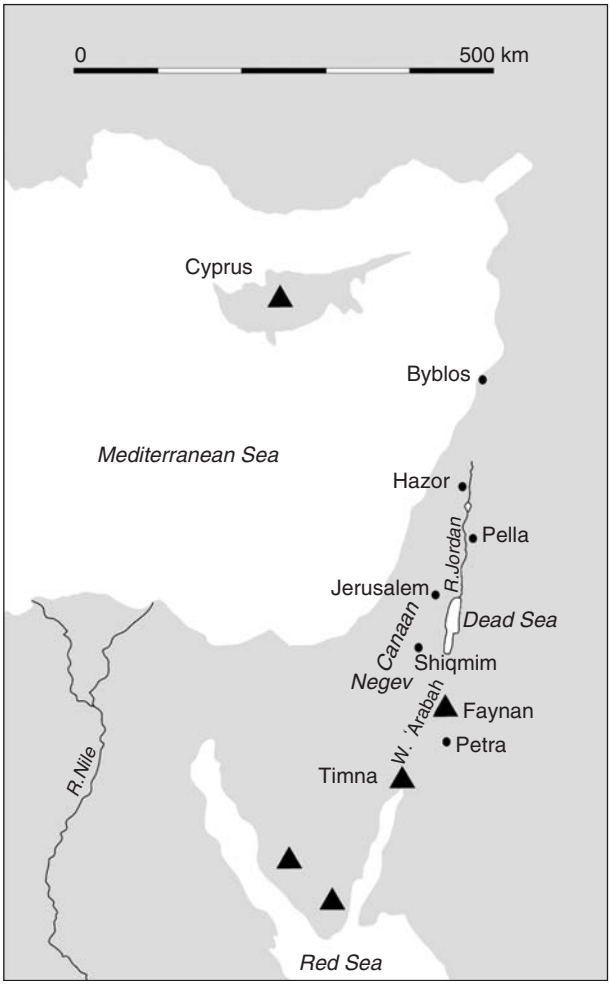

Fig. 7.1 Southern Jordan, showing the location of the Wadi Faynan and other places mentioned in the chapter
▲ = copper source.

even less in the Wadi 'Arabah ('Aqaba receives 30mm for example), whereas the Jordanian Tablelands have an average precipitation exceeding 200mm per year. Given this extreme aridity, the Wadi Faynan today is primarily used for seasonal grazing by Bedouin. Some of the latter stay in the Wadi 'Arabah throughout the year but most are transhumant, bringing their flocks and herds down from villages on the plateau (a day's walk with livestock), where pastoralism is integrated with a Mediterranean-style farming, the flocks being kept on the plateau in the hottest and driest months.

Though an important focus of the paper is the Roman period, we want in particular to reflect on the changing character of core/periphery relations in which the Wadi Faynan, an inhospitable and extremely arid landscape on the margins of better watered and more populous regions, participated (Bienkowski 2006 raises some of the same issues for the Wadi 'Arabah as a whole). The key factor in these changing relationships was metal. The sedimentary copper ores of southern Jordan are one of the most abundant copper sources in the Levant and have through many phases of prehistory and history been a key resource at the regional scale. Copper mining on both sides of the rift valley south of the Dead Sea has a long history, with recent work in and around the Wadi Faynan suggesting that exploitation there was even more impressive than the earlier explored Timna region (Hauptmann 2000; Rothenberg 1999a, 1999b). Well in excess of 150,000 tons of ancient copper slag remain at the surface within the *c.*12km^2 main zone of ancient mining and smelting, which still contains an estimated 19.8 million metric tons of

Fig. 7.2 Khirbat Faynan (the prominent mound in the middle distance on the right), identified as *Phaino*, the principal Roman-period settlement in the Wadi Faynan and the focus of Roman smelting activity. Traces of the ancient field system are visible in front of it

copper (*www.nra.gov.jo*). Overall, the Faynan Orefield covers an area of about 500 sq. km. The mining activity in the Faynan region related to two main ore bodies that outcrop at multiple locations within the uplifted mountain front—notably in exposures in the steep-sided valleys that break through the mountain front. The higher-grade Dolomite-Limestone-Shale (DLS) ores were exploited primarily in the Bronze Age and Iron Age mining phases. Roman miners appear to have concentrated on lower grade Massive Brown Sandstone (MBS) ores.

Copper mining and smelting were central to Bronze Age, Iron Age, and Roman activity in the Faynan region. The principal settlement of the region, Khirbat Faynan (figure 7.2), site WF1 in our survey record, is commonly identified as the ancient settlement of *Phaino*, the centre of Roman copper mining in the Jordanian desert (Lagrange 1898, 1900). Yet these societies operated on different scales and with varied external relations across this time frame. The prime aims of this chapter are to evaluate the significance of the mining in the socio-economic evolution of these societies, and the impact the mode of exploitation had on the local population and environment of Faynan.

THE ARCHAEOLOGY OF THE FAYNAN MINING LANDSCAPES

The Wadi Faynan Landscape Survey concentrated on an area of just over 30km^2, with some reconnaissance beyond—notably to locate the more remote mining sites (Barker *et al.* 1997, 1998, 1999, 2000 for interim reports). Over 1500 archaeological structures have been recorded in this small zone, allowing our team to construct a multi-period analysis of settlement, mineral exploitation, landuse, and environmental change. The mines themselves are focused in several groups within the mountain front just beyond the core survey area, especially to the north and northeast of Khirbat Faynan (figures 7.3–7.4). Detailed survey and classification of the workings, which comprise extensive shafts, adits, and galleries, have been carried out by the Bochum Bergbau Museum, but the results are still only partially published (Hauptmann 2006; Weisberger 1989, 1996, 2003); a general listing of the Bochum Bergbau Museum's surveys of mining and smelting sites is provided by Hauptmann (2000: 62–100). What the Faynan survey was able to add to the picture was much more detailed knowledge of the associated settlements, field systems, and landscape features, as well as making a detailed assessment of the physical and human impacts of the mining and metallurgical activity (Barker *et al.* forthcoming).

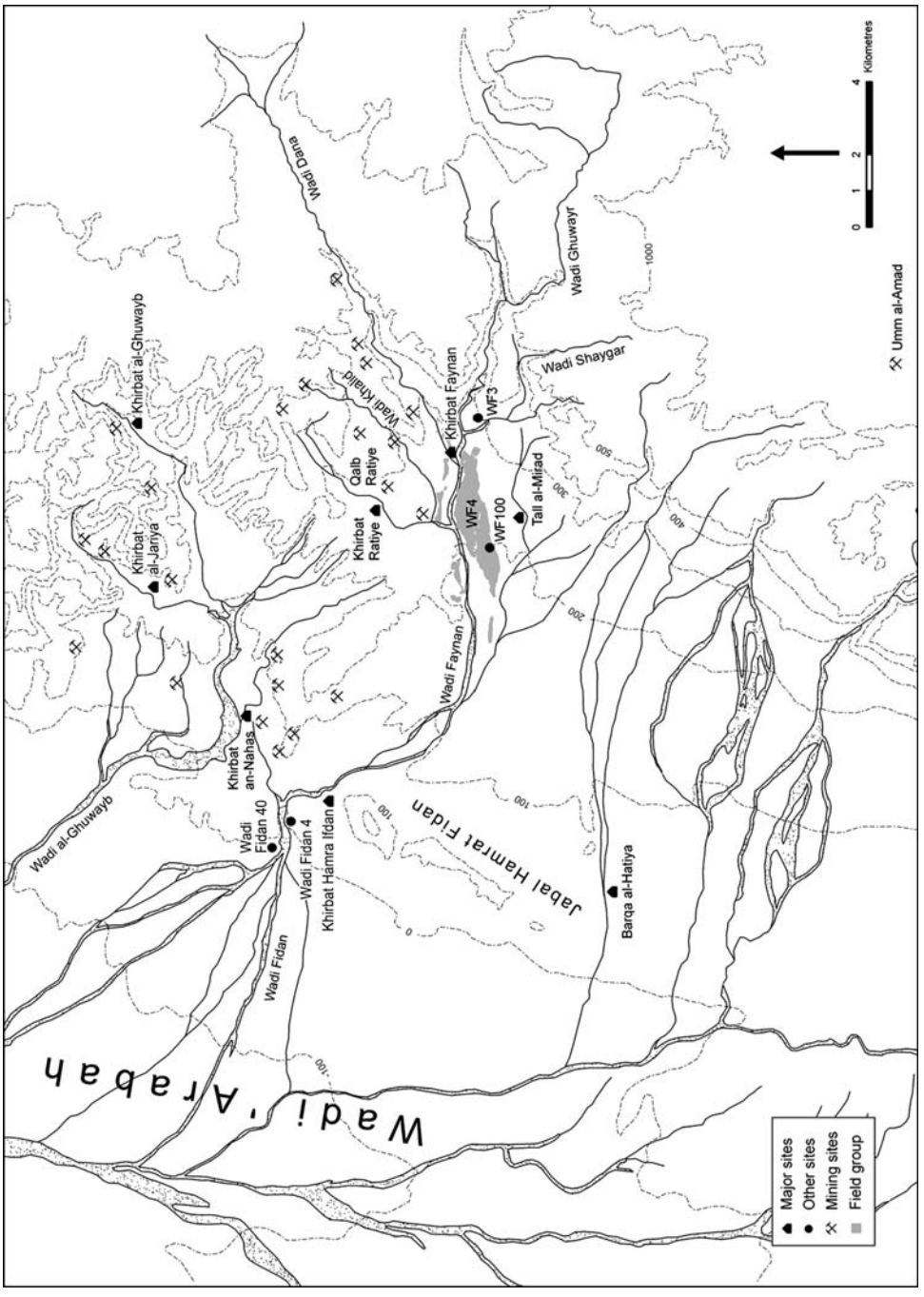

Fig. 7.3 The distribution of mines and metallurgical features in the Faynan region

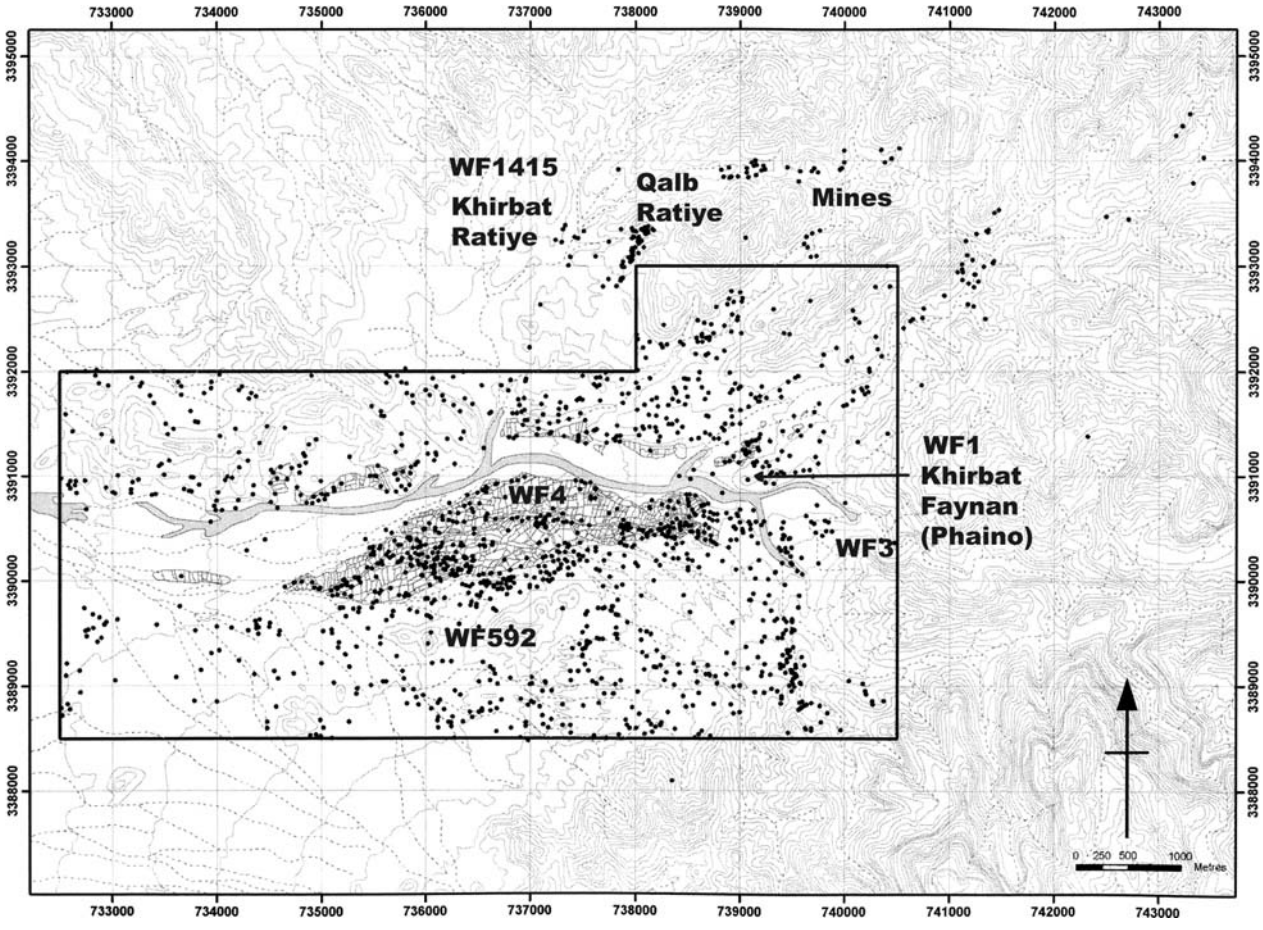

Fig. 7.4 The overall distribution of sites located by the Wadi Faynan Landscape Survey, showing locations of principal sites referred to in the text

A distinctive feature of the project's methodologies was the extensive use of geochemical investigations of suites of heavy metals within sediments. It was clear from the Bochum work that ores of different composition and sources had been worked, transported, and processed by technologies that had changed over time (Hauptmann 2000, 2006), suggesting that different suites of emission products might have been released at different rates and times into the atmospheric, terrestrial, biological, and cultural environments. Initially geochemical investigations were carried out using Flame Atomic Absorption Spectrophotometry (AAS) for the analysis of copper and lead. A more broad-brush and rapid approach was provided by EDMA (Energy Dispersive X-ray Microanalysis) surveys. More wide-ranging analyses of small samples of metals were undertaken using ICPMS (Inductively Coupled Plasma Mass Spectroscopy) and most recently by ICP-AES (Atomic Emissions Spectrophotometry). At various times all three approaches were employed on dated sediment sequences to give us information on the nature and scale of past metallurgical activities, as well as on modern tree and plant samples, the remains of invertebrates and other animals, and other surface materials, to inform on the scale of metal pollution in the present-day environment created by mining and smelting in antiquity.

CHALCOLITHIC AND BRONZE AGE EXPLOITATION

On the evidence of a tiny piece of copper ore found in trial excavations at Tell Wadi Faynan, a Neolithic and Chalcolithic settlement 1km west of Khirbet Faynan, Neolithic people were collecting lumps of surface copper ('native' copper) from the adjacent hills by the seventh millennium BC (al Najjar *et al.* 1990: 31). It is quite likely that, like many other Neolithic societies, they were beating lumps of native copper into simple ornaments; but on the evidence of our geochemical studies of sediments at Tell Wadi Faynan, they do not appear to have experimented purposively with the effects of heating ore until a thousand years later.

The fourth, third, and second millennia BC were periods of extraordinary social change throughout the Levant, characterized especially by the development of hierarchical societies in the Chalcolithic (*c.* 5000–3600 BC) and the rise, and in places subsequent collapse, of urbanism in the Bronze Age (*c.* 3600–1200 BC). Through these millennia the southern Levant was increasingly part of the competing spheres of influence of imperial powers to the east, south, and north. From the middle of the fourth millennium BC there were urbanized societies living in southern Mesopotamia on the alluvial

plains of the lower Tigris and Euphrates valleys (in what is now Iraq). The Nile valley was unified within a state system of comparable complexity by the end of the fourth millennium BC. By the middle of the third millennium BC Mesopotamia was the heartland of the aggrandizing state of Assyria. By the early second millennium the Hittite state was established across much of Anatolia. As with modern states, these ancient states were voracious consumers of resources beyond their heartlands, which they could variously obtain by trade or coercion. Wadi Faynan, on the margins of the settled landscape but rich in mineral wealth, was clearly exposed to the effects of these supra-regional transformations in political and economic structures. The role of local elites in facilitating trade in metals with powerful neighbours is frequently regarded as the key factor in the development of Chalcolithic and Early Bronze Age societies in the southern Levant (Adams 1999; Algaze 1993; Finkelstein 1995; Joffe 1993).

Chalcolithic societies in the southern Levant (*c.* 5000–3600 BC) developed out of the preceding village-based Neolithic societies, but were characterized in some regions such as the Negev by the emergence of marked social hierarchies and evidence for other social institutions which are commonly regarded as signatures of chiefdom societies (Levy 1995). There is evidence for significant population growth, and for the development of local settlement hierarchies, with larger sites such as Shiqmim in the Beersheva valley in the Negev (Levy 1987) interpreted not just as more substantial villages than the smaller sites around them but as political centres coordinating social, economic, and religious activities within their spheres of influence (Levy 1987, 1995). (An alternative view is that Chalcolithic elites were primarily religious specialists: Joffe *et al.* 2002.) The archaeological indicators of status include craft workshops, specialized metallurgy, prestige objects, formal cemeteries including child burials with rich grave-goods, and religious buildings or sanctuaries (Alon and Levy 2005).

The Bochum mining studies indicate that copper mining began in Wadi Faynan in the Chalcolithic period, in the form of simple adits or scoops quarried into the hillside (Hauptmann 1989a, 1989b, 2000). The dating evidence in direct association with these diggings is rather tenuous, but archaeometallurgical analysis of artefacts and ore at Shiqmim, over 100 km to the west, indicated that they were of Faynan copper (Shalev and Northover 1987). Timna ores were also exploited by the Negev settlements. Given the presence of ores, slags, crucibles, and prills at Shiqmim and other Negev sites clearly associated with the working of Faynan copper, together with the lack of evidence hitherto for any infrastructure for metal extraction at this time at Faynan and Timna, the consensus has been that access to the ores was not being controlled by local Faynan elites and that Negev settlements such as

Shiqmim were sending working parties to the mining areas and transporting back—presumably by donkey—quantities of ore for smelting and casting (Golden *et al.* 2001; Levy 1995; Levy and Shalev 1989).

While our survey found no evidence for settlements of the complexity and elaboration of Shiqmim in the vicinity of the Faynan ores, the scale of local participation in the early metal exploitation needs re-evaluation. A 1.5 ha site likely to be of early Chalcolithic Age has been found at the mouth of the Wadi Fidan (the lower part of the Wadi Faynan) overlooking the Wadi 'Arabah, but without evidence for metal-working (Levy *et al.* 2001: 10). However, our geochemical analyses of Chalcolithic Age layers at Tell Wadi Faynan provide strong hints of *in situ* metallurgical activity, with high concentrations of copper and lead in ash-rich sediments indicating that metal-rich ores were being deliberately heated—smelted—on site. We also found slags in sediments built up behind a revetment wall northeast of Khirbat Faynan at the foot of the site mound, from which we obtained radiocarbon dates of Chalcolithic Age (Beta –203413: 5690 ± 40 BP [4600–4450 cal. BC]; Beta 203414: 5290 ± 40 BP [4240–3990 cal. BC]). The indications are that there were Chalcolithic communities living in the Wadi Faynan engaged in the extraction and processing of copper ores, though their relations with the complex copper-using societies of the Negev are unknown.

The mines of the Early Bronze Age (3600–2200 BC) were technically much more sophisticated than the simple adits of the Chalcolithic period (Hauptmann 2000: 97; Hauptmann and Weisgerber 1987: 424). The Faynan miners targeted the copper-rich DLS ores, excavating vertical pits or shafts and then opening them out into galleries, leaving vertical pillars as reinforcing structures. One of the galleries explored by the Bochum team was 1–1.5m in height, over 30m wide, and could be followed over 50m into the hillside. Smelting sites consisted of simple bowl furnaces, commonly located on ridge tops where the prevailing winds would help the process of heating up the ore/charcoal mix. Small rods of fired clay ('ladies' fingers') were used to support the ore/charcoal mix to aid the process of the prills of molten copper flowing down freely to the base of the crucible where they could be collected after cooling. We identified ten Early Bronze Age smelting sites with small slag nodules, clay rods, and Early Bronze Age pottery, the most substantial consisting of a stone-built enclosure built up against a rock wall, together with several locations with slag and clay rods but without pottery that almost certainly belong to the same phase of metallurgical activity.

Our survey indicates a highly structured, indeed hierarchical, as well as densely occupied landscape in the Early Bronze Age, with evidence for marked differentiation between arable, pastoral, and metallurgical activities in the different parts of the Wadi Faynan. The most substantial settlement was at

the centre of the wadi, classified as WF100, where trial excavations revealed a substantial boundary wall enclosing a cluster of house-and-courtyard compounds and further paddocks and yards (Wright *et al.* 1998). The area of densest surface material covers 11 hectares, a size of settlement for which Philip (2001: 182) suggests a likely population in the region of 1000–2500 people. The site was the focus for a range of food- and craft-production activities. The former included cereal cultivation, tree-crop agriculture, and animal husbandry (sheep, goat, cattle, donkey, and pig are all represented). Crafts included potting, making stone vessels, flint knapping, weaving, and metallurgy: copper ores were brought to the site, broken up, and smelted, and the resulting metal was fashioned into objects using moulds and hammering techniques. A preliminary petrological analysis suggests that WF100 may also have been the centre of production for large storage jars found at adjacent sites interpreted as agricultural settlements (Edgar 2003), hinting at the possible role of its community in the local control and central storage of foodstuffs. One interpretation is that there were powerful individuals or groups at WF100 with some kind of controlling role of the metal extraction process and trade in copper and copper artefacts with the outside world. However, it is probably important not to exaggerate the scale of this: there was another significant copper-working settlement dating to the Early Bronze Age in the Wadi Faynan, at the end of the Faynan/Fidan complex, classified as Wadi Fidan 4, which like WF100 was surrounded by what appear to have been smaller satellite sites, but detailed studies of its settlement architecture and artefactual distributions indicate that copper production at the site was relatively small scale, with part-time metal-workers carrying out their activities in restricted zones of what was otherwise a domestic agricultural village (Levy *et al.* 2001).

Although our survey evidence indicates that the Faynan landscape was increasingly dominated by pastoralists after *c.* 3000 BC, metal production appears to have intensified, with a more stable and productive copper ore being mined and processed in powerful wind-powered furnaces (Adams 2002, 2006; Craddock 2001; Hauptmann 2003, 2006). Faynan copper continued to be processed and traded out of the region: it has been identified, for example, in a series of axes and spearheads in a destruction deposit of Early Bronze Age 2 date (*c.* 3000–2700 BC) at the settlement of Pella in northern Jordan (Philips *et al.* 2003). The focus of local power structures appears to have shifted at this time down-channel to Wadi Fidan, where the Jabal Himrat Fidan Survey has found a network of small settlements and cemeteries grouped around the major strategically located and defensible settlement of Khirbat Hamra Ifdan. The site of Barqa al-Hatiya, about 7km southwest of Wadi Faynan, may also have played a role as a local trade centre at this time, for its pottery matches in its mineral composition pottery from the Negev and Jerusalem (Adams 2003).

One factor in the decline in the exploitation of Faynan copper in the second half of the third millennium BC (the Early Bronze Age 3 and 4 periods), with all its social and economic implications for the inhabitants of the region, might have been the shift in Egyptian trade links to Byblos and Cyprus, changes which the power structures of the more urbanized settlement zones west of the Jordan valley were strong enough to weather. Another may have been the vulnerability of the agricultural system to deteriorations in environment, probably both climatically and humanly induced. The increasing rates of soil erosion identified by our palynological and sedimentological studies in the Wadi Faynan support arguments that a significant shift to aridification occurred throughout the region towards the end of the third millennium BC (Rosen 1995), the effects compounded by poor land management techniques including stripping timber for smelting.

In the Middle Bronze Age (2000–1550 BC), sophisticated urban forms and what appear to be state-level political structures developed in the better-watered regions of the southern Levant (Broshni and Gophna 1986). The major centres there were the foci of administrators, priests, merchants, scribes, and professional military cadres. The elites maintained political and economic links with the more powerful neighbouring states: there were long-term emissaries from Babylon based at Hazor, for example (Ilan 1995: 307). There is then widespread evidence for settlement contraction and economic decline in the Late Bronze Age (1550–1200 BC), and for a loosening in socio-political integration, though surviving centres remained urban in character. One view of these trends is that they can be linked to military campaigns by the Egyptians, for example the expulsion of the Hyksos from Egypt and the conquest of Canaan by the first pharaohs of the Eighteenth Dynasty, or to the demands for tribute by the Egyptian authorities controlling the coastal plain at this time (Bienkowski 1989). Another is that they primarily reflect a process of internal instability and conflict. In all likelihood both sets of processes, external and internal, were involved and inter-linked.

The nature of settlement in the more arid parts of the southern Levant during the second millennium BC is much debated. One view is that the region continued to be inhabited by small-scale mobile populations that created an ephemeral archaeology that is difficult to recognize and date (Finkelstein 1995; Finkelstein and Perevolotsky 1990). Another is that, given the successful recognition in areas such as the Negev of 'pastoral archaeologies' in other periods (for the Early Bronze Age and Iron Ages, for example), the absence of Middle Bronze Age settlement signifies a real decline in pastoral populations, with the arid zone perhaps being more or less abandoned (Rosen 1992). Wadi Faynan is typical of the region in the paucity of evidence obtained by the project for settlement dating to the second millennium

BC—we found only a handful of sites with pottery of this period (the Middle and Late Bronze Ages). It is difficult to believe that pastoral populations living on the plateau did not avail themselves of seasonal grazing in Wadi Faynan at this time, but if they did, they do not appear to have built stone structures and were certainly not pottery-using to any degree and so are invisible to the archaeological survey. However, given the discovery of the graves of apparently aceramic Iron Age people buried with wooden bowls at the Wadi Fidan 40 cemetery (Levy *et al.* 1999), the near-absence of Middle and Late Bronze Age pottery in Wadi Faynan is not necessarily evidence for the absence of people. In fact, radiocarbon dates and associated geochemical studies from sediments near Khirbat Faynan indicate metal-working activities in that locality in the late second millennium BC. On balance, it seems likely that Wadi Faynan was characterized by predominantly pastoral use through the course of the second millennium BC, though some people were still visiting its mountain rim from time to time to extract and process copper ores.

IRON AGE EXPLOITATION

The first millennium BC saw the re-emergence of complex societies (states) in the southern Levant and the renewal of substantial metallurgical activity in Faynan. The uncertainties concerning the Late Bronze Age are compounded by equally controversial debates about the visibility of the earliest Iron Age activity. In southern Jordan the following broad divisions apply: Iron I (1250–1000 BC), Iron II (1000–587 BC) and Iron III (587–332 BC). The Iron II period is sometimes subdivided into A, B, and C phases, but even this simple system is not without difficulties (see Herr and al-Najjar 2001 for the overall frameworks).

In broad terms, a common view of the Early Iron Age in the Transjordan region contrasts the archaeological invisibility of the Iron I societies with the relatively greater sophistication and diffused material culture of those of the Iron II period, coinciding with the synchronous emergence of three proto-states as described in the somewhat biased Hebrew bible: Ammon, Moab, and Edom. The Faynan district fell within the territory normally ascribed to the most southerly of these, Edom, but the exact sequence and process of the evolution of the Trans-Jordanian states are still very imperfectly understood (Bartlett 1989, 1999; Bienkowski 1992b: 1). From the ninth century onwards the Transjordanian states also had to deal successively with the neo-Assyrian and neo-Babylonian empires, enduring periods of tributary vassal status and, possibly, direct rule (Bienkowski 1992b; Weippert 1987). Egyptian influence

on the Red Sea and Wadi 'Arabah corridor was also significant (Kitchen 1992; Rothenberg 1988). The history of the Edomite kingdom must thus be constructed from a variety of external written sources to a greater or lesser extent antipathetic to it. Archaeology is all too often used simply to support conclusions drawn from this written testimony, rather than being allowed to speak for itself. The simple correlation of Iron Age material in southern Jordan with the assumed ethnic label 'Edomite' is rarely questioned, for example (LaBianca and Younker 1998; Mattingly 1992).

The Edomite territory is generally assumed to have comprised a section of the arid Wadi 'Arabah corridor south of the Dead Sea and the adjacent section of the Jordanian plateau to the east. The heartlands are commonly assumed from the very start to have been on the better-watered plateau region, though the population involved in making the transition to state formation is recognized to have been of a transhumant or nomadic pastoral background (Bienkowski 2001b; Bienkowski and Steen 2001). As Levy *et al.* (2001: 159–65) have observed, the application of core-periphery models to the rise of early states in Transjordania needs to recognize that core-periphery zones were not static and that peripheries could become cores at critical junctures. To date, surprisingly little attention has been paid to the potential significance of copper production in the rise of the Edomite kingdom (Bartlett 1989; La Bianca and Younker 1998). What if the Wadi 'Arabah was the initial core of what was to become a fully-fledged Edomite state by the seventh century?

The work of the Bochum Bergbau Museum has now made clear the huge scale of Iron Age metallurgical activity (Hauptmann *et al.* 1992: 20–30). Within a 20 × 15km area centred on Wadi Faynan there were numerous mines and at least five major Iron Age smelting centres: Khirbat Faynan, Barqa al-Hatiya, Khirbat an-Nahas, Khirbat al-Jariya, and Khirbat al-Ghuwayb. The most common indicator is the presence of mine waste (tailings) around the entrances of buried mines, though some adits and shafts remain open. The adits followed the 2–3 m thick DLS unit into the hillside at a strike of *c.* 30° for at least 60 m. These were large scale production sites, very different from the typical Bronze Age smelters—the slag heaps around the major sites are estimated to amount to between 100,000 and 130,000 tonnes, representing *c.* 6,500–13,000 tonnes of copper (Hauptmann 2000: 97). In the Wadi Khalid in particular, the miners had to go deeper in consequence of Bronze Age mining working out the shallower more accessible ores: Iron Age mines had shafts up to 70 m deep in places in order to reach lenses of the DLS ores (Hauptmann and Weisberger 1987, 1992; Hauptmann *et al.* 1985; Khouri 1988: 124–7).

Of the main smelters, the site of Khirbat an-Nahas (the 'Copper Ruin') is visually the most striking and has the highest volume of slag associated

with it (Frank 1934: 298; Glueck 1935: 26–29, and 1940: 67–73; Hauptmann 2000: 87–88, with fig. 64; Kennedy and Bewley 2004: 118–19; Levy *et al.* 2001: 169, 2003: 268–71, with fig. 12, 2005, 133–58; Musil 1907: 218). The extensive slag heaps are spread over 10 ha around a large 'fort' and settlement (8.6 ha). Recent survey and excavation have established the existence of at least 100 separate buildings and 34 distinct slag mounds (Levy *et al.* 2003: 268). The enceinte of the 'fort' (*c.* 73m^2) was constructed in good quality masonry and still stands to a considerable height.

Dating the Iron Age exploitation in Faynan is hampered by the limited understanding of Iron I pottery and by the common assumption that the copper mining will logically have followed the emergence of the 'Edomite state', most clearly identifiable on the plateau in the Iron IIC phase. The radiocarbon dates obtained by Hauptmann at Faynan fall into the Iron II (1000–587 BC) and III (587–332 BC) periods, but his samples from an-Nahas and al-Jariya extend back to Iron I (1250–1000 BC), so the overall suite of radiocarbon dates indicates some copper production in the Iron I period followed by a peak in production early in the Iron II phase, probably in the tenth and ninth centuries BC (Hauptmann 2000: 64–6). Finds of Egyptian scarabs and 'Midianite' pottery at Khirbat an-Nahas and Barqa al-Hatiya support a date for initial activity in the thirteenth-eleventh centuries BC (Fritz 1994; Levy 2002: 5), and 'Midianite' pottery recorded from the Wadi Faynan (cf. Rothenberg and Glass 1983) indicates mining and smelting activity in Iron I. An AMS date (Levy *et al.* 1999: 303) obtained from a short-life fruit from the Wadi Fidan 40 cemetery (situated less than 5km from Khirbat an-Nahas) appears remarkably similar to the range of the bulk of the smelting dates (broadly late twelfth–ninth centuries BC). There is thus a high probability that the people buried at Wadi Fidan 40 were an important labour pool for the early mining and smelting activity. Some preliminary analyses of skeletal elements from this cemetery have revealed significant levels of copper and lead in the bones, almost certainly indicating involvement in mining or smelting of copper (Pyatt *et al.* 2005: 297, table 2). The latest evidence from Khirbat an-Nahas (Levy *et al.* 2005; Higham *et al.* 2005) has isolated two main phases of production in the twelfth to eleventh centuries BC and tenth to ninth centuries BC. Two identical AMS dates of 2630 $\pm$ 50 BP (Beta-110840/110841, calibrated 820–790 BC) obtained from pieces of charcoal found at a depth of 2.60m in sediments that built up behind a barrage wall beside Khirbat Faynan probably correlate with the end of the high peak of Iron Age metallurgy, further evidence suggesting significant activity before Iron II C.

In the Iron I period it may well be inappropriate to talk of the existence of the Edomite kingdom or a people known as the Edomites. Broadly similar issues and problems exist too in relation to the Moabite civilization (LaBianca

and Younker 1998; Routledge 2004). The straightforward implication of the dearth of archaeological evidence for Late Bronze Age and Early Iron Age activity in southern Jordan is that settlement was mostly transient, based on tribal societies practising extensive pastoralism and leaving only vestigial traces (Steen 2004). However, the new evidence presented here suggests that there was some renewal of copper production in the Faynan region during the later second or very early in the first millennium BC. The full extent of this remains difficult to trace because of the paucity of excavation and the near aceramic conditions of this phase.

It is now clear that copper mining and production in the Faynan region in the first half of the first millennium BC were organized on an industrial scale, with centralized smelting facilities at a series of major sites. The large fort at Khirbat an-Nahas suggests that the production was protected by a military force, perhaps also required to oversee forced labour at the mines. Long ago, Glueck (1935: 28) speculated on the use of slave labour at the Iron Age mines and smelters, drawing on biblical references to the enslaving of defeated enemies by the Edomites and noting the tradition that David enslaved the people of Edom after his conquest of the region (Amos 1.6.9). The most recent review of the AMS dates from the fort suggests that it was constructed early in the Iron II phase (Levy *et al.* 2005; Higham *et al.* 2005).

As Knauf (1992: 50) observed, the massive investment in agricultural expansion and in the embellishment of the main settlements on the Edom plateau in the Iron IIC phase required substantial capital and this most likely came from two sources: copper production, and trade with Arabia. It is thus an interesting possibility that the evolution of copper production was a key driver in Edomite state formation, rather than that the creation of the kingdom led to the reopening of mines there (see Levy *et al.* 2001, 163 and 2005, for a similar observations). The growth of copper production may well have preceded the dynamic social changes on the plateau. In and of itself, the copper wealth of Edom when deployed in prestige building projects on the Jordanian plateau lands may equally have motivated Assyrian expansionism against the kingdom during the Iron IIC period, translating the region once more into a periphery of a remote core.

NABATAEAN EXPLOITATION

The cultural identity of the Nabataeans is still controversial, though the possibility that they represent the direct descendants of the Edomites is now generally doubted (Schmid 2001: 367). It is most probable on linguistic and

historical grounds that they were immigrants into the region from north-western Saudi Arabia around 400 BC, though the first historical attestation is in 312 BC (Graf 1990). The archaeological record of later Nabataean civilization, traditionally viewed as a desert nomadic culture, reveals instead a complex, literate, society ruled by coin-issuing kings, with some substantial urban settlements such as Petra (Nehmé 1999; Schmid 2001, 2002). One key question is the extent to which there was Nabataean mining and smelting activity as a precursor to the expanded Roman and Byzantine operations.

Some commentators have suggested that there was no Nabataean copper exploitation in the Faynan area, in part relying on the testimony of a second-century BC writer who claimed that the copper and iron mines of the mountains bordering Arabia were no longer worked in his time (Sartre 1993: 142). However, a well-engineered shaft inserted next to an Iron Age double shaft in the Wadi Khalid is believed to date to either the late Nabataean or early Roman period and seems to represent technically proficient prospection work, evaluating the state of mineral deposits there. There is ceramic evidence for a substantial Nabataean presence at Khirbat Faynan and slight amounts of Nabataean material have been recovered at the other major Iron Age smelting sites of Khirbat an-Nahas, al-Jariya, and al-Ghuwayb (Glueck 1935: 25, 34–5), perhaps indicating some small-scale activity elsewhere. Although it is clear that the huge scale of exploitation of the earlier Iron Age had not been maintained, these indications do suggest that some active measures were underway to re-exploit at least in a minor way the Faynan copper during the Nabataean period.

Although the Nabataean levels at Khirbat Faynan are buried beneath the later town, the impressive stonework and architecture of a Nabataean fortified site further down the Wadi to the west, Tall al-Mirad, site WF592, suggests that activity in the valley was under some degree of supervision or surveillance (figure 7.5). This fortified hilltop site on the south side of the valley commands outstanding views out to the Wadi ʻArabah and up the valley to Khirbat Faynan and the mountains beyond. There were numerous minor rural settlements in the valley, associated with advanced floodwater farming hydraulic systems, though at this stage the overall appearance of the main field system flooring the Wadi Faynan (WF4) will likely have been of a series of discrete minor field systems. These sites, with enclosures and close spatial association with elements of the field system, are thus interpreted as farms and farmsteads.

The settlement evidence for the Nabataean phase thus seems to comprise a substantial nucleated settlement beneath and around Khirbat Faynan, with a secondary (intervisible) control site a few km away, Tall al-Mirad. At the very least, this looks like direct political control of the valley by the authorities at

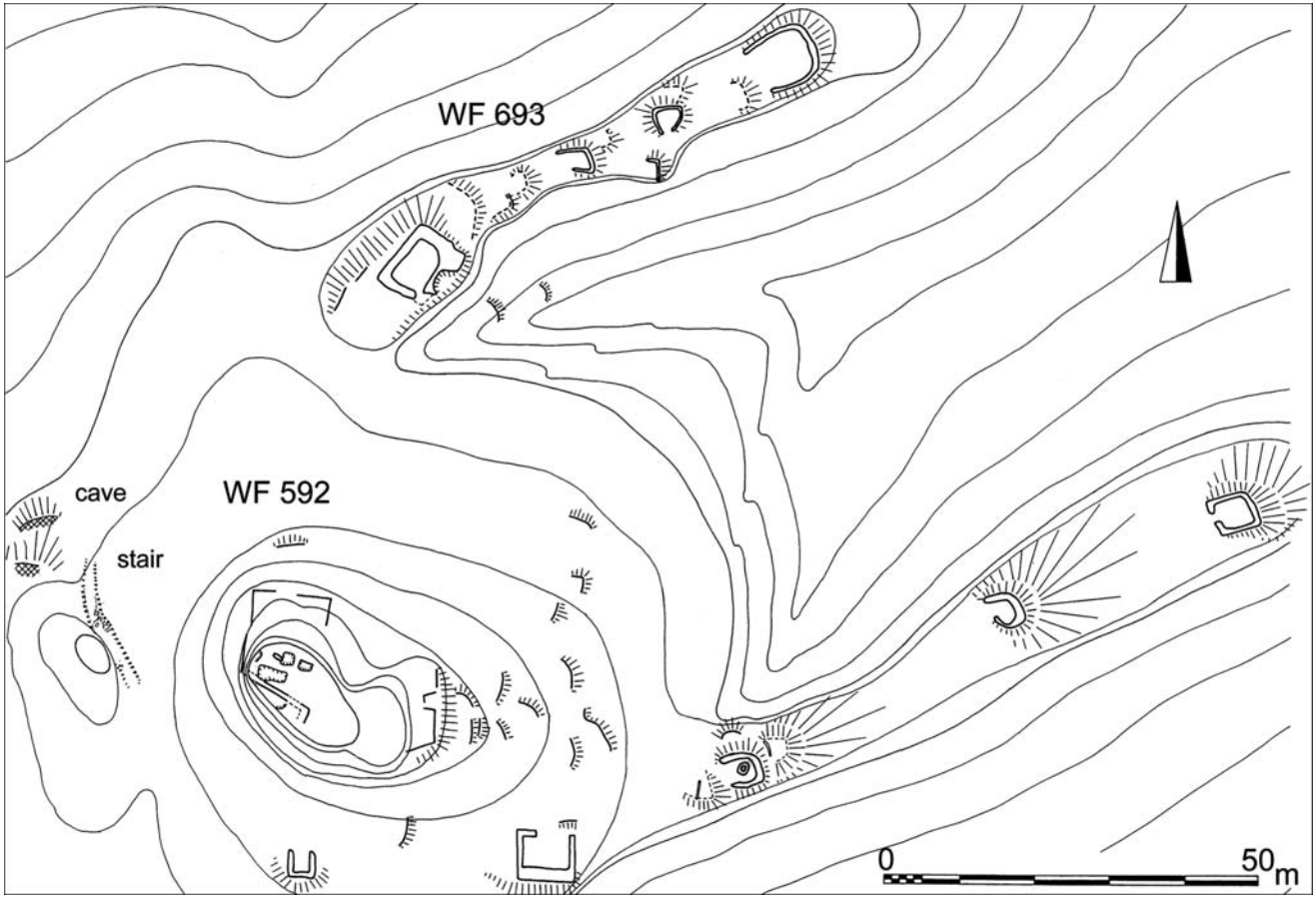

Fig. 7.5 Tall al-Mirad (WF592) a Nabataean fortified settlement

Petra, though the hints at some renewed mining await confirmation through more extensive excavations.

ROMAN EXPLOITATION

The Roman archaeology of the Wadi Faynan focuses on Khirbat Faynan, ancient *Phaino*, and its impressive group of associated sites (figure 7.6): the South Cemetery (WF3), an aqueduct, water pool and mill, slag heaps, and the extensive field system that extends down the Wadi Faynan to the west (WF4). The extensive and dense settlement at Khirbat Faynan suggests an urban centre with a fortified administrative building at its centre, and indeed the literary sources confirm that *Phaino* was an imperial mining operation (*metalla*), a major state operation imposed on the landscape (Sartre 1993: 139–42; cf. Millar 1984). The preserved remains of Khirbat Faynan have the character of a mining town, ornamented in late antiquity with a series of churches, the latter reflecting the fact that the site became a focus of pilgrimage following the martyrdom of Christians there during the Great Persecution (Sartre 1993: 139–42).

The Qalb Ratiye mines (Hauptmann 2000: 79–81; 2006: 129) a few km north of Khirbat Faynan were controlled by a large fortified building, Khirbat Ratiye (WF1415), suggestive of the presence of some soldiers and a small bureaucracy, while the simple huts gathered around the enclosure may well have housed the miners themselves (figure 7.7). Although major settlement concentrated on the two Khirbats, some smaller settlements were dispersed across the landscape. A number of village-like settlements has been located close to the mountain face; some of these could have housed miners and mining-related personnel. Smelting activity, though, was almost exclusively concentrated at Khirbat Faynan, where thick-walled furnaces and large tap slags indicate very intensive and large-scale production in the Roman period.

The selection of the Wadi Faynan as the Roman mining centre was undoubtedly connected with the fact that there was a good water supply in the Wadi Ghuwayr and the largest expanse of potentially cultivable land in the Wadi ʻAraba region. Preliminary analysis of surface pottery from the WF4 field system suggests that the control of land was now centralized and unified, with farming carried out by people based at *Phaino*. The land was exploited through the use of run-off farming technology, exploiting the seasonal rainfall and flash-floods of the area (Barker *et al.* 1996). Progressive additions to the field system increased its integral nature, its scale, and its hydraulic sophistication—an elaborate irrigation system of water conduits was constructed.

Fig. 7.6 Khirbat Faynan (WF1/2/11): plan of core of site and South Cemetery (WF3) (after CBRL survey)

Productivity was artificially raised above the normal carrying capacity of the arid Faynan landscape to feed the greatly enlarged population.

The character of Roman settlement and activity therefore appears to testify to a high degree of centralized control. The Roman state claimed ownership of all significant mineral deposits and decorative stones (Suetonius, *Tiberius*, 49.2), though the exploitation of these was variously handled. Sometimes, the imperial monopoly was strictly maintained by the direct management of mining activities by imperial officials (military prefects or civil procurators); in other cases the rights of exploitation were leased to private companies, who contracted with the State to hand over a fixed percentage of the output (Hirt 2004). Faynan appears to be an example of the former mode of exploitation—with significant implications for the logistical supply and provisioning of the mining settlements and security control of the operation. The remote desert location hindered supply but favoured security: the site never seems to have had a major garrison, though small numbers of troops may have been housed at Khirbat Faynan and Khirbat Ratiye. There are close parallels here with the quarrying operations set up to exploit the granites and porphyries of the Eastern Egyptian desert (Maxfield 2001; Maxfield and Peacock 2001a, 2001b; Peacock and Maxfield 1997). The scale, complexity, and expense of the enterprise there are revealed by the establishment and maintenance of quarries, slipways, and workshops, forts and fortlets, settlements for workers, animal feeding stations, wells, tracks and roads, and massive wheeled vehicles to transport 200-tonne columns across the desert to the Nile (Maxfield 2001, for a succinct summary). One of the things the Egyptian quarries highlight is the lengths and expense that the Roman state was prepared to go to control the supply of both everyday necessities and of selected high-status commodities (Adams 2001; van der Veen 1998).

In the case of Wadi Faynan, however, there is compelling evidence that by the late Roman period the landscape was severely compromised by the scale of industrial and agricultural activity (Grattan *et al.* 2002, 2003a, 2003b, 2004; Pyatt *et al.* 1999, 2000, 2005). The production of copper required large quantities of charcoal and timber, and whereas in the Iron Age the principal sources were local trees and scrub, by the Roman period these had to be brought in from the plateau above because the local environment had been stripped of suitable vegetation (Engel 1993; Engel and Frey 1996). There are significant implications from this, not least the transport implications of bringing in thousands of donkey loads of charcoal each year. In addition, ore was brought from various mines to the main smelting centre at Faynan, emphasising the fact that pack animals were vital for many aspects of the mining operation. The fodder needs of these animals were an additional burden on the system, perhaps met by a combination of additional grain imports and the exploitation of available grazing within the valley.

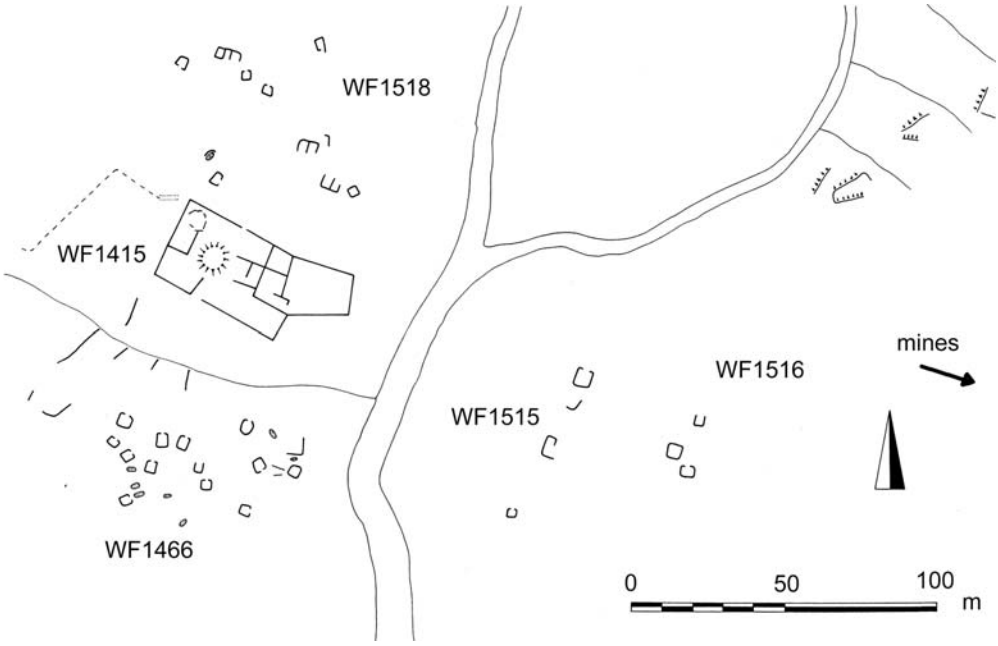

Fig. 7.7 Khirbat Ratiye (WF1415) and associated mining settlement, close to the main Roman mines in the Faynan district

The intense smelting activity around Khirbat Faynan will have produced a dense pall of airborne pollution, from which many particles will have entered the ecosystem by falling on crops, bare fields, and the uncultivated landscape, to be taken up by plants. The extent of Roman pollution can be gauged in part from our studies of pollution signatures in buried soil horizons close to the smelters, from the presence of toxins in samples of human bone of Byzantine date from the South Cemetery, and from the continuing significant levels of heavy metals in present-day vegetation, invertebrates, and grazing animals. AMS dating of the deep sequence of deposits that built up behind the Khirbat Faynan barrage wall provides a consistent picture of the Roman/Byzantine period as a time of peak levels of heavy metal pollution from the smelting activity (Barker *et al.* 2000: 44–6).

Today, seed production of wild barley plants close to the major slag heaps is about 50 per cent of that of plants 1km distant, with a progressive decline with distance between, implying that yields in antiquity would also have been much lower on polluted ground (Barker *et al.* 2000: 44–5). Although perhaps not understood at the time as a consequence of pollution, such problems of diminished plant or soil fertility can hardly have gone unremarked in

antiquity. The dense carpet of Roman-Byzantine sherds in the fields of the WF4 field system, contrasting with the relative absence of major rubbish deposits around Khirbat Faynan itself, almost certainly indicates the sustained and large-scale collection of domestic and household waste from the major settlement and the systematic manuring of the agricultural land with it. Human and animal waste was known to improve soil and crop fertility in antiquity, and this was the obvious strategy for the ancient farmers of Faynan to adopt in response to declining yields. However, the unfortunate side-effect of this policy would have been to add the fraction of heavy metal components excreted by humans and animals to the farmland, with the fertilizing effect of manuring increasingly nullified by higher levels of pollution. Over time, these practices increased the level of heavy metals in the soil and thus in the crops grown on the land, making them more dangerous to those who consumed them, as studies of pollutant bio-accumulation in human skeletons from the adjacent South Cemetery confirm (Grattan *et al.* 2002). Copper and lead are well-known poisons and both occurred at very dangerous levels in the Faynan ores, along with associated contaminants such as cadmium, zinc, and thallium. Ingestion of these toxins could lead to death from a variety of complications, but the overall cocktail of poisons would have made the Roman miners and farmers of Faynan exceptionally vulnerable to any significant epidemic.

CONCLUSIONS

The early Holocene was characterized by a climate significantly wetter than today, but from the Chalcolithic the dominant climate of the Wadi Faynan has been arid. Given this meagre rainfall, and associated (at best) steppic vegetation, the Wadi Faynan has always been peripheral to better watered regions in the Levant as a potential agricultural resource, though the Wadi Faynan Landscape Survey has uncovered evidence that in many phases of settlement its inhabitants developed floodwater farming systems of different degrees of sophistication in order to overcome the constraints of this challenging agricultural and pastoral environment. Its rich metal ores, in contrast, offered resources of considerable potential value, their exploitation providing the major theme running through the Wadi's history from the beginning of metallurgy in the Chalcolithic. However, it is not a simple story of continual exploitation by ever more complex societies, but one punctuated by periods of settlement mobility, and perhaps phases of more or less complete abandonment. Furthermore, as in the case of the development of irrigation systems, while Roman systems of mining, smelting, and labour organization

represented the apogee of sophistication in industrial practices compared with those of preceding eras, it would be wrong to characterize the latter in some kind of neo-evolutionary sequence of step-like developments in technological expertise. The same is true in terms of the record of environmental impacts detected by the project.

Most important for the theme of this chapter, though, are the changing nature and scale of core-periphery relations in which the Wadi Faynan has shared (echoed for the Wadi 'Arabah region as a whole by Bienkowski 2006). The relations between the 'Faynan periphery' of local people beginning to exploit copper in the Chalcolithic and the Negev chiefdoms who acquired Faynan copper remain unclear. Early Bronze Age elites, including perhaps pastoral-based societies in Early Bronze Age 2, may have played a central role in supplying the metal needs of the Levantine urban zone (focused on the highlands of present-day Israel, Palestine, and Jordan), until Egypt's trade links—including those to obtain copper—shifted to Cyprus. Subsequently it appears that pastoral-based societies continued to use the Faynan copper ores through the course of the second millennium BC, but largely for their local needs. In contrast, the beginnings of copper mining on an industrial scale during the first half of the first millennium BC may have been an important driver of the development of the Edomite kingdom, in which Faynan was perhaps initially as much core as periphery. The accrued wealth was in our view influential in stimulating the evolution of a fully fledged Edomite state and raising it to a level of prominence where its visible wealth may have in turn attracted Assyrian expansionism. The region then returned to peripheral status, before the process of state formation and imperial take-over repeated itself. The scale of industrial activity at Faynan in the ensuing Nabataean kingdom is unclear, but mining does seem to have been reviving and surveillance structures were put in place to control it. This activity may have provided some of the motivation for the eventual Roman annexation of the territory, which remains a somewhat murky episode in the *Realpolitik* of the empire (Freeman 1996). Here we might draw interesting parallels with Barry Cunliffe's own prime area of study, noting how the vague rumour of Britain's mineral wealth was one of the factors that brought the Roman core into contact with the 'Celtic' periphery. Certainly the subsequent exploitation of metals from the Jordanian desert region represents in a microcosm key elements of the *modus operandi* of an imperial regime: an imperial landscape of control and exploitation, an operation that defied normal rules of economic rationality in the service of a super-state. The ecological and human consequences of the rape of this landscape were profound in antiquity and are still with us to the present day: the periphery was left virtually uninhabitable as a result of the core state's approach to exploiting its resources.

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8

Where Were North African *Nundinae* Held?

Elizabeth Fentress

Like several other contributors to this volume I wrote my doctoral thesis for Barry (on the economic effects of the Roman army on Southern Numidia)[1], learning from him of the possible ways in which Roman and indigenous peoples could interact, and the various fields in which that interaction could take place. I was then, as now, interested in the Roman economy, and while my research has moved far away from both North Africa and the economy over the past twenty-five years it is a pleasure to come back to them. This paper attempts to identify the unidentifiable, the places where the periodic markets of Roman North Africa were held.

While at some level we know a great deal about the *nundinae* of Roman Africa—Brent Shaw's 1981 article is still fundamental for their study, although many of his conclusions have been questioned[2]—on another we know absolutely nothing. Considering the 300-odd towns of North Africa, our epigraphic evidence for *nundinae* is actually very slight: in four cases the inscriptions were put up on private estates,[3] in two others at *castellae* near Cirta.[4] An inscription from Hassawana, near Tiaret in western Algeria,

[1] Oxford 1978, published as *Numidia and the Roman Army*, BAR 50, Oxford 1979.

[2] B. Shaw, 1995 (1981) 'Rural Markets in North Africa', in *Rulers, Nomads and Christians in Roman North Africa*, Aldershot, 37–83: see note 1 for previous bibliography. More recent discussions may be found in J. Nollé, *Nundinas instituere et habere*, Heldesheim 1982; L. de Ligt *Fairs and Markets in the Roman Empire. Economic and social aspects of periodic trade in a pre-industrial society.* Amsterdam 1993; Y. Zelener 'Market Dynamics in Roman North Africa', in E. Lo Cascio ed., *Mercati Permanenti e mercati periodici nel mondo romano. Atti degli Incontri capresi di storia dell'economia antica.* Bari 2000. 223–235. M. Chaouali, 'Les Nundinae dans les Grands Domaines en Afrique du Nord à l'époque romaine', *Antiquités Africaines* 38–39, 2002–3, 375–86.

[3] The relevant inscriptions record the markets set up by Lucilius Africanus at Casae: Nundinae Saltus Beguensis , CIL VIII, 270 = ILS 11.451, Nollé 1982 no. 3, AD 138; Antonia Saturnina at 'Ain Meshira, CIL 8280 cf. 20.077 = ILS 6869: Nollé 1982 no. 5, *ca.* AD 170; Munatius Flavianus, owner of the Vicus Flavianus at Ain Kerma, Emadaucapensis, BCTH 1903, ccxi: Nollé 1982 no. 4, N. Charbonnel and S. Demougin, 'Un marché en Numide au Ie siècle après J. –C,' RHD 54, 1976, 559–68, *ca.* AD 280; Phosphorus at the Vicus Phosphorus, Henchir Oued Kherouf near 'Ain Meluk, 50 km. southeast of Cirta, (de Ligt cit. p. 158), AE 1913, 226; Nollé 1982 no. 6, late third century?.

[4] Castellum Mastarensis CIL VIII, 19337 = ILS 6868, Nollé 1982 no. 7; ILAlg I, 1, 3604; AE 1942–43, 7, Nollé 1982 no. 8.

appears to relate to an annual tribal fair located, significantly, far from any settlement.[5] No circuits comparable to those in Campania and Lazio are recorded, and indeed, as Shaw points out, two neighbouring praedial *nundinae* had identical market days, suggesting competition rather than collaboration—although, as De Ligt notes, the inscriptions are hardly contemporary.[6] Shaw concludes, among other things, that the *nundinae* were generally linked to *praedia* and under private control, rather than characterizing small settlements in the process of urbanization.[7] He suggests that *nundinae* were tied to the internal economy of the domain, but not to the external sphere of large-scale trade and exchange between domains, or between agricultural estates and the central state.

Yet it is difficult to imagine that periodic markets were not taking place, as they do today, at every agglomeration of significant size. Products such as the ubiquitous African Red Slip ware were not produced everywhere, but they are found everywhere, and we must imagine that they were sold by travelling traders at periodic markets. Itinerant traders are characteristic of pre-industrial economies, and fundamental to the retailing of manufactured goods. Textiles, metal and ivory objects, jewellery, and animals would also have been part of such periodic and itinerant trade, which would logically take place at periodic markets or fairs, just as they do today in North Africa. But where did these actually take place? What did they look like? What was their relationship to settlements? As Shaw says, 'how are we to identify and study institutions that were so ephemeral and did not tend to leave any physical traces of their existence?'[8] This paper is intended to suggest possible lines of inquiry without pretending to answer these questions.

Inside an established town, the *macellum* served for the daily supply of produce to the community, while clothes were sold at the *fora* or *basilicae vestiaria*. These have substantial architectural form and present no problem of identification. We can imagine that the stalls were rented on an annual basis, and that most of them were used by the same local merchants. Periodic markets, on the other hand, served for the exchange of goods brought in by itinerant traders from further afield, dealing in, for instance, pottery and woven goods, or, in particular, metal objects such as nails that might not be available locally. They would also, as they do today, allow local small producers to sell their produce directly, without the intervention of middlemen. Thus they are important for two classes outside the established citizens and municipal traders: small producers and itinerant pedlars. Neither of these exercised any power in African society; indeed, Xavier Colin has recently

[5] CIL VIII, 20,627 = ILS 4490; Shaw 1981, 51.
[6] Shaw 1981, 45–46; de Ligt 1993, 157–8.
[7] Shaw 1981, 73.
[8] Shaw 1981, 43.

shown that itinerant pedlars—*ambulatores*, *circitores* and *circulatores*, were held in disrepute.[9] These markets are highly unlikely to have been used for the sale of the produce of large estates, which, being produced in bulk for external markets, would be of little interest to the small traders. Thus Shaw's contention that *nundinae* were set up by estate owners for their own convenience and the sale of the produce of their estates as well as a means of controlling and isolating their tenants is somewhat counterintuitive.[10] The estate owners, as well as their tenants, would have found it convenient to have manufactured goods periodically available on their estates, which are unlikely to have produced nails and metal tools for themselves. What we are looking at, then, is the lower tier of Kula's two-tiered market system, in which the small producer—the peasants on the estate in this case, but also independent producers and pastoralists—will find it more advantageous to sell any surplus at a periodic market, where the other goods on sale will fit into the same sort of economic category. The upper tier, the production of the estate bound for the international market, was the province of the *negotiator* or *mercator*. In Africa, as Morley has recently shown for Italy, the *nundinae* 'played little or no part in dealing with the surplus produce of the villas and other large estates'.[11]

Here there is an important distinction with the fairs such as that at Hassawana.[12] These were higher-level markets that must have served an important function as cattle and sheep markets, essential for transhumant stockraising, where a wide choice of breeding stock is essential for keeping up the quality of herds. These fairs today typically take place on a semi-annual basis, although live animals are available in the weekly markets. Like Hassawana, they may have occurred far from an established town. It is notable, in fact, that not a single forum *boarium* or *pecorarum* is known from a North African town. Today, the most important cattle and camel market in the region north of the Aurès mountains takes place just outside of Timgad, where until recently there was no important settlement.

I will begin the search for the sites of periodic markets with an anachronistic premise, based on the view of the African countryside as entirely conservative, a view that I am the first to contest. The premise is that, as today or in the very recent past, most settlements had a periodic market, and those

[9] X. Colin, 'Commercants itinerants et marchands sedentaires dans l'Occdent roman', in E. Lo Cascio ed., *Mercati Permanenti e mercati periodici nel mondo romano. Atti degli Incontri capresi di storia dell'economia antica*. Bari 2000, 149–60.

[10] de Ligt 1993 162–76.

[11] W. Kula, *An Economic Theory of the Feudal System*, London 1976 (1962), 43; see also Colin, op.cit. in note 9, where the *negotiatores* occupy the upper tier, and similar considerations in N. Morley, 'Markets, Marketing and the Roman élite', in E. Lo Cascio (ed), *Mercati Permanenti e Mercati Perodici nel Mondo Romano*, Bari 2000, 211–22, 220.

[12] CIL VIII, 20,627 = ILS 4490; Shaw p. 50–3.

markets were located outside the walls. It is a topos of Berber anthropology that markets are potentially polluting, in that they bring in foreigners whose intentions might or might not be honourable, and are the source of disruption and occasional riots.[13] They therefore tend to be consigned to the periphery, or even to a space on the border between settlements. Another characteristic of Berber markets is that they are held in a space sanctified by the presence of a saint's tomb, usually under the protection of the family of the saint. The guarantee given by the shrine of the marabout to oaths and transactions has, of course, its equivalence in antiquity in the form of shrines, particularly to Hercules or Mercury as patrons of trade. The phenomenon is not limited to Africa, of course, for we know of many major boundary shrines that served as the sites of markets and fairs, particularly in the pre-Roman period.[14] The divine element is essential for the sanctity of the transaction. So in looking for market sites in North African towns, it seems appropriate to look for extra-mural shrines.

The customs tariff of Zarai, mentioning *pecora in nundinium*, demonstrates that markets existed in urban contexts.[15] Their structures are, however, not easy to identify. The most obvious place for a temporary market would be within the forum itself. This might be the case at Thuburbo Maius and Thignica, where commerce within the forum was overseen by a temple to Mercury.[16] It was certainly the case at Cherchel, where an elegant piece of archaeology by Tim Potter and Naçera Benseddik revealed the traces of four small stalls just outside the forum portico.[17] These, together with handfuls of tiny coins from the paving around them, suggested that the forum was frequently used for mundane activities like shopping. In other cases they may have taken place within the walls, but on the outskirts of the built area. Volubilis presents an interesting but hardly conclusive picture. The walls enclose two spurs of a hill, separated by a wadi. While the larger spur to the west is entirely occupied, that to the east is almost empty, except for the sanctuary to Saturn towards the top of the rise (figure 8.1). Excavation of a test trench a few years ago at site C, just below

[13] Here the article of F. Benet, 'Explosive Markets: the Berber Highlands' in K. Polanyi, ed., *Trade and Market in the Early Empires: Economies in History and Theory*, Glencoe Ill, 1957, 188–127 remains fundamental, see also Hanoteau and Letourneux, La Kabylie et les coutumes kabyles, v2, 78; M. Brett and E. Fentress, *The Berbers*, Oxford 1996, 257–8, with further bibliography.

[14] See e.g. J. Scheid, Les sanctuaires de confins dans la Rome antique. Réalité et permanence d'une représentation idéale de l'espace romain. In *L'Urbs. Espace urbain et histoire (Ier siècle av. J.. –C,–IIIe siècle ap. J. C.)* CEFR, Rome 1987, 583–95.

[15] Shaw 1981, 66, de Ligt 1993, 120. On the tariff see most recently P. Trousset, 'Le tarif de Zarae: essai sur les circuits commerciaux dans la zone présaharienne' *AntAfr* 38–9, 2003, 355–74.

[16] CIL VIII 4508 and 18643.

[17] N. Benseddik and T. Potter, *Fouilles du forum de Cherchel 1977–1981*, I, Bulletin d'Archéologie Algérienne supp. 6, 1993, 58–9 and fig. 10.

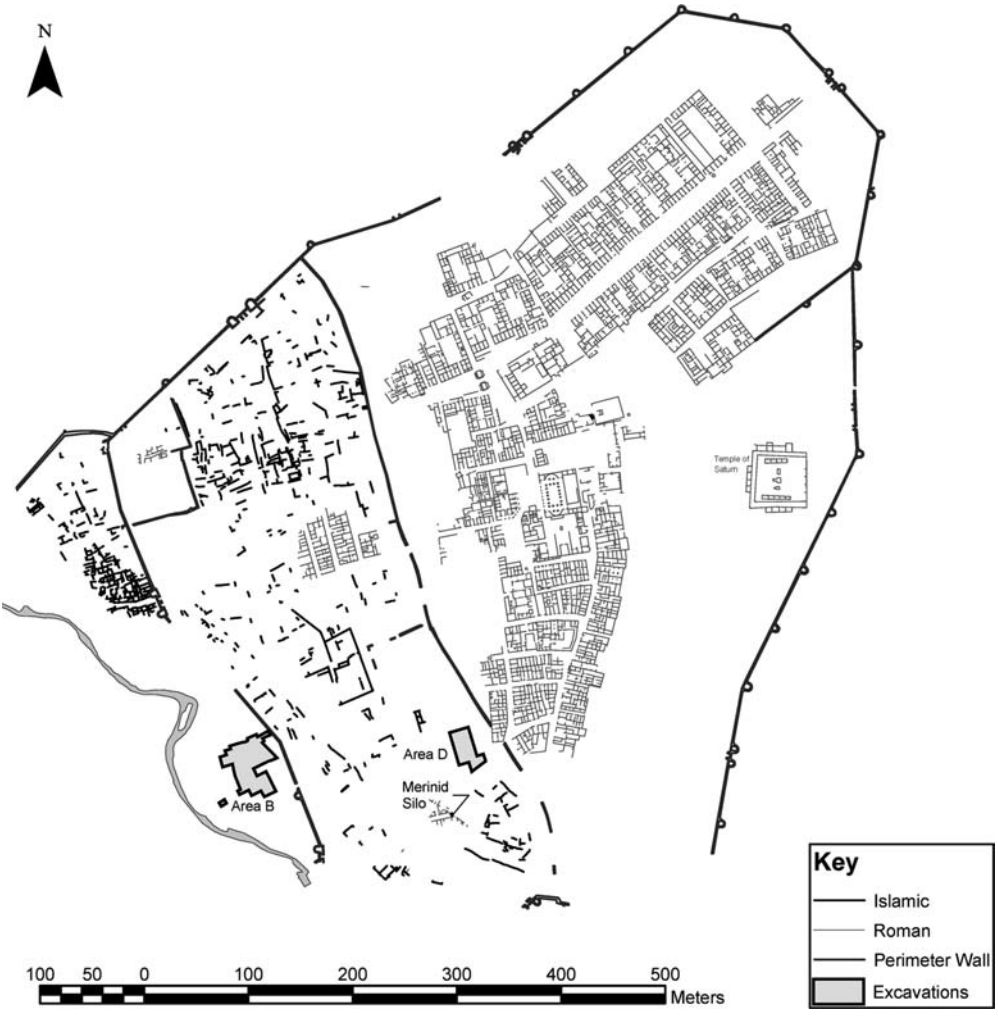

Fig. 8.1 Volubilis, general plan of site, showing the empty space south of the temple of Saturn

the temple of Saturn, confirmed the absence of Roman-period structures, revealing a building of the colonial period cut into the bedrock, and covered by layers of colluvium.[18] We might suggest that the space was used for periodic fairs, associated with the great sanctuary of Saturn, although without further evidence the question must remain open. We might note, incidentally, that a geophysical survey by the university of Sassari revealed a circular

[18] Excavations carried out by the Institut National des Sciences de l'Archéologie et du Patrimoine and University College London, directed by Hassan Limane and myself.

enclosure near the north gate, which might also be a candidate for a cattle market.[19] The vast majority of Roman towns, however, do not have structured spaces for temporary markets that we can identify, while the small, statue-filled fora of many towns would have been ill-suited for the sprawling spaces of the periodic market.

If we examine the areas immediately adjacent to the towns for structured market spaces we are not much better off. One possible candidate for a building which might have served as a periodic market is found at Bulla Regia. Here a huge portico almost exactly 45m square overlooks the city from the west (figure 8.2).[20] No temple has been associated with this, and although it is referred to as the '*temple anonyme*' it is hard to see where on the plan a cella might have been placed, as the modern house to the south is explicitly described as occupying the space of the steps into the monument. A large cistern is found in the courtyard, and while this would not be out of place in a temple precinct, it would clearly have been functional in the context of a temporary market. However, the evidence is hardly conclusive.

At this point, however, I want to return to the suggestion that periodic markets may have been regularly sited outside the town walls, near extra-mural temples, and to examine the evidence for the latter. The importance of the temple is evident in the case of the 'vicus' of Phosphorus, where a temple was set up overlooking the portico of the tiny settlement, which measured almost exactly four hectares.[21] It was in this portico that the *nundinae* took place. But what deities were found in the peri-urban temples? In Africa Proconsularis these have been the subject of two recent studies, both of which conclude that they are dedicated to divinities that are interpretations of Punic or Numidian deities, particularly Saturn, whose extra-mural siting reflects in some way their otherness.[22] Although this assumption holds true for Saturn, in the case of Mercury there seem to have been other factors in play. There is no doubt that the god had long been worshiped in Africa; as early as the sixth century the promontory of Cap Bon was attributed to

[19] Personal communication Emanuele Papi.

[20] A. Olivier and Y. Thébert, 'Note sur un temple de la périphérie', in *Recherches archéologiques franco-tunsiennes à Bulla Regia II. Miscellanea*, 1983, 129–34.

[21] AE 1913, 226, which gives the dimensions of the settlement. The plan found in Nollé 1982, 139, is an attempt at the reconstruction of the details given on the inscription: it would be perhaps more plausible with the portico surrounding a square, rather than simply suggesting porticoed streets.

[22] C. Rossignoli, 'Templi periurbani di Africa Proconsolare e Numidia: alcuni esempi' in *L'Africa Romana* x, 2, 559–95. See also the discussion of peri-urban temples in S. Saint-Amans *Topographie religieuse de Thugga (Dougga): Ville romaine d'Afrique proconsulaire (Tunisie)* Bordeaux 2004, 256–60.

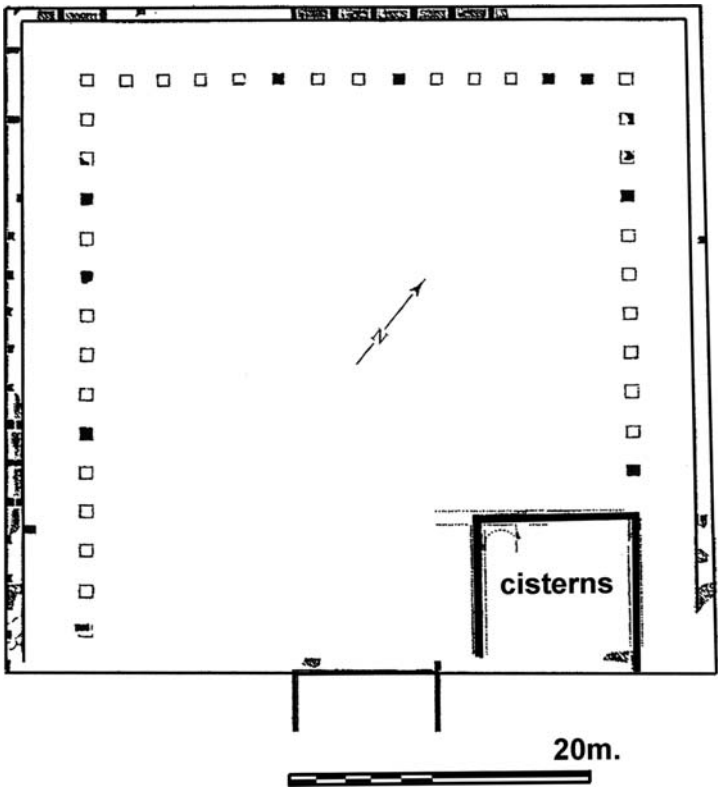

Fig. 8.2 Bulla Regia: 'Temple anonyme'(after Cagnat and Gauckler)

Mercury.[23] One of his manifestations carries the epithet Sobrius, indicating, according to Festus, that he is given libations of milk rather than wine.[24] In this African version he was imported into Rome by the immigrant African population, perhaps as early as the third century BC.[25] I believe, however, that his principal attribute remained trade: at Thugga in Africa Proconsularis there

[23] Polybius 3.22.5. Here he is clearly a divinity of trade and passage: see for Rome B. Combet-Farnoux, *Mercure Romain. Le culte public de Mercure et la fonction mercantile à Rome de la république archaïque à l'époque augustéene*, BEFAR 238, 1980. An interpretation of the African Mercury as a divinity of frontiers is found in P. Trousset, 'Mercure et le limes: A propos des inscriptions de Kriz (Sud Tunisien)' in *Studien zu den Militärgrenzen Rom, III, 13, Internationalen Limeskongresses*, Aalen 1983 Stuttgart 1986, 661–9. Leglay shows that, associated with Silvanus, Mercury acted as an agrarian divinity: M. Leglay, 'La vie religieuse à Lambèse d'après de nouveaux documents, *Antiquités Africaines* 5, 1971, 127–39.

[24] Festus p. 382

[25] A full discussion of this cult is found in R. E. A. Palmer, *Rome and Carthage at Peace*, Historia Einzelschriften 113, Stuttgart 1997, 80–6. Palmer refutes the Greek origin of the libations in milk, suggested in the recent treatment of the cult of Mercury by Combet-Farnoux 1980, demonstrating that the only cults where libations in wine were avoided are found in Africa.

are no fewer than three shrines to Mercury on the forum, in one of which he is referred to as the 'Genius macelli'.[26] A temple to Mercury seems to be associated with the *nundinae* at Castellum Mastarense,[27] while we have evidence for a *collegium Mercuri Vestiarior(um)* from Volubilis.[28] All of this fits neatly with the dedications from elsewhere in the empire to Mercury with such epithets as *negotiatori* and *nundinatori*.[29] A final point is that Africa is unique in having a large number of localities known simply as *Ad Mercurium* on the Peutinger table. This would imply that the principal focus of the place was a sanctuary or perhaps an altar to the god, located along a road.

If we examine the temples of Mercury found in Africa Proconsularis, the regularity with which they appear to be extra-urban is striking. Only three are found within the city walls (at Thugga, Thuburbo Maius[30] and Thignica),[31] whereas many of the rest are found a substantial distance outside the city. The case of Gigthis is particularly significant, with the temple and sanctuary of Mercury sitting on a small rise facing the road that runs south into the desert from the town (figure 8.3).[32] This was a hugely important caravan route, bringing cattle and slaves from the south to the port at Gigthis: perhaps the second outlet for Garamantian trade after Leptis Magna. The 'return cargo' might have included the salted fish, and garum produced at the port, as well as wine and purple-dyed garments from the coast and the island of Jerba.[33] Although Rossignoli suggests that the subsidiary buildings attached to the sanctuary might have allowed it to function as a sort of customs post,[34] a more purely commercial role is perfectly possible. The outskirts of the temple would have provided space for a sizable fair, while even within the large temple precinct we can imagine transactions taking place. The

[26] ILAfr. 548; Saint-Amans, 2004, 336.

[27] CIL VIII 6355 = 19336, Gsell identifies the subject of the relief with Mercury: *Atlas Archéologique de l'Algerie* Paris 1891, f. 18 no. 94, in association with Silvanus.

[28] CIL VIII, 21848.

[29] ILS II, 1, 3201, 3202. See also Palmer 1997, 100, for the assertion that the Punic deity was principally concerned with trade.

[30] Thuburbo Maius: R. Cagnat and P. Gauckler, *Les monuments historiques de la Tunisie I: Les monuments antiques. Les temples payens*,. Paris 1898, 70–21.

[31] Thignica: Cagnat and Gauckler 63. At Furni the dedication of the temple was found built into the wall of the Byzantine castrum, so its original position is unsure: CIL VIII 12027 and 12039.

[32] L. Constans *Gigthis, Étude d'histoire et d'archéologe sur un emporium de la Petite Syrte*, Paris 1916. CIL VIII 26595–26596. It has been dated to the Julio-Claudian period by N. Ferchiou, 'Le temple de Mercure à Gigthis. Recherches sur le décor architectonique', *Africa* x, 1988. 174–96. Rossignoli 1994, 565–6; Saint-Amans 2004, 258.

[33] On wine production at Jerba see E. Fentress, 'Villas, wine and kilns: the landscape of late Hellenistic Jerba' *JRA* 14, 249–68. On the purple dye from Jerba A. Drine, 'Les fouilles de *Meninx*, Résultats des campagnes de 1997 et 1998', *l'Africa Romana* XIII, Rome, 87–94.

[34] Rossignoli 1994, 566.

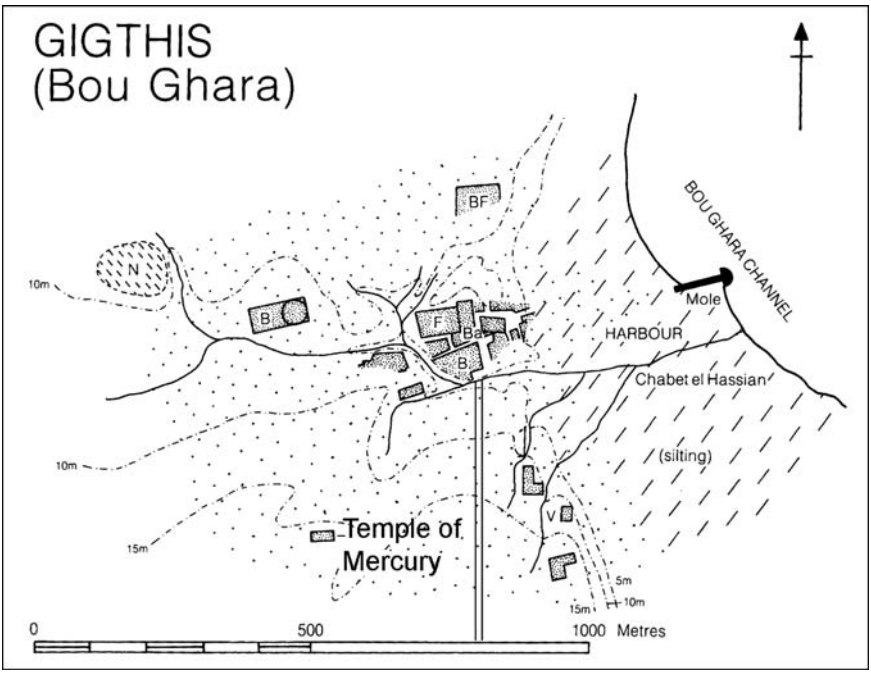

Fig. 8.3 Gigthis, showing the position of the temple to Mercury (after Mattingly)

substantial portico, doubled in this case by a wide porch, would have given shelter to both people and goods (figures 8.3, 8.4).

At Thuburbo Maius, too, there may have been an extra-mural sanctuary to Mercury as well as the major temple found on the forum, for a second dedication to Mercury was found in the area of the amphitheatre:[35] this leads us to wonder if the position of the market was connected to the periodic celebration of games in the amphitheatre.

The sanctuary at Vazi Sarra, built on a plateau to the west of the city and dedicated to Mercurius Sobrius, is again very large, measuring roughly 1,600 square metres, with gates on three sides and a portico on all four sides[36] (figure 8.4). The space is presided over by a single small cella in the centre. It is easy to imagine a periodic market being held within its walls. A similar sanctuary is found at Thuburnica, although the absence of the south wall makes its size difficult to establish (figure 8.2).[37] Again, it is built well out

[35] AE 1961, 71; J. Desanges, 'Deux inscriptions de Thuburbo Majus, *Cahiers de Tunisie* VII, 1959, 275–9 p. 272.: the inscription refers to an 'aedem'.

[36] Cagnat and Gauckler 66–67, pl. XX; CIL VIII 12002 and 12006. Palmer 1997, 91.

[37] Cagnat and Gauckler 72; CIL VIII 14690; Rossignoli 1994, 573; Palmer 1997, 91.

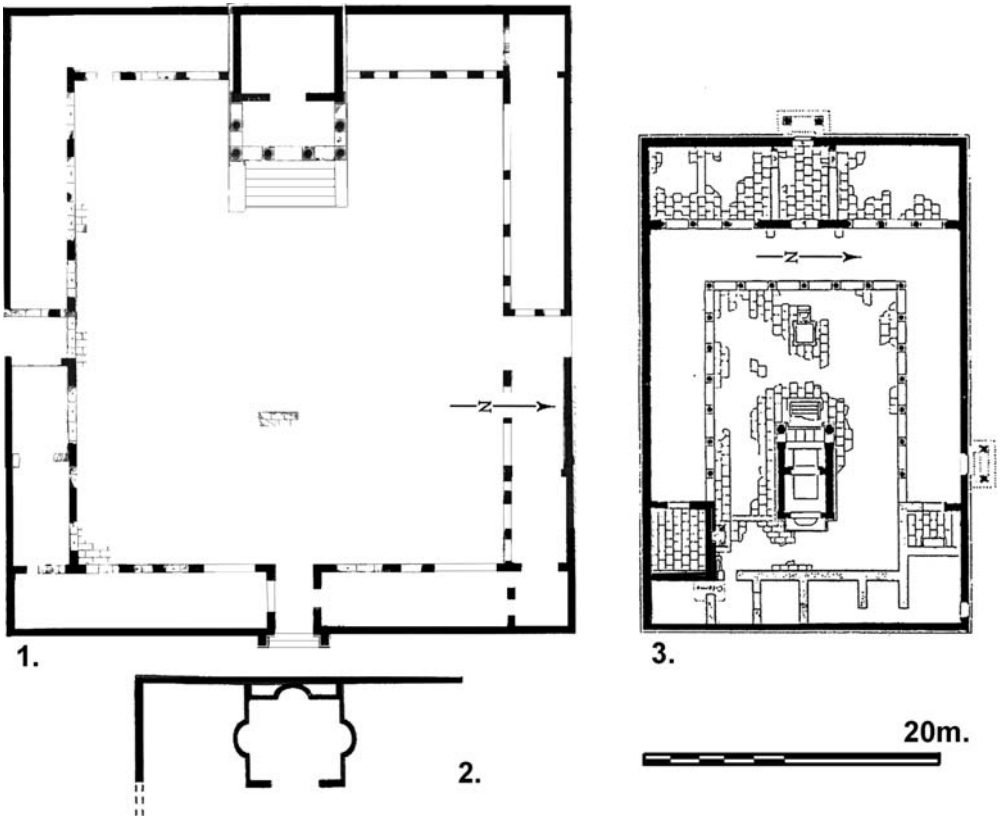

Fig. 8.4 Shrines at Vazi Sarra, Thuburnica and Gigthis (after Cagnat and Gauckler, Constans)

of town and includes a porticus. The dedication in this case is again to Mercurius Sobrius, together with the Genius Sesasae and Caracalla.[38] As at Gigthis, the cellae of both of these temples are extremely small, while the portico is substantial, allowing for numerous visitors to a fair or festival. We know less of the other sites—Henchir Besra, Roman Muzuc;[39] Hr. Ain Djellula, southwest of Kairouan,[40] and Henchir Khima, whose dedication again mentions a porticus.[41]

The distribution of these sites is equally interesting. Although it has been used to support the argument that, in Africa, Mercury was an interpretation

[38] Palmer removes the comma to suggest that Mercuris Sobrius is the Genius Sesaae (1997, 91).

[39] CIL VIII, 12094. [40] CIL VIII, 12111. [41] CIL VIII 709.

of an African or Punic agricultural deity,[42] the rural siting of these shrines can also be interpreted as indicating the position of periodic markets. Almost all of them appear to be in the sort of interstitial position between much larger towns which might be predicted by classic central-place analysis. Most of them are actually off the main roads, and probably served as markets for communities that were closer to villages than major towns: indeed, we have no ancient names for three of the sites, and of the rest only Thuburnica and Vazi Sarra have produced more than a handful of inscriptions. The distances between them are sufficiently small to suggest a rural circuit, at least in the case of the eastern group. Here we can perhaps follow Shaw's assertion that periodic markets were a primarily rural phenomenon without, however, linking them exclusively to *praedia*. We may in fact be seeing regional distinctions. As we have seen, with the exception of those at Casae, Shaw's private *nundinae* are all found in the region of Cirta, where urbanization is effectively light, especially when compared to the extremely dense settlement network of the central Mejerda valley. In Africa Proconsularis, the role of the estate-based *nundinae* in the distribution network for local production would have been taken over by the small settlements, old Numidian villages like Vazi Sarra that were slowly moving towards urban status. The periodic markets would have played an important role in bringing local producers, the villagers, into the markets, allowing them to transform their crops into cash with which to pay taxes and to acquire manufactured goods. The proximity of the sites might even suggest that we are dealing with organized market circuits,[43] although without epigraphic evidence this would be hard to demonstrate.

In Numidia the situation appears to be slightly different, with extra-mural temples to Mercury at many of the major towns as well as the minor sites. At Lambaesis, there is an extra-urban sanctuary to Mercury on the Djebel Askar this is suggested by a few inscriptions, one of which was the pediment of an *aedicula*, and local information of the discovery of associated structures.[44] The mountain lies to the south of the upper town, along the road leading into the Aurés mountains and, beyond them, to the desert. At Theveste an inscription to Mercury comes, again, from the main road leading out of

[42] Le Glay 1971, 245 and note 5.

[43] The bibliography on these is vast: see most recently J. Andreau, 'Les marchés hebdomadaires du Latium et de Campanie au Ier siècle ap. J. –C', in E. Lo Cascio ed., *Mercati Permanenti e Mercati Perodici nel Mondo Romano*, Bari 2000, 69–92; A. Storchi Marino, 'Reti interregionali integrate e circuiti di mercato periodico negli indices nundinarii del Lazio e della Campania', *ibid*., 93–130 with the relevant bibliograpy.

[44] CIL VIII, 2676; a statue of Mercury, with Silvanus, seems to have been placed on the summit of Djebel Askar: CIL VIII 2644.

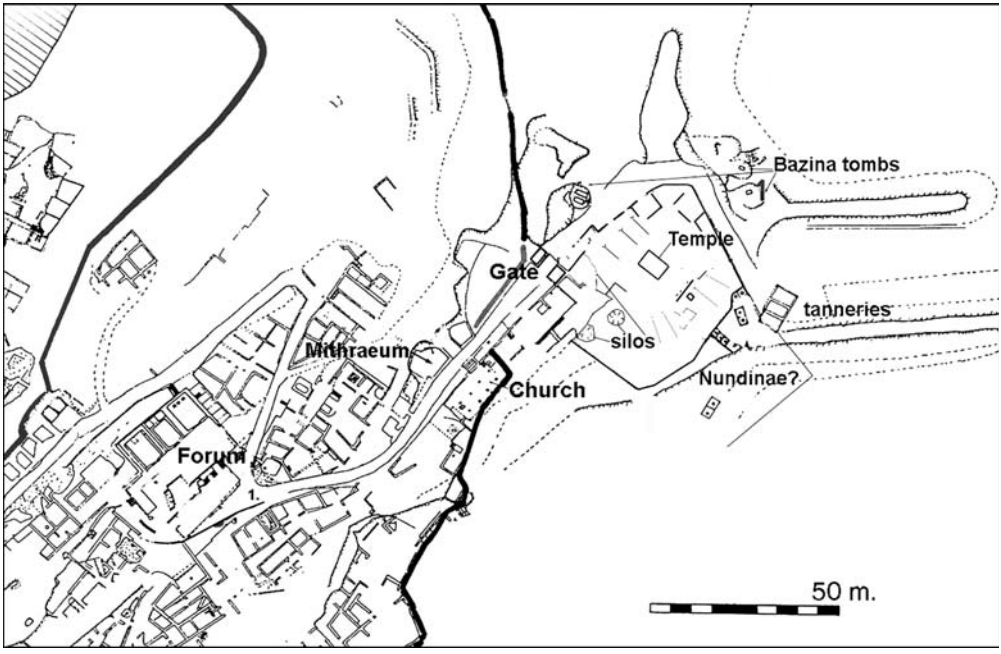

Fig. 8.5 Castellum Tidditanorum, the area of the North gate (after Berthier)

town to the south.[45] A particularly vivid example comes from the old Numidian town of Castellum Tidditanorum, from which comes one of the inscriptions detailing the establishment of *nundinae*.[46] Now, although this inscription is generally assumed to come from just below the forum, Leschi tells us that it was found built into the late city wall,[47] so its provenance remains uncertain; in any case, this area is simply a short stretch of road (figure 8.5, point 1), highly unsuitable for a market. Immediately outside the north gate of the town, however, is a substantial enclosure, with roofed spaces of some sort around its outside wall, and a small temple in the centre. It opens onto the main road into town, dominating from above a wide, flat space with ample room for a market (figure 8.6). The presence of the shrine would have served to guarantee the transactions that took place below, while the various subsidiary buildings may have served to support the market: the presence of numerous deep silos within the enclosure may have been related to storage between market days. In a subsequent period a number of small

[45] CIL VIII, 16709. [46] ILAlg II 3604.

[47] L. Leschi, 'Séance de la Commission de l'Afrique du Nord', *Bulletin du Comité des Travaux Historique* 1941, 156–8.

Fig. 8.6 Castellum Tidditanorum, proposed site of *nundinae*, with the sanctuary above it. The buildings in the foreground are later tanneries (EF)

establishments dedicated to tanning were built along the edge of the sanctuary: as we will see, this artisan production may be directly related to the presence of the *nundinae*. Although the dedication of this sanctuary is not known, it is notable that around the gate and the proposed site of the *nundinae* there is a notable concentration of sacred structures: three protohistoric 'bazina' tombs, lining the road which leads to the gate, a Mithraeum, and the only Christian chapel known from the site. This cluster is resonant in terms of its emphasis on the protection of the gate, as well as the approaches to the town.

It is, however, Timgad, as always, that provides the best evidence. To the southwest of the town, behind the Capitoline temple, lies the well-known 'industrial triangle', an extramural quarter with, among other things, a bronze foundry and a pottery workshop (figure 8.7).[48] Here a little shrine to Mercury dominates

[48] A. Ballu, *Les Ruines de Timgad: Sept Années de découvertes* Paris 1911, 21–9.

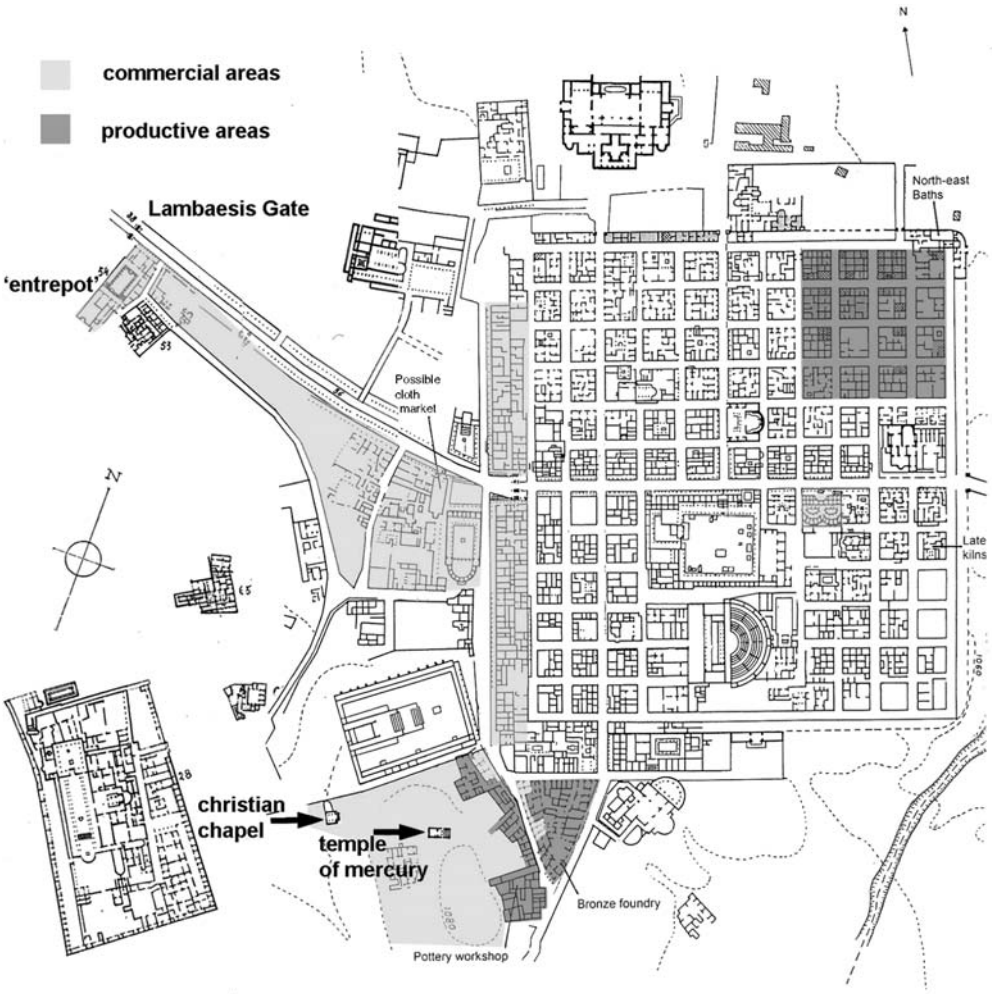

Fig. 8.7 Timgad, showing the position of the industrial quarter, the shrine, and the commercial sector on the route to Lambaesis (after Ballu)

from a height a large empty space to the west of this quarter, roughly rectangular in shape and perfect for the siting of a periodic market (figure 8.8).[49] Andrew Wilson has recently shown the importance of Timgad in textile production, with a dense concentration of *fullones* in the northeast

[49] *Ibid.*, 29–30.

quarter of the town.[50] I think it is possible to take the analysis of the town plan a step further, showing the imbrication of artisan production, with both higher and lower level markets.

Here we need to step back and remember the stages in the development of the Trajanic colony, founded in its geometric perfection to the west of the Legionary fortress of Lambaesis on the main road running to the north of the Aures mountains. Towards the end of the second century it began to expand beyond its walls. This expansion was sealed by the destruction of the western wall in the beginning of the third century in an impressive piece of property speculation carried out by Marcus Plotius Faustus, otherwise known as Sertius.[51] Leschi drew this conclusion from the fact that his house occupies some of the space that resulted from the removal of the walls. In gratitude to the colony, from which he had apparently made a substantial amount of money, he donated the large new macellum known as the market of Sertius, twice the size of the old market of the colony.[52] He may also have built and dedicated the Capitoline temple, but that is another question. The market complex also includes a *forum vestiarium*, opening onto the same square. Behind the two are a small shrine and a confusion of commercial buildings. These stretch west along the Lambaesis road, terminating in the second monumental entrance to the colony, the new Lambaesis gate, which may form part of the same developmental thrust. This significant series of commercial establishments signals the presence of a large number of *negotiatores* at Timgad. Their presence along the Lambaesis road can hardly be by chance, as the prosperity of the town must have depended on the large amount of cash dispensed by the army and its soldiers. As Wilson suggests, textiles alone must have comprised a significant portion of this trade,[53] but its ramifications must have stretched to all sectors of the economy and played a significant part in the higher order markets of the region.

If we analyse the plan of the site as a whole (figure 8.7), the relationship between this group of commercial buildings and our suggested periodic market becomes evident. Just as the purpose-built structures of the commercial sector are situated on the road to Timgad, the periodic market that I suggest took place in front of the shrine to Mercury is situated on the road

[50] A. Wilson, 'Timgad and textile production' in D. Mattingly and J. Salmon (eds.), *Economies beyond agriculture in the classical world*, London 2001, 271–96.

[51] J. Lassus, 'Une opération immobilière à Timgad', in R. Chevallier (ed.), *Mélanges Piganiol*. Paris 1966, 1221–1231; E. Fentress 'Frontier Culture and Politics at Timgad' *Bulletin Archéologique du C.T.H.S.*, 17b, 1984, 399–408. 49.

[52] E. Boeswillwald, R. Cagnat, A. Ballu, *Timgad, une cité africaine sous l'empire romain*, Paris 1905 183–215; CIL VIII 2395–99; 17904–5.

[53] Wilson 2001, 280.

Fig. 8.8 Timgad, area below of the shrine of Mercury (EF)

leading south into the Aurès mountains. Through the mountains came transhumant pastoralists, arriving on the northern plains in the late spring. These would have provided wool for the town's textile production. The mountains were also the home of numerous small farms and villages, whose produce would have sold on the local market.[54] The presence of the periodic market would have stimulated artisan production for sale there—witness the pottery shops and metalworking establishments which lie just east of the shrine, which produced exactly the sort of artisan products necessary for the small producers who sold their wool and other raw materials on the market. The road running behind the Capitoline temple that links this area to the Lambaesis development shows the close relationship between the two complementary market systems. That this system was long lived is suggested not only by the date of the restoration of the shrine to Mercury, carried out by a *praeses* of Numidia under Constantine,[55] but also by the chapel that lies just behind it, and that may have taken its place in the sanctioning of the market transactions.

The identification of extra-mural markets relating to the shrines of Mercury remains, of course, an hypothesis, although the regularity of their position, dominating an open area on roads leading south is striking. The suggestion that extra-mural sanctuaries were the sites of periodic markets requires further testing, preferably by excavation: as it stands, it is not, in the Popperian sense, falsifiable. Such an experiment might be an important step towards understanding the nature of urban and rural marketplaces. If we continue to believe in a two-tiered market structure, the excavation of such a space might lend support to the idea that products destined for the trans-Mediterranean markets, such as wine, oil and garum in amphorae, might *not* end up on local markets, where we would be more likely to find pottery, small artisan production, and coins of small denominations. It would take some courage to propose the excavation of a 'blank' space, but the risk might be worth it. The effect of the periodic markets on drawing urban commercial activity away from the forum while serving as a stimulus to production cannot be measured, but, at least in the case of Timgad, seems clear.

[54] For these see the numerous studies of P. Morizot, of which his *Archéologie aérienne de l'Aurès* (Paris 1997) is an excellent example.

[55] Ballu 1911, 39–40.

9

A Feast of Beltain? Reflections on the Rich Danebury Harvests

Martin Jones

> It is necessary to consider how much research effort
> should be expended on the raw data—
> a consideration that can only be made on academic grounds
> in the full knowledge of the entire site data base
> and in the light of current research questions
>
> (Cunliffe 1971)

> No man may travel there who has not gone without
> sleep from Samhain to the lambing time
> at Imbolc, from Imbolc to the fires of Beltain,
> and from Beltain to the harvest time of Lughnasadh,
> and from then to Samhain.
>
> (Emer's response to the wooing of Cuchulainn)

Twenty-five years after embarking on what was to become one of the major Iron Age excavations of the twentieth century, Barry Cunliffe was also reflecting on the endless cycle from Beltain, through Lughnasadh, to Samhain and Imbolc, and back to Beltain (Cunliffe 1995). While the journey to which Cuchulainn aspired was across the bosom of his bride to be, Cunliffe's journey took him to a deeper understanding of the culmination of European Prehistory. The campaign he so impressively led at Danebury hillfort formed a critical leg of that journey; it remains a keystone to everyone's understanding of Iron Age society.

He was not alone among his research group in reflecting upon that annual cycle of seasons and feasts, which is preserved in various subsequent Celtic and Gaelic accounts; the principal archaeobotanist and archaeozoologist on the Danebury Environs Project incorporated them into their resumé of seasonal economic activities (Campbell and Hamilton 2000). Cunliffe had previously inferred, on the basis of an analysis he conducted with Poole (1995) of different patterns of erosion and infilling in the thousands of pits within the hillfort of Danebury, that Beltain and Samhain were the times of

their ritual opening and infilling. These same pits provided the present author with one of the richest archaeobotanical data-sets I have had the opportunity to examine, and formed a cornerstone of my arguments about Iron Age agricultural production (Jones 1981, 1984a and b, 1985, 1991, 1995, 1996). The discussion and critique those analyses have generated are at least as valuable as the original publications themselves, and the most recent of them draws the debate in an interesting direction. In a meticulous and critical study, Van der Veen and Jones (2006) question a number of aspects of my original argument, and shift the emphasis from my own, which was upon relations of production, to a new emphasis upon relations of consumption. Whereas I had connected the plant remains within the pits to the toil of farmers, they speculated upon the celebrations of the feast.

I want to explore in this chapter the implications of their interesting ideas. If the numerous grain storage pits within the hillfort are not so much shaped by the needs of biological production, than those of social reproduction, then what are the implications? What were those feasts? On what scale were they instigated and by whom? What social institutions did they reconstitute and how, and how did these feasts connect with the larger historical dynamic? But first, let us backtrack to the roots of Cunliffe's own project, and the uniquely detailed data it generated with which such issues might be addressed.

LONG-TERM EXCAVATIONS WITHIN A FAST CHANGING DISCIPLINE

The opening quotation captures some elements of the way many archaeologists were thinking in the 1960s, and encapsulated by the idea of a 'complete excavation'. An archaeological site had boundaries, within which finite assemblages of material were arranged in stratigraphic order. The challenge was to unpack and decode those finite sites in their entirety. The best excavated would become 'type sites', the building blocks of prehistoric reconstruction. By the time the Danebury Project was underway, the precepts of 'complete excavation' were about to be challenged by a revolution in archaeological method. Over the following ten years, the notion of a finite dataset to be recorded in its entirety would be shown to be meaningless. Sieving, flotation, analysis, and microscopy would reveal the data pertaining to imprints of the human past to be without limit. We had to select which tiny fraction of those data to sample, and make explicit our reasons for selection.

That way of thinking had gained ground by the time I joined the project in 1978, to implement a probabilistic sampling programme for analysis of the

plant remains that could be recovered from most contexts. The first analyses of the Danebury harvests were thus completed in 1979 and 1980, and published a few years later Jones (1984a, 1985). The charred assemblages displayed a great deal of patterning, both in the remains of crops and among the weeds, and this patterning could be accounted for in relation to a sequence connecting the growing fields with the stores of processed grain. The varied ecology of the weeds was taken to indicate a wide range of ecological field conditions, in turn indicating that the Danebury harvests derived from many zones of the surrounding landscape, from the damp valley bottoms to the dry slopes adjacent to the fort. These distinctive ecological signatures retained their integrity as the harvests were brought into the fort by, I inferred, individual households. However, in the debris of subsequent processing stages, the ecological types are mixed, suggesting communal processing. The cleaned spikelets were stored and the waste material possibly mixed with barley as animal feed. A comparison of these assemblages with the other assemblages recovered from farm sites that were contemporary (though from beyond the Danebury region itself) highlighted the assemblage diversity within the Danebury hillfort, and its potentially central role within the agrarian economy of the regional community.

In response to the methodological revolution of the 1970s, the strategy of the Danebury Project was reconfigured during its second decade towards a question-driven sampling of the site towards a wider range of data forms. In that context, we were keen to understand the spatial arrangement of the economic sequence that the intensive study in 1978 had revealed. The results were in many ways enigmatic, and not at all what we might have anticipated in 1978. On the one hand, the new assemblages did indeed follow the varied pattern of composition recovered from the 1978 season. What they allowed was a spatial representation of the processing sequence, and it was here that the patterns alluded to something beyond economic functionality, especially in the later period of hillfort use (Nye and Jones 1991).

Whereas in the earlier period, when the embanked enclosure had two points of entry with a simple parallel pattern of tracks linking them, the crop-processing seemed to be happening in a broad range of localities, concentrated within the southerly part of the site. In the later phase of the hillfort's life, entry within the now massive earthworks was constrained to a single entrance, and internally along a series of tracks. The crop processing sequence established from the first phase of archaeological work could now be arranged across this interior in what proved to be quite a distinctive manner. The processing sequence was broken and spatially displaced, such that the earlier stages took place in the northerly sector of the interior, after which the harvest was taken down the now rather convoluted pattern of tracks, truncated at one of their foci, to the southerly sector for collective processing. Such constrained and

regulated movement, persisting over generations and respecting the symbolic landscape of the interior, did not lend itself to arguments of economic functionality, and resonated with other changes that had affected archaeological analysis. While the 1970s marked a methodological transformation, the 1980s marked a transformation in archaeological theory.

Rereading my own initial studies of the Danebury harvests, I can see many features of 1970s thinking. Archaeological sites were to a great extent complex refuse trails from the endless toil of production. Following a series of economic historians and Marxian anthropologists, an understanding of history would come from revealing the changing relations of production and access to its forces and means. We hoped that a scientific scrutiny of its material refuse trail would reveal those dynamics.

The most tangible impact of post-processual trends of the 1980s has been to shift from the somewhat impersonal forces of production, to issues of consciously informed action in the reproduction of social institutions. The emphasis of archaeological discourse moved from identifying economic strata of society and the unintended refuse of their productive activities, towards a focus upon consumptive activities and intentional discard; a shift in emphasis from biological production to social reproduction. In relation to Danebury, an important contribution was an exploration by J. D. Hill (1995) of 'structured deposition' within the pits. This ran concurrent with Cunliffe's own more detailed consideration of what archaeozoolgist Annie Grant (2002) had described as 'special deposits' within the pits, and the ritual dimension of discard. In many ways the constrained geometry of discard of crop-related debris across the entire site could itself be considered a form of structured deposition on a site-wide scale. There has sometimes been a tendency to treat biological and social explanations of pattern as alternative, a division whose fallacy is starkly exposed when dealing with the preparation and sharing of food, in which the two are inseparable. The greater emphasis upon spatial pattern and context of discard, while revealing the social dimension of agrarian practice in no way diminished its economic and nutritional consequences; biological production and social reproduction were two aspects of a single set of activities.

THE DANEBURY ENVIRONS PROJECT

While the 1980s studies extended the crop analyses from two excavation squares to the entire hillfort interior, the Danebury Environs Project, also instigated and led by Cunliffe (2000), was extending our spatial and temporal understanding across a vast landscape including several Iron Age sites.

The work of Campbell (2000) has added greatly to our understanding of the Danebury harvests and their relationship to changes in agrarian society.

Considering first the temporal dimension, Campbell's analyses included sites with a greater focus both upon early and, most critically, later farming activities. From sites across the country, it was already clear that the Late Iron Age was a period of profound agrarian transformation. Farming communities who had for centuries been locked within the social structures epitomised by the massive hillfort earthworks, were now moving to new locations to engage in new activities, including a much freer exchange of metals. During the time of the hillforts, the most archaeologically conspicuous use ordinary people made of the sparing amounts of metal to which they had access was for bodily adornment. This is incidentally evident from the metal finds from smaller sites excavated within the Danebury Environs Project. The tiny data set is made up of brooches, pins, tweezers, and a few weapons. A few items with a link to agrarian production (saws, ard-share tips) are concentrated within the two hillforts, at Danebury and Bury Hill. Whatever this scarcity implies, it begins to change in the Later Iron Age; between the early and the later stages of the hillfort, the estimated deposition of iron fragments increased fourteen-fold (Cunliffe 1995: 93). In the century before the Roman Conquest, the balanced sickle appears in the southeast (Rees 1979), while the whole metal economy and the use of metal for mundane purposes grew exponentially in the Roman period.

It was clear from other British sites that the Late Iron Age was a time of new crops and new patterns of weeds, suggesting new methods of cultivation, field draining and manuring. There is also written evidence for the export of cereal crops. Campbell has added some detail for sites in the immediate vicinity of Danebury, in relation to mono-cropping and multiple seasons of sowing and harvesting. Her analyses support the idea of mixed cropping at Danebury, with spelt wheat and barley growing together in the same field together with smaller quantities of emmer wheat and chess (*Bromus* spp.). A modern observer might describe both the chess and the emmer wheat as 'weeds' but we have no reason to assume such categorisations were meaningful in prehistory. Wheat/barley mixtures are known from historical accounts as 'beremancorn' and mixed spelt and emmer fields are still being cultivated in Northern Spain. There, individual farmers vary in terms of how much they distinguish between the large amounts of spelt and small amounts of emmer growing together (personal observation, author), and the same may well have been true of Iron Age farmers. However, Campbell has recognized a distinct shift during the Late Iron Age to monocultural practice. By looking at grain-rich assemblages from a number of sites, she argues that mixed storage gives way to single crop storage, accompanied by a shift from autumn sowing to mixed autumn and spring sowing.

Campbell's work is also of great importance in identifying earlier stages of crop processing that have not been recorded within the Danebury hillfort itself. Of particular interest among these stages, which include the initial threshing and winnowing of the harvest, is her evidence for the uprooting of the cereal crop, a practice particularly found among communities whose access to metal for harvesting tools is quite limited. I would imagine that many farmers in the Danebury environs made virtually no use of metal in their daily working lives.

At the end of the Danebury hillfort study, the crop evidence was rationalized in relation to the crop-processing sequence recorded from ethnographic observation by Hillman (1981). In the same volume Cunliffe considered the spatial patterning comprehensively, with reference to patterns of centre-periphery, exterior-interior, and left-right, providing a broader context for the bilateral patterning of crop-processing that had emerged among the carbonized assemblages. A significant feature of Campbell's results is that, while they add rich detail to the missing stages in the pre-hillfort element of the sequence, they provide no evidence of any product finding its way back out into the landscape from the hillfort. We have seriously to consider the possibility that the harvests that entered the hilltop enclosure remained there. This is essentially what Van der Veen and Jones (2006) examine in their consideration of feasting.

Their critique concludes that a predominance of grain-rich samples was less likely to reflect a particular stage in the production–consumption sequence, and more likely to relate to the scale of production and consumption as a whole. They point out that such assemblages are more likely to be found in the south of Britain, often in conjunction with evidence for grain storage pits, features which in turn appear to be concentrated within hillforts. They go on to propose that grain stored in these pits was destined for consumption at large communal feasts.

A TIME OF CELEBRATION

From this point on, I shall proceed from the premise that many of the recent arguments of Cunliffe, Van der Veen, and Jones are well founded, and ask what that implies about the nature of hillfort feasts. I shall assume that the total number of pits within the hilltop is around double the number exposed and excavated, and that around 80 per cent are beehive pits used once only for the storage of grain (Cunliffe 1995). I shall also work from the premise that twenty-seven bushels of cleaned grain could feed one person for a year. From

my own calculations, I would suggest that around a third of that amount, once fermented, would supply that individual with a daily gallon of beer throughout the year. Adding a drinks allowance and adjusting the storage volume 30 per cent upwards to accommodate storage in spikelets, I shall assume 48 bushels of cereal spikelets would provide bread and beer for one person for one year. In order to relate that to pit volumes and feasts, a figure of $0.032m^3$ per bushel gives a figure of $.0042m^3$ of grain per person-day of the feast. This last conjecture, of course, does no more than provide a tool with which to explore orders of magnitude.

Let us start by considering the frequency and the scale of those feasts. An estimated 3,600 pits of the beehive type, associated with grain storage, were in use over a 450-year period (Cunliffe 1995: 85). Following the inference of a single use, that amounts to an average of eight feasts a year. For a great deal of the hillfort's life, from ceramic phases one to six, around 95 per cent of those pits are of between 0–5 cubic metres volume, enough to accommodate a week-long feast for 170 people. Most of the remaining 5 per cent of pits range between six and ten cubic metres capacity, allowing the numbers of feasters to double. These larger feasts would have taken place on average around once every three years. A smaller proportion, less than one per cent have a capacity of up to 15 cubic metres, which could supply over 500 people for a week. They may have occurred no more than once every twenty-five years.

This brings us to the issue of tempo, starting with the short temporalities of the seasons. Looking at Campbell and Hamilton's farming year, we can speculate that each equinox and solstice was celebrated, as well as the height of the four seasons, a speculation that happens to generate the estimated eight feasts per year. If we superimpose upon this tempo the intermediate feasts around once every three years, that fortuitously happens to match Cunliffe's estimated frequency for the ritual deposition of whole unbutchered animals, human sacrifice, or a fragment of an ancestor, while the frequent feasts merited a more modest offering. Furthermore, the tempo of the largest feasts of all, which took place perhaps four times a century, also happens to match a third cycle suggested by Cunliffe, a slower cycle marked by significant refashioning of the earthworks around the site. During the latest phases of the site's use, the frequency of the two larger categories of feast makes a dramatic five-fold increase, at the same time as the massive earthworks show many signs of reworking.

This may be connected to a still longer cycle, one alluded to by Van der Veen and Jones. The fate of the hillfort itself is intimately linked to the fate of a society in which social power and social relations are reconstituted at the local level, as implicit in inclusive feasts of local agricultural produce. Both before and after the hillfort's prime, long-distance networks of exchange of

exotic items connect to a different dynamic of social reproduction and a different use of food, which differentiates, rather than interconnects. We can even look beyond the long distance interconnections of the Bronze Age to a much earlier episode of collective hilltop feasting, as exemplified by the meticulous excavations with the Neolithic Causewayed enclosure at Hambledon Hill in Dorset, another place at which food remains find their way into underground pits.

But before we are lulled into a pleasant harmony of rhythms—seasonal, generational, and millennial—the comparison with Hambledon Hill, twice as old as Danebury, for all its resonances of seasonal hilltop pit-digging, feasting and deposition of the ancestors, offers us a stark contrast with the later site, which should cause us to query the fragile edifice erected above.

The occupants of neither site were vegetarians, and we are encouraged by classical accounts to imagine that the feasts of the northern Europeans involved a fair helping of meat. The early site of Hambledon Hill supplies bones in plenty, and there are certainly a large number of bones at Danebury. Grant (1984) analysed around a quarter of a million bone fragments. That may sound a large number, but quantifying them carefully led her to conclude 'the actual number of carcasses represented per year is very small indeed'. Her estimation of minimum numbers of individuals gives a figure of two carcasses per year in the early period, rising to six carcasses a year in the late period. Furthermore, throughout the period, two-thirds of these carcasses are of sheep, which bear much less meat than pigs or cattle. Vigne (1992) has suggested 3.6 kg for a newborn lamb and 14.5 kg for a one-year-old animal. Furthermore, the patterns of age of death among the young animals at the sites did not suggest an even distribution of consumption through the year, but instead a marked peak around spring. A subsequent study by Grant cast even greater light on the temporality of these culls.

The bones of the late period Pit 2269 at Danebury were subjected to detailed scrutiny by Grant (2002). She examined each of its component layers for evidence of species composition, numbers of carcasses involved, and the season of the cull. It was a pit of around 6.3 cubic metres, which, following Van der Veen and Jones' model, would yield up enough grain for 1,500 person-days of feasting. We might speculate that the lowest levels of infilling corresponded to that same feast; bones from a minimum of three sheep, three cattle and two pigs culled in late spring / early summer—a feast of Beltain.

There are two subsequent depositions within the same pit from that season in the year, again with a reasonable number of animals—six sheep, three cattle and one pig in the middle layer, and five sheep, two cattle and one pig in the uppermost layer. What is intriguing is the evidence from the intervening pits

that corresponds with other seasons of the year. Autumn/winter feasts of Samhain seem to have left little more than a single young sheep, that would have borne just a few kilos of meat; quite an intimate sort of feast, perhaps of the immediate family alone.

Of course, the fact that there may be five or more consumption events within a single pit indicates that at least five open pits may be gathering debris in the wake of one pit opening. However, the global figures for minimum numbers of carcasses across the site, alluded to above, would not suggest that a more extensive study would cause those numbers to grow. While the pit volume projections indicate hundreds or thousands of person-days of feasting, several times a year, the skeletal remains can be accounted for by a rather small number of carcasses, the great majority consumed during the late spring/ early summer feast of Beltain. In feasting terms, there seems to be a mismatch between the seeds and the bones.

BIOLOGICAL PRODUCTION AND SOCIAL REPRODUCTION

One way of looking at a seeming contradiction between the various feasting arguments is to infer they offer inadequate explanations of the data, but there is another possibility that may be explored. My earlier work on the material from Danebury placed a strong emphasis on exploring the relations of biological production, and many aspects of my approach have been impressively critiqued (Van der Veen and Jones 2006). Subsequent explorations of feasting instead emphasize social reproduction, but these too have their difficulties in terms of the problems of scale outlined above. If however we return to the intrinsic connections between production and reproduction, between the biological and the social in the sharing and distribution of food, then many of the anomalies may be resolved. There is much in the frequency and tempo of pit digging to support a seasonal feasting argument, and Grant's meticulous analyses allow us to ascribe to those feasts certain characteristics. The sheep roasts at their heart were no doubt accompanied by bread and washed down with beer, but there is far too much grain in a freshly opened pit to accompany the feasts envisaged by Grant. The feasting is a context for economic redistribution and exchange, both for consumption over the coming months and planting for future seasons of growth, and that is likely to have been the fate of the great majority of stored grain.

WHOSE FEASTS?

We can finally turn to the enactment of the feast, and Grant's observations on scale. The kind of celebrations she inferred for the autumn and winter months were intimate affairs centred around a single lamb's carcass, and just a few kilograms of meat. The extended family comes to mind. When we think of the earlier episodes of the hillfort's life, when the minimum number of carcasses averages out at around two per year, it suggests that the extended family may be the normal unit for the feast. Pit 2269 comes from a later phase, by which time the annual deposition of carcasses is estimated to have risen around three-fold, and it also seems that her late spring–early summer feasting involved a good few more carcasses. Here I would like to return to the interesting nature of the crop processing debris that indicated, not just communal harvesting, but the spatial, temporal, and symbolic compartmentalization of the processing sequence across the site, such that the feasters would no longer be in a position to know which family's harvest they were consuming (Jones 1995). They were feasts at a time when the agrarian landscape was being transformed on many levels. The familial intimacy of feasts was in their memories, but a new world was coming into view in the context of these later period celebrations of Beltain.

At a certain point in this chapter, I have accepted a series of conjectures and premises as fact, in order to explore the implications of Van der Veen and Jones' feasting hypothesis, and have even gone so far as to join Cunliffe in imagining the timing and naming of such celebrations. It is a real tribute to the excavators of Danebury that the dataset they assembled constrains those imaginings, and prompts new questions of that evidence. However far the above narrative has drifted from what actually took place within the Danebury ramparts, there appears to be a significant difference in the sheer scale of activity in relation to meat and cereals. We need to account for large-scale storage of the latter in the context of the modest scale of the former. For the reasons developed above, this in turn suggests to me that we should explore accounts that closely interweave relations of biological production and distribution and social relations of consumption. It was clear from the spatial patterning of both the site itself and in the crop debris captured within its in-filled features that there were radical changes in the way in which crops were handled between the earlier and later periods. If Van der Veen and Jones are correct in their conjecture, then Danebury may provide a remarkable insight into the manner in which, over the longer term, the relations of production and of consumption can be substantially renegotiated through an enduring tradition of feasting.

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10

A Re-Assessment of the Enclosure at Lugg, County Dublin, Ireland

Helen Roche and George Eogan[1]

The purpose of this contribution is to re-evaluate Lugg, a somewhat unusual site and to assign it chronologically to the Late Bronze Age period. The site is in an area that is 'facing the ocean' to use Barry Cunliffe's memorable phrase. This general area is well known to Barry, a region to which he has contributed so much over many years, both from the point of view of detailed fieldwork, interpretation and wider comparative studies. Time-wise the site fits into a main period of Barry's interests and accordingly we offer this contribution in appreciation of his academic work as well as the positive role that he has played in aiding the development of Irish archaeological studies.

Lugg is one of at least a dozen archaeological sites located on Saggart Hill, about 18km southwest of Dublin city (figure 10.1). Prior to excavation in

Table 10.1 Sites mentioned in the text

Site	Mound/Cairn +diameter	Max. internal diam. of enclosure	Max external diam. of enclosure	Human Bone
Lugg, Co. Dublin	Mound 9.5m	37m	44m	Cremated Bone
Johnstown, Co. Wicklow	Mound 16.5m	36m	73m	Cremated Bone
Circle O, Co. Limerick	Cairn 15m	44m	54.4m	Cremated Bone
Circle P, Co. Limerick	Cairn 11m	None	None	Cremated Bone
Coolalough, Co. Limerick	Mound 14m	?	64m	Cremated Bone
Grange, Co. Limerick	None	45m	65.5m	Unburnt skull fragments

[1] We extend our appreciation to Eoin Grogan for his helpful comments and for preparing the illustrations for this paper.

Fig. 10.1 The location of Lugg, Co. Dublin

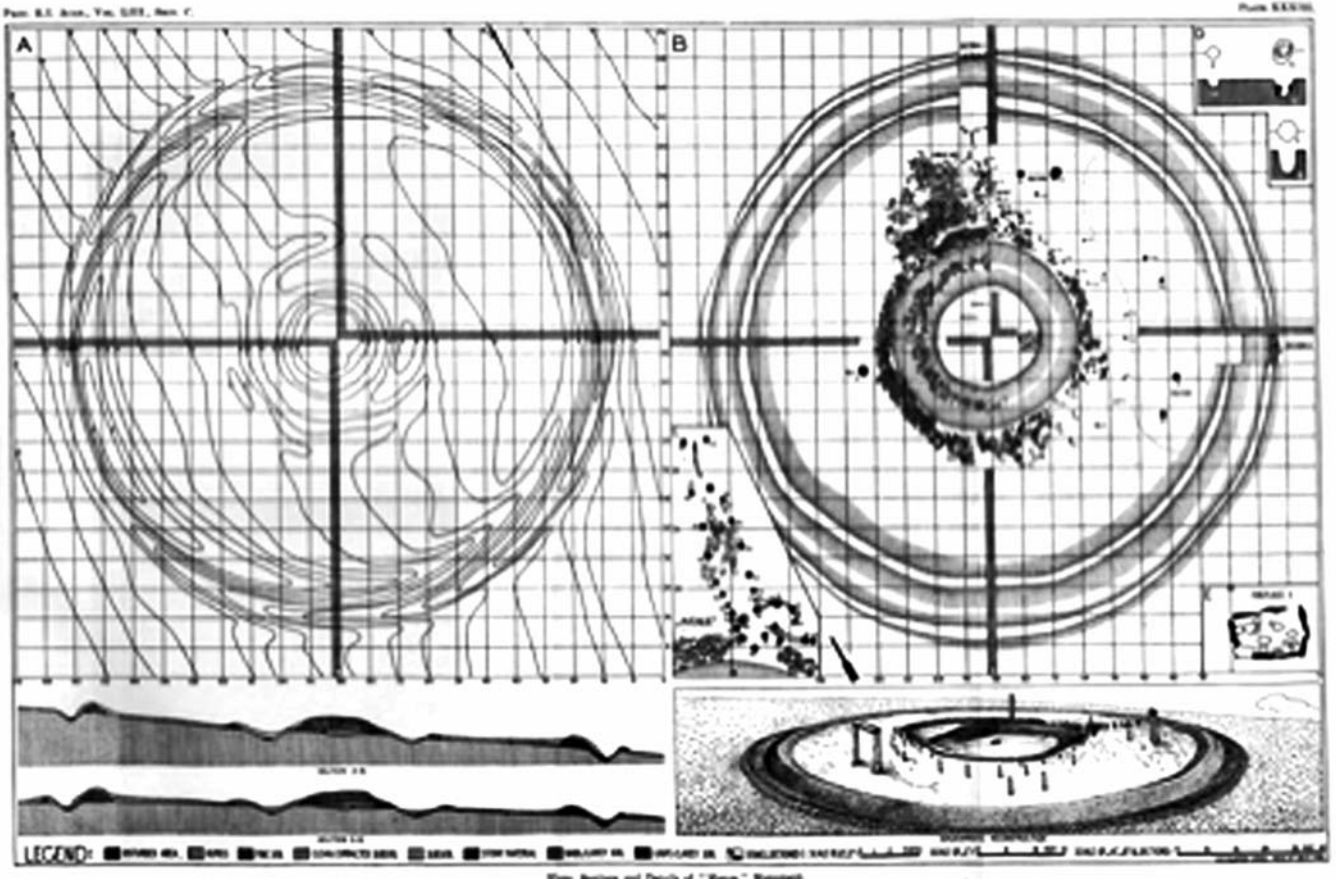

Fig. 10.2 The original excavation plan of Lugg (Kilbride-Jones 1950)

1939 by Howard Kilbride-Jones, it was thought that the site with its enclosing bank and central mound might represent a disc-barrow. However, a preliminary survey (Kilbride-Jones 1950: 315) revealed that the mound had a surrounding ditch as well as the visible bank and this complex central monument was in turn surrounded by a bank and ditch, (enclosing an area about 37m in diameter), which alerted the excavator to the fact that the site might be more complex than previously envisaged (figure 10.2). Excavation subsequently revealed a complex range of features that were interpreted as representing three phases of activity and, based on the identification of the pottery, were assigned to the Iron Age period. Phase 1 representing the earliest activity consisted of a timber monument that was termed a 'Sanctuary-Site'. The second phase was interpreted as representing a habitation site and the final phase was described as being a modified 'henge' monument (*ibid.* 1950: 316).

THE 1950s INTERPRETATION OF THE EXCAVATION: PHASE 1

The evidence for Kilbride-Jones' earliest phase, which he referred to by the then popular term of a 'sanctuary-site', was located mainly beneath the central mound with further areas located in the wide level area (called a berm by Kilbride-Jones) between the inner and outer enclosures. The evidence consisted of three fireplaces, limited areas of paving and one hundred and sixty post- and stake-holes. Material up to 5–7cm deep, described as 'light clayey material' overlay the subsoil, which was interpreted as representing a possible prepared floor. It was also recorded that the scanty remains of a cairn were found in this area, described by the excavator as having covered the 'sanctuary' after its 'period of usefulness had ended' (Kilbride-Jones 1950: 316). The only associated artefacts consisted of a few flint flakes and a sherd of pottery which was found in one of the post-holes.

The post-holes and stake-holes varied from 5cm to 55cm in diameter and 10cm to 35cm deep but did not appear to form a coherent plan. What is described as a pit was found on the east side of this central area measuring 97cm in diameter and 45cm deep. It contained flint flakes and a few scrapers.

Two of the fireplaces were similar in form, enclosed by stones that were positioned in shallow channels (figure 10.3). Fireplace 1 was on the eastern side of the central area and fireplace 2 was 10.9m further to the south, outside the central area. They measured 1.57m by 1.02m and 1.22m by 1.07m respectively. The surface soil within fireplace 1 had been burnt to a deep red and it also contained a significant quantity of charcoal and charcoal dust. A granite pebble

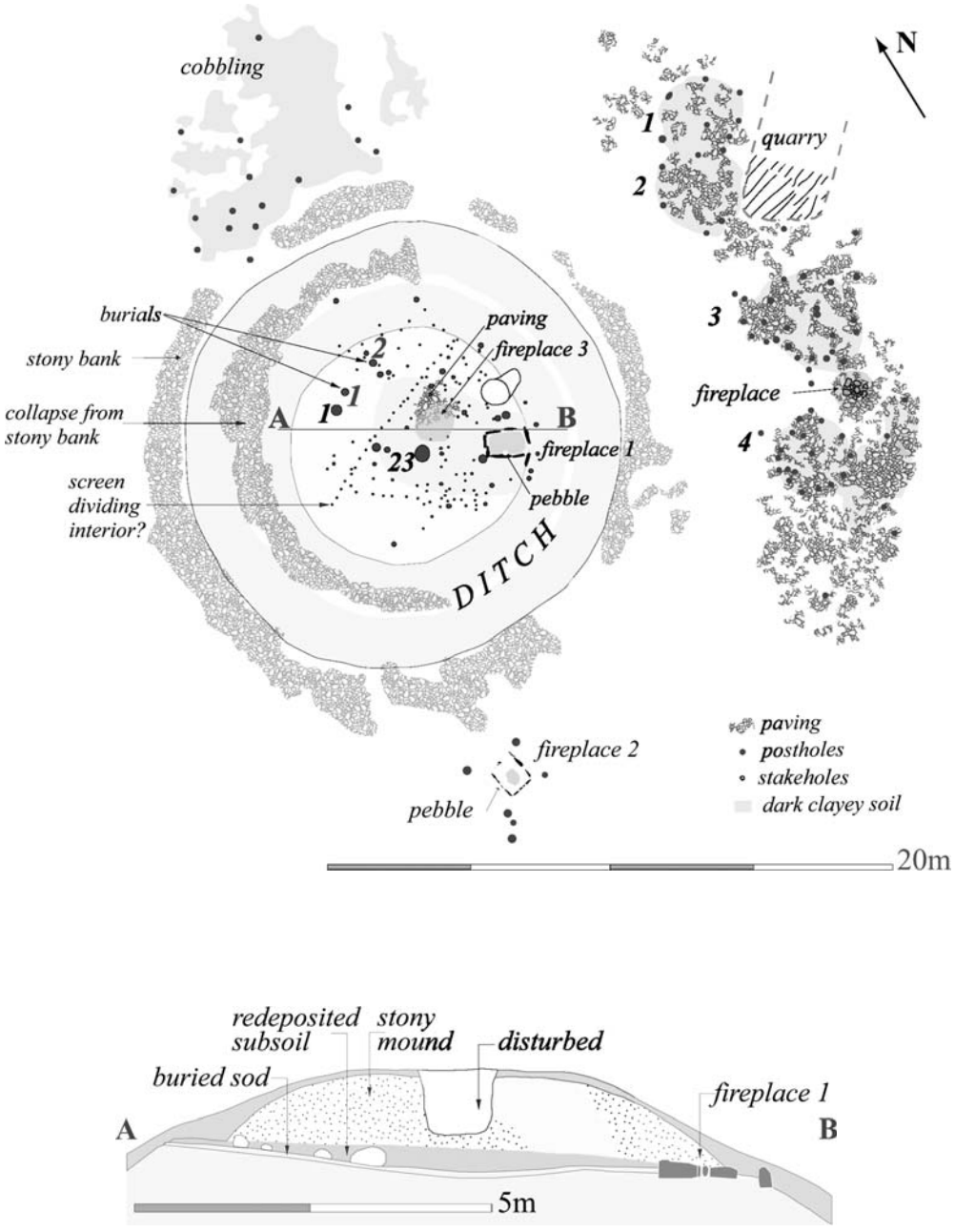

Fig. 10.3 The central area and the huts, the first stage of activity on the site

showing evidence for burning was found on the southern side set against the inside of the enclosing stones. A post-hole abutted the southwest corner of this fireplace and a pottery sherd, identified as early Iron Age ware, was found within. In contrast the second fireplace showed little evidence for fire reddening and charcoal but a quartz pebble was found in a similar position within it. A post-hole varying from 20cm to 25cm in diameter and 15cm to 30cm deep, was present about 30cm from each corner of fireplace 2. A third fireplace was also uncovered within the central area, a short distance to the northwest of fireplace 1. It was not enclosed but was defined by an intense reddened area measuring 75cm by 60cm. A large quantity of fine charcoal, up to 10cm in depth, was found on and around the fireplace. Kilbride-Jones noted the arrangement of a post-hole present outside each corner of the burnt area similar to those in fireplace 2. Thin slate flags had been placed directly above the charcoal and it is suggested that this occurred when the fireplace had become redundant (Kilbride-Jones 1950: 318). Large stones, either singly or in clusters, were also found in this central area. These were interpreted as representing the remains of a cairn that had completely covered the central area and perhaps also fireplace 2, but owing to the fact that the builders of the later 'Henge' had dismantled this feature it was not possible to estimate its size accurately (*ibid.* 1950: 318).

PHASE 2

In the eastern part of the wide level area, bordering the inner curve of the outer ditch, evidence for up to five small circular huts was found, none measuring more than 3m in diameter. This was interpreted as representing a habitation site by Kilbride-Jones (1950: 318–20). The huts were defined by circles or arcs of post-holes and areas of internal cobbling. A dark clay-like soil containing flint flakes and some scrapers was present throughout the area. The surviving remains of these huts are quite similar but hut 3 is described as being the largest (just over 3m in diameter) with a central post-hole measuring 47cm in diameter and 15cm deep. A concentration of post-holes positioned on the west side of the hut was interpreted as representing a protective porch and around this area the ground was heavily cobbled. It was suggested that a second entrance was present on the southern side giving access to a large hearth just 60cm outside. It is recorded that 'moderately good paving' continued from within the hut to this fireplace. This large sunken paved fireplace positioned between huts 3 and 4 measured 1.65m in diameter and was sunk to a depth of 15cm below ground level. Large quantities of charcoal and charcoal dust as well

as flint flakes and several sherds of what is described as 'typical early Iron Age' pottery were found above the paving. It was suggested that the sherds represented a single pot that had essentially exploded within the fireplace.

PHASE 3

The final phase was termed a timber or modified 'henge' monument (*ibid.* 1950: 320–5). Kilbride-Jones suggested that Phases 1 and 2 were covered and enclosed by a platform mound and the surrounding uninterrupted banks and ditches of the so-called 'henge' monument. The outer bank (90cm in surviving maximum height) with its external V-shaped ditch (83cm deep) enclosed an area of 37m in diameter. Kilbride-Jones observed that the remains of a low wall were present on the outer edge of the ditch. A flat area, averaging 9.75m in width, lay between this outer enclosure and an inner ditch with external wall that surrounded a central mound. This inner ditch measured 15.5m in diameter and averaged 21.3m deep and it was suggested that the material from this was used to construct the central mound. Prior to the construction of the mound a layer of 'clean subsoil' was laid over the features representing the 'sanctuary-site', including the remains of what was described as a cairn. Two cremation burials associated with 'early Iron Age' pottery were found lying directly on the clean yellow subsoil and directly below the mound material.

A number of gaps were identified in the wall associated with the inner ditch. An area of cobbling and arrangements of post-holes were found in the flat area outside the two northern gaps. Another arrangement of post-holes extending southwards for a distance of 9m towards the inner bank and ditch was described as representing an 'avenue'. A gap was also noted in the wall at this point, as were the largest of the post-holes. Areas of this suggested avenue were paved and there also seemed to be an attempt to divide it by setting thin slabs across it at one point. Post-holes continued around the east and southern circumference of the ditch where they appeared to terminate at another break in the wall. The northwestern portion of the level area was devoid of stake- and post-holes with the noted exception of a single large post-hole. In fact, seven unusually large post-holes are discussed in the report, the example just mentioned (marked no. 1 on figure 10.4) measured 80cm in diameter and 95cm in depth and contained fragments of oak. Two were located on the northeastern area of the flat area (nos. 2 and 3). They were positioned 2.10m apart, with the largest measuring 97cm in diameter and 70cm in depth. Fragments of oak as well as packing stones were found within. Another pair was uncovered in the southeastern area of the flat area (Nos 4 and 5). Both pairs were termed

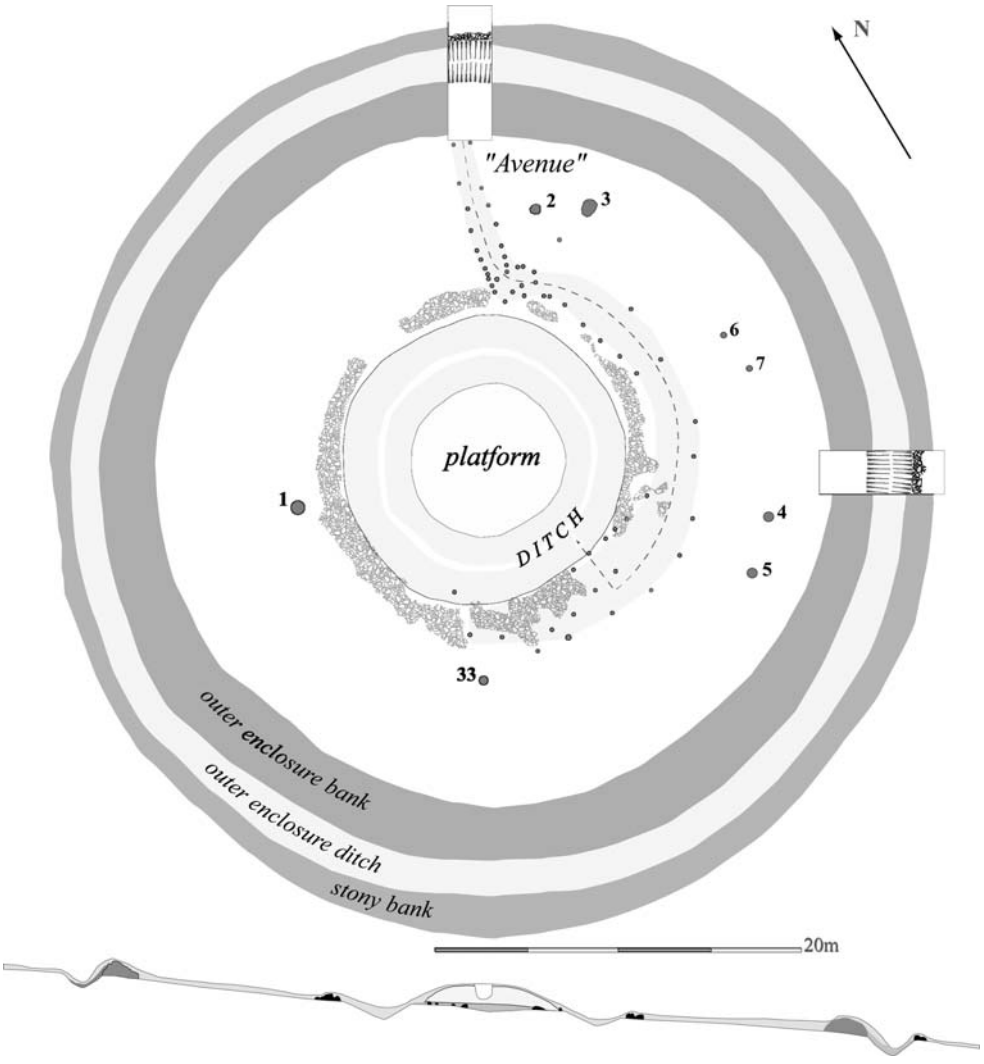

Fig. 10.4 The completed ceremonial enclosure

'Trilithons' by Kilbride-Jones. Two somewhat smaller post-holes were found between the 'Trilithons', one of which was cut through the floor of hut 3.

The excavator concluded that Lugg was related to the 'henge' monument tradition, which he regarded of great importance, as it was the only example in Ireland that could be assigned to the Iron Age. A site that had been constructed above the remains of two earlier areas of activity, possibly also of early Iron Age date.

A NEW APPRECIATION OF AN OLD SITE

Since the publication of the site the above view has been largely accepted and indeed for such an interesting and important site, it is only referred to occasionally in the archaeological literature where it is either glossed over or there is a concentration on the 'henge' characteristics. The intriguing underlying areas are largely overlooked and certainly the location and potential importance of the pottery is undervalued. Two notable exceptions are Barry Raftery and Alex Gibson (1995: 150; 1995: 87), who have both suggested the likelihood of the site dating to the Late Bronze Age, but both also express doubts in establishing a precise date for the site. This paper is not so much presented as a reinterpretation or criticism but more as taking a fresh look at a complex site while acknowledging the advantage of having more than fifty years of new excavations and research since Lugg was published. There is also now a greater understanding of Irish prehistoric pottery and the fact that, to date, no indigenous Iron Age pottery has been found in Ireland. It is also time to cease the over-cautious nature in assigning a date to the site and present it as an important addition to the Late Bronze Age period. This chapter will dispute two main arguments in the original report; firstly the date and secondly the sequential development of the site.

THE PRIMARY LEVEL OF ACTIVITY

In re-evaluating the pre-earthworks evidence on the site it is worth recalling Kilbride-Jones's statement that 'the "henge" monument was built upon the remains of two former occupations, one religious the other secular' (1950: 328). This interpretation is questionable in that the features uncovered within the central core, fireplace 2 in the south and the hut sites are all on the same stratigraphic level and therefore there is no reason to suggest that they were not in contemporary use (figure 10.3). The central features are indisputably ritual in nature with evidence for intensive burning associated with the three fireplaces and the presence of posts at each corner of nos. 2 and 3 that were interpreted by the excavator as representing roofing. However, because of the evidence for the intensity of burning it seems more likely that they actually represented pyres, with the four posts acting as a support to suspend the remains. It is not clear why fireplace 2 is located further away from the central area but their contemporaneity is unquestionably not only in the similarity of construction and stratigraphy but also in the deliberate placing of a rounded pebble in the same location within both fireplaces.

Among the seemingly haphazard scatter of stake-holes in the central area is a distinct row running diagonally in a southeasterly direction that probably represented a barrier either in the form of upright stakes or a light fence; this would have created a distinct demarcation within the central area. The later deposit of the two cremation burials may be relevant to this deliberate segregation and will be returned to later in the chapter.

The group of hut sites on the eastern area of the site are stratigraphically contemporary with the above area of ritual activity. In accepting this contemporaneity it is therefore unlikely that they represented a domestic site. Their small size and lack of occupation debris would also support this view, as well as the fact that it may be inappropriate for a domestic site to be in such close proximity to funerary related activities. It also seems more probable that the cobbled spread and post-holes (termed 'cobbled way' by Kilbride-Jones), located northeast of the central area and just outside the inner ditch, is also contemporary with this phase of activity on the site and not as suggested by the excavator as forming part of the later timber uprights. This is suggested on the basis that, as with the hut sites, the area of cobbles lies on the old ground surface while the similarity of the cobbled spread and stone spread around the hut sites is also notable.

Few artefacts were found in association with this primary level of activity. These consisted of the already mentioned burnt flints from the large pit within the central area, several flint flakes including what are described as thumb-nail scrapers and a leaf-shaped arrowhead and a small stone axe head, the majority coming from the area of the huts. Unfortunately only a few of the flint flakes were located during the research for this paper. However, a review of the pottery provided a greater understanding of the site, even though, regretfully, the archives do not relate the exact locations of the sherds. Then again, as all the sherds were Late Bronze Age in date, this did not create an impenetrable problem. A total of 283 sherds (weight 11,228.99g) representing three flat-based coarse vessels were found. Two (probably coming from the hearth associated with the hut sites) were large thick-walled (13.3–17.1mm) vessels and seemed to be of roughly similar dimensions with heights averaging between 27–31cm, diameter at the mouth between 25–7cm and the diameter of the bases averaging 16–18cm. These very substantial vessels are among the largest of their type so far found in the country. One was barrel-shaped with a low internal bevel on the interior surface of the rim while the other was more straight-sided with out-turned inward sloping rim. The fabric of both vessels is of good quality with a thick slurry wash on the exterior surfaces. Thick deposits of carbonized residue were present mainly on the interior surface of the vessels. Neither showed evidence for weathering indicating that the sherds had not been exposed to the elements for very long. Many of the sherds show

evidence for distinct coil breaks, where the individual coils look as if they have been peeled away. The breaks suggest it was hastily fired and the joins had not bonded adequately. This is an unusual feature on Irish Late Bronze Age pottery and it is possible that the Lugg vessel was specifically made and deliberately broken for a particular function connected with the funerary ritual activity of the site. The rim fragments representing the third vessel are from a smaller, finer pot, with the wall thickness averaging between 9.8 and 11.1mm and the diameter at the mouth about 17.5cm. The fabric is compact and the exterior surface had been smoothed. The sherds from this vessel are presumably those found on the same level as the cremation burials. It was not possible to identify the exact sherd that had been found in post-hole 17.

The pottery from Lugg is typical in shape and fabric to other Late Bronze Age ceramic assemblages in Ireland. Similar pottery has been found on other sites in this region of the country, for example, the hillfort at Rathgall, Co. Wicklow (Roche 2004, 113) and the enclosure with central mound/platform at Johnstown, Co. Wicklow (Fitzpatrick 1997). Similar pottery securely dated to the Late Bronze Age period has also been found further afield on hillforts at Mooghaun, Co. Clare and Haughey's Fort, Co. Armagh (Grogan 2005a: 241: table 7.2; Mallory 1995: 84). Late Bronze Age pottery came from three different areas at Lugg, from a hearth associated with the hut sites, from the fill of a post-hole within the central core area of the site and near the cremation burials again within the central area. In other words it is the pottery that actually acts as the common denominator in linking all aspects of the site together.

Stratigraphic and artefactual evidence demonstrates that the primary horizon, including fireplaces, post and stake-holes, the cobbled area and the group of huts were in contemporary use and all were related to ritual, including funerary activities. Rather than representing an isolated domestic site it is more credible that the huts functioned only as a temporary dwelling for those involved with the ritual activities. It is proposed here that the earliest phase of activity on the site was concerned with the sanctification and preparation of the site, for its use as an elaborate ceremonial enclosure.

THE CEREMONIAL ENCLOSURE

There is a sequential development regarding the construction of this site: it would appear that the end product was envisaged from day one, demanding an enormous commitment in time, resources and manpower. The initial activity was a way of preparing, and perhaps sanctifying, the site and perhaps

the cremation burials are central to the whole ritual, representing significant people or in establishing a tangible reverential link to the ancestors.

The construction of the elaborate combination of earthworks including both outer and inner banks and ditches and the central mound did not denote the destruction of the underlying features, but, instead, represented the next planned stage on this complex ritual site (figure 10.4). It is difficult to be certain in which order the final phase of the site was constructed. However, in order to gain unrestricted access to the central area it makes practical sense that the construction of the inner bank and ditch complex, that in turn provided the material for the central mound, was carried out first. Stratigraphic and artefactual evidence demonstrates that the construction of the earthworks commenced without delay after the primary ritual functions had been completed. The suggestion of evidence for an overlying cairn is too insubstantial to realistically comment on but the sealing of the features within the central area with a thick layer of compacted yellow soil is very clearly identifiable in section (figure 10.3, redeposited subsoil). This layer is very important not only because it heralded an end to the initial practices on the site but it also acted as a platform for the two cremation burials, one of the last acts in the primary programme of ritual activities. These burials, arguably derived from the underlying suggested pyres, were accompanied with sherds of Late Bronze Age pottery and placed directly on the compacted yellow soil immediately below the subsequent mound. This shows that activities were carried out in an ordered and planned manner and even after the deposition of the yellow compacted soil portions of the primary features were visible to the builders of the earthworks. The southern stone settings of fireplace 2 were left balancing precariously in its shallow trench at the edge of the ditch and were not in fact covered by the mound, instead a narrow gap or flat area was left between the edge of the ditch and the mound. It can be suggested that the construction of the ditch and mound not only encapsulated a sacred space but also provided a central platform for the intended ceremonies.

The next stage would have entailed the defining of the entire ritual space, the construction of the outer encircling bank and ditch complex. The material from the outer ditch was used to construct the bank as well as to cover the wide area between the two enclosures including the group of huts. During the excavation stones were found around the circumference of the outer side of both ditches; these were interpreted as walls, however, from the sections and also taking into account the amount of stones found in the base of both ditches, it is probable that they represent low stony banks.

It is again difficult to estimate at what stage the erection of the upright posts that represented a processional avenue with outlying isolated upright posts took place. However, as the avenue extended from the inner side of the

external bank and ditch complex and turned eastwards at the outer edge of the inner low stony bank, it appears that both inner and outer bank and ditch enclosures were in place at the time it was erected. This pattern of post-holes discontinues at the southern side of the inner enclosure corresponding with a break in the stony bank that may represent an entrance point to the summit of the central platform mound (figure 10.4). The northwestern area of the wide level space between the two enclosures is devoid of post-holes, except for a single large post-hole (no. 1), similar in scale to a post-hole to the south (no. 33), the double post-holes (nos. 2–3, 4–5) and nos. 6 and 7 in the south-eastern side of the level area (figure 10.4).

When completed it would have been a visually impressive monument. The outer enclosure consisting of an encircling low stony bank, an internal ditch and an internal mainly clay bank, a wide level area and then the interior enclosure consisting of another encircling low stony bank, a ditch and a central platform mound. The avenue created by upright posts would have controlled the direction in which the ceremonial procession would have proceeded around the site (figure 10.4). The seven exceptionally large post-holes would have held impressively large posts indicating the importance of the site but would also signify special areas or boundaries on the site.

CONCLUSIONS

While accepting the impressive nature of the enclosure at Lugg, it does not represent a henge. Neither is it exceptional, but represents one of an increasingly familiar Late Bronze Age monument type. This region of the country has a strong Late Bronze Age presence, the hillfort at Rathgall, Co. Wicklow (Raftery 1995) being an obvious and rich example. However, it is a site to the south of this region at Johnstown, Co. Wicklow (Fitzpatrick 1997: 199–200) that has closer parallels to Lugg. At Johnstown there is also a central mound or platform encircled by a ditch, bank and an outer ditch, in all having a maximum external diameter of 73m, somewhat larger than the external diameter at Lugg, which is 44m (table 10.1). A level flat space is present between the mound and the encircling earthworks at Johnstown and a large assemblage of Late Bronze Age pottery was found in association with the site. Related sites are also present in the north Munster region in Co. Limerick. At Circle P in Lough Gur (Grogan and Eogan 1987: 496–501), a pit containing two Late Bronze Age pots associated with cremated bone were found beneath a flat topped, kerbed cairn. Just 30m away at Circle O, a central cairn/platform faced with upright boulders was encircled with a bank faced with upright

stone on both sides and an internal ditch. A number of post-holes and paving were found in the level space between the central cairn/platform and outer enclosure and cremated bone was found beneath the bank (Grogan and Eogan 1987: 496–501). Although the large embanked stone circle at Grange is devoid of a central mound or cairn, there is now no doubt that it forms part of this distinctive Late Bronze Age ceremonial enclosure type (Roche 2004: 109–16). Excavations at Grange established a much longer archaeological history on the site before the construction of the enclosure. However, after its construction a thick layer of clay was spread over the entire interior creating a level surface, a somewhat similar concept to the deposition of redeposited subsoil over the central area at Lugg. At Coolalough, again in Co. Limerick, a central mound is encircled with two banks and two ditches, limited rescue excavation produced a Late Bronze Age date (Grogan 2005b: 56). Not only do these sites share similarities in date and construction but in all cases where excavation has been carried out there appears to be the common presence of human bone, not always in a strict funerary capacity, and it appears that the use or presence of human bone was an important component of the ceremonial process. The presence and the place of large ceremonial enclosures during the Late Bronze age period, especially in the north Munster region, have recently been assessed, for the first time, by Eoin Grogan (2005a: 46–54), where over 50 examples of various types of these monuments have been identified. In that study it is suggested that such monuments may have functioned as the focal points for the community and as a mechanism for social bonding (2005b: 69). These are, of course, valid points, but until further, more focused excavations are carried out on sites that appear to represent Late Bronze Age ceremonial enclosures; it will not be possible to establish a realistic picture of the function of these sites and how widespread they are throughout the country.

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11

The Late Castro Culture of Northwest Portugal: Dynamics of Change

Francisco M. V. Reimão Queiroga

The principal aim of this short chapter is to present some ideas and suggest possible directions of research concerning the development of the northwestern Portuguese Iron Age, and in particular its late—and most dynamic—phase, that which coincided with Roman acculturation and conquest, towards the end of the first century BC.

These processes of acculturation and conquest, and their impact on the Iron Age communities of the region, have long been the subject of discussion and indeed misunderstanding. Many unresolved questions and contradictions have blurred the construction of a coherent picture which is only now starting to take shape, though not necessarily providing definitive answers. If there was an effective military conquest, where is the evidence for the destruction of sites in the archaeological record? If the northwest was already conquered and pacified, why were the local communities building and reinforcing defensive walls? If the Romans were controlling this region, why were hillforts still being built in the traditional indigenous fashion? Generations of archaeologists, myself included, have attempted to answer some of these questions in the course of our research.

THE BACKGROUND TO THE CASTRO CULTURE

The Iron Age cultures of northwest Iberia are broadly characterized by hillfort settlements built in stone, either granite or schist. These hillforts, known locally as 'castros', provide the name by which the culture is generally known: 'cultura castreja', in Portugal, or 'cultura castrexa' in Galicia. The word 'castro' obviously derives from the Latin 'castrum', in the sense of defended settlement.

Francisco Martins Sarmento introduced this terminology following his major excavation work at the Citânia de Briteiros, from the 1870s onwards. Martins Sarmento's excavation and survey work, combined with his remarkable capacity for observation and analysis, brought the Castro culture to widespread international attention, particularly after the Ninth International Congress of Anthropology and Prehistoric Archaeology, held in Lisbon in 1890. Despite this promising start, the Castro culture remained little known to most European archaeologists until the last few decades of the twentieth century, save for the contribution made by Christopher Hawkes (1971; 1984).

The history of the Castro culture can be traced along an uneven path which extends from the end of the Bronze Age until vanishing in the second century AD. At the end of the second millennium BC there is a widespread trend for changes in the nature of landscape occupation and exploitation, as well as a new strategy in the location of settlements. Although many communities are still moving across the territory, living in open and transitory settlements, a consistent number of communities locate their dwellings on higher ground, which provides them with a defensive capability (Figueiral and Queiroga 1988; Martins 1996: 121–4); this trend lasts until the end of the Bronze Age. By that stage it appears that all the communities of northwest Portugal lived in defended settlements located on hilltops.

The emergence of some of the early castros, between the first and second quarter of the first millennium BC, appears to be related to a kind of continuity of the same form of settlement (Queiroga 2003: 42–7), apparently by the same ethnic group. The nature of the transition between the late Bronze Age and Iron Age sites is not yet clear, although some regional studies (Bettencourt 2000; Martins 1990) have greatly contributed to our present knowledge. In fact there are many examples of continuous occupation of the hilltop-located, and apparently defended, late Bronze Age sites, which by 800–600 BC were renewed with defensive and dwelling structures, as well as displaying a noticeable change in material culture (Dinis 1993–94: 184; Queiroga 2003: 47, 63–5). Each site shows a remarkable individuality, which accounts for the difficulty in establishing a cultural model. Somewhere in this process is the transition between the late Bronze Age and the early Iron Age.

Although archaeological evidence suggests that most early hillforts were self-sufficient as far as metallurgical work was concerned—if not metal production as well—there is no doubt that by this time the wider, international, bronze exchange network had been disassembled. A new pattern of individuality of the communities appears to emerge, with the defended villages as the only type of settlement. This individuality in location, in the structures of occupation and defence, in the material culture and in the chronology and pace of evolution, makes any effort at synthesis a difficult one.

The typical late Bronze Age settlement, almost entirely built with perishable materials, is constructed in the early Iron Age on a more solid basis. The huts—the only structures for which we have evidence—are made with timbers interlaced with branches and sealed with a coat of clay (Queiroga 2003: 28–9; 2005: 156–8). The first feature to be built with stone is the defensive wall. It is only later that stone is used for the dwellings, by the fifth or fourth centuries BC in some cases (Soeiro 1997: 220). However, the masons were still far from mastering the art of building in stone, and they certainly lacked decent steel tools for cutting granite. In fact during these early phases of the Iron Age the stone is not carved, but simply cut along its natural fracture lines. Only a few sites dating to these phases have been excavated to date, and the excavated areas are small, thus limiting our data on the subject.

From the fourth century BC onwards, until the end of the millennium, imports from the Mediterranean become increasingly noticeable in the archaeological record. Among the items found in coastal hillforts are oenochoe for perfume and ointment, coloured glass beads and bracelets, Greek Attic red- and black-figure pottery, Punic wares,[1] and the Italic productions of Campanian and Arretine wares (Caamaño 1983; Queiroga 2003: figure 51). As the trade contacts with the Mediterranean were established, so was the taste for fine imported goods, to the extent that the local pottery attempts to imitate the black glazed surfaces of the Greek pottery, as suggested by Almeida (1974: 190) and observed in recent, as yet unpublished, excavations at Castro de Penices.

The third–second centuries BC witness substantial developments in masonry work (Queiroga 2005: 159), and therefore in the architectural layout of the hillforts, which are now almost all granite-built, with a few exceptions in the small areas of schist. There is more abundant evidence for the use of carving tools. It is at this point that the Castro culture becomes established as a 'stone civilization' (Almeida 1983a).

At the end of the first millennium BC a new era begins, alongside the completion of the conquest of Iberia. The spread of steel tools allows for great improvement in masonry techniques, and a decorative art of unique character develops on most sites (Calo Lourido 1994), not only in the architectural elements, but also in statues.

The hillforts, which show an enormous variety in their individual form, are present in great numbers in the northwest of Portugal (Silva 1986; Queiroga 2003). They all have massive defensive structures such as walls, ditches, and ramparts—regardless of the area enclosed—and thus they have inevitably led

[1] Punic-type pottery has been identified in ceramic assemblages from old excavations as well as new, now that archaeologists are more aware of its presence. Recent excavation by the writer at the 'Castelo de Gaia', a possible trading post at the mouth of the Douro river, has provided abundant evidence for this type of pottery.

archaeologists to convey the impression that war was omnipresent for these communities. In addition, their diversity and their location within the landscape appear to indicate some kind of hierarchical organization of the indigenous communities (Almagro 1994), although settlement analysis has been little used here as evidence of the existence of an aristocracy (Tranoy 1988), unlike most other European Iron Age cultures of 'Celtic' affiliation (Audouze and Büchsenschütz 1989; Brun 1987; Büchsenschütz 2001; Cunliffe 1978; 1982; Duval 1981).

At the turn of the millennium there is a major change in the Iron Age landscape: the emergence of the large *oppida*, locally called 'citânias'. These large sites, the most extensively excavated sites in the region, become the *leitmotif* of Castro culture. Among the best-known of this type of site in northern Portugal are Citânia de Briteiros, Citânia de Sanfins, Monte Mozinho and Citânia de Santa Luzia, but many others, which have not yet been excavated, have been located. They are up to forty hectares in size and massively stone-built, bearing impressive defensive walls. While Citânia de Sanfins shows a clear and disciplined orthogonal configuration (Silva 1986), others show a geometric layout only for the inner paved roads that define and organize the dwelling quarters. But there is no doubt that they all demonstrate the intention of following an urban orthogonal order, thus raising suspicions from the start about their Roman affiliation. The sites mentioned above had evidence of previous occupation, over which extensive urban reconstruction had taken place, except for Monte Mozinho; this *oppidum* apparently shows no evidence for earlier occupation, although the topic has been considered with some circumspection (Soeiro 1997: 220). Evidence from Monte Mozinho and Citânia de Sanfins, the only examples where stratigraphy has been recorded, indicates that they were respectively built and reorganized after the Augustan conquest (Almeida 1974b; 1974c; 1977; Silva and Centeno 1980; Silva 1986)—in other words under the supervision and with the permission of the Roman authorities, regardless of other social and economic (Alarcão 1992: 59; Martins 1990: 193–4) or military factors (Tranoy 1981: 126–32) which may have influenced the local communities.

THE ROMAN CONQUEST

The completion of the conquest of Iberia, carried out by Augustus in 19 BC with the campaign against the Artabrians, signalled a new era in the Castro culture. This has generally been considered as the point at which the culture entered its most dynamic and flourishing phase (Almeida 1983a; 1983b;

Soeiro 1997). However, long before the conquest, there was a series of contacts and military events, which need to be taken into account in order to understand the developments in political and administrative control, and in particular the process of acculturation.

In 139 BC the consul Q. Servilius Caepio, governor of Hispania Ulterior, broke the peace and attacked the Lusitanians, Vettonians and Callaicans. His expedition reached the region of the Douro river (Schulten 1937: 122), in the territory of the Callaicans. It appears that the conquest of the whole of Iberia was being taken more seriously by Rome, as suggested by the fact that this military enterprise was promoted by the Senate.

Decimus Junius Brutus was a proconsul who succeeded Servilius Caepio. After having 'pacified Lusitania' (Appian, *Hist. Rome*, 73–5), his first action was to conduct a military expedition against the Callaicans, in 138–136 BC, establishing a base in the region of Santarém-Alpiarça (Alarcão 1988: 22), and taking a coastal route towards the north. According to Appian (*Hist. Rome*, 73–5), Brutus reached the Minho river, after having crossed the Douro and the Lima, and it appears therefore that most of the coastal area of present north-western Portugal may have been encompassed by this expedition.

Q. C. Metelus Pius founded a permanent Roman military camp in the 70s BC, near *Egitania* (Idanha-A-Velha), in the heart of Lusitania (Alarcão 1988: 35). This camp, together with others created further north, in the region of Viseu, suggests some kind of military control over the region to the south of the Douro river.

In 61 BC Julius Caesar was appointed *propraetor* of the province of Hispania Ulterior, while facing severe financial problems due to his heavy debts. Caesar faced the Lusitanians in their own country, in the region between the Tejo and Douro rivers. They retreated to the northern shore of the Douro, but were followed and defeated by him. After this victory, Caesar returned to the south, where he obtained ships and followed the Atlantic coast up to *Brigantium* (La Coruña), in Galicia.

The division of the provinces of Hispania between Augustus and the Senate, which was formalized in 27 BC, defined the Douro river as the border. Between 29 and 19 BC the so-called Augustan campaigns, or Cantabrian wars, took place, with the involvement of Augustus himself in 26–25 BC. Most of the fighting occurred in the north, in Cantabria. As for the region north of the Douro river, there are suggestions that the army from Lusitania, commanded by Publius Carisius, may have established a base in *Bracara Augusta* (Balil 1976: 47; Schulten 1962: 174),[2] or, more probably, in its surroundings, and

[2] Alternatives to the hypothesis of these authors are presented by Torres Rodríguez (1976; 1980: 111–12), and are the subject of revision by Martino (1982).

from there invaded and subdued the western part of the Asturian region. References to this incursion in the territory of the Bracari are scarce in the classical texts. However, the victory of Carisius over the Callaicans is emphasized in the Roman sources, and it is celebrated by the 'Carisius mint' (Sutherland 1984: 25). It is striking that—so far—there is no noticeable evidence of destruction observed in the sites of this region which may be related to the campaigns described above.

Having summarized some of the more relevant historical events, we need to examine another type of evidence: the contracts and pacts between the Romans and the indigenous communities, normally recorded on bronze plaques, or *tesserae*. The information provided by these objects is priceless, including the names of the individuals involved and their tribes, and in particular the legal relationship between them. Although a reasonable number of these pieces are known in Iberia, only the two found at Monte Murado (Silva 1983; 1986: 310–14, gráfico 12) are from the northwest of Portugal. The earlier, dated AD 7, refers to a pact of hospitality between a Roman citizen and three indigenous individuals bearing Roman names, belonging to the Turdulians, an old Celtic group that had settled south of the Douro river estuary (Strabo III, 3, 5). The other *tessera*, dated two years later (AD 9), refers to a pact where the same Roman citizen offers both his hospitality and a clientage relationship to another member of the Turdulians. These examples show how a Roman citizen, apparently without any official administrative or military status, could pass from client to patron of local inhabitants in a period of just two years.

Another example of a similar nature is recorded from a different region, the Bierzo in northern Spain: the '*Bronze de el Bierzo*' or '*Bronce de Bembibre*' (Grau and Hoyas 2001). This document dates to 14–15 February of 15 BC, thus shortly after the total conquest of Iberia. In summary, the text records that Augustus was informed by his *legati* that the inhabitants of one *castellum* named Paemeiobrigensis had remained faithful to Rome, while others had broken their commitment of fidelity. The text continues that as a reward, the Emperor granted them perpetual immunity and returned to them the territories they previously possessed when Lucius Sestius Quirinal was an imperial legate in the region (20–19 BC).

This document is of outstanding importance for our understanding of the administrative and juridical relations between Rome and the indigenous communities. It appears that by 15 BC an indigenous community located in one of the last regions to be conquered had already been displaced from their original territory, after 19 BC, by the Roman administration (Pereira Menaut 2005: 228). This implies not only a nimble application of imperial authority over the subdued peoples, but also a remarkably attentive and accurate

control, even of one of the most obscure indigenous communities of the empire. Although such evidence is lacking for the northwest of Portugal, it can be presumed that this kind of administrative authority already existed over this region by the time of the Cantabrian wars.

Let us now return to the hillforts. It is worth reiterating the vitality of the Castro culture in this region, its degree of Romanization, and in particular the increasingly dynamic activity reflected in many aspects of the archaeological record during the last decades of the millennium. The landscape of the region is dominated by scattered hillforts of various configurations. There is a degree of pacification, which undoubtedly reflects the result of Caesar's campaigns in the region (Almeida 1983a; 1983b; Calo Lourido 1993; 1994), and more permanent contact with the Romans. One particular reference from Strabo, discussing these communities and their relations with Rome, is worth noting: '... most of the people had ceased to gain their livelihood from the earth, and were spending their time in brigandage and in continuous warfare both with each other and with their neighbours across the Tagus, until they were stopped by the Romans, who humbled them and reduced most of their cities to mere villages, though they improved some of their cities by adding colonies thereto' (Strabo III, 3, 5).

This quotation clearly refers to a warrior society that underwent major change through contact with Rome. Their cities were improved by the addition of colonies—but where were these colonies? From what we know of the archaeological record, these were not the cities, such as Bracara or Lucus, which were centres of administration and Romanization. In fact, these colonies may be the large oppida created during, or after the conquest.

Until the last few decades most attention has been concentrated on the large hillforts or '*citânias*', because of their monumentality. They were mostly subject to extensive excavations at the end of the nineteenth century and during the first half of the twentieth century. These excavations uncovered large areas of dwellings—to the tourist's delight—but unfortunately stratigraphy or significant chronological sequences were only rarely produced. The first exceptions to this generalized pattern, from the 1970s onwards, were Mozinho and Citânia de Sanfins, as mentioned above, from which assumptions were made to form the basis of our understanding of these large hillforts: some were newly created and others grew out of previously existing castros. These large cities may have acted as central places within some indigenous regional hierarchy (Silva 1986; 1995), although the suggestion that they were formed in response to Roman military pressure can no longer be sustained (Alarcão 1992: 59; Martins 1990: 193–4). In fact it appears as though the Romans induced, or forced, the local peoples to built large cities according to their own patterns, with defensive structures and indigenous

circular houses. There may have been underlying geostrategic reasons: the concentration of the indigenous population in a more 'urban' settlement, where the processes of acculturation would be accelerated; a reduction in the authority of local chieftains, to the benefit of the concentration of power in the hands of the most collaborative ones, as suggested by Calo Lourido (1994); and also a more effective control of the overall population for the responsibilities which were most dear to Roman administration, such as taxation and public duties. But let us consider some fresh archaeological data.

One fairly recent excavation carried out at Mozinho, Penafiel (Carvalho and Queiroga 2006) was intended to establish the nature and chronology of occupation between the upper area, which has been excavated for more than thirty years, and the outer defensive wall, where the cemeteries are located, and so a trench of 150 metres was dug between the two areas. One of our conclusions is that there is a fairly consistent occupation dating to the first phase, the Augustan, within the external defensive wall. This suggests that Mozinho was designed for a given number of people, and effectively filled by them. This could not have taken place without the removal of the inhabitants of other hillforts. In fact, the sudden abandonment of some small hillforts around the turn of the millennium had been previously noticed (Martins 1990: 209; Queiroga 2003: 36; Soeiro *et al.* 1981), and we now have no doubt that the population had moved to the newly built central places, the colonies referred to by Strabo that some writers now tend to call *civitates* (Alarcão 1990; 1992; 2003), due to their role in regional administration. However, all these facts and the assumptions drawn from them raise another question. Urban settlements as large as Mozinho, or any of the others mentioned above, could not be achieved without programmed construction. After all, they were meant for an 'urban life', in the classical sense of the term, and this is probably why they have a kind of acropolis with an open space—sometimes arena-like, as in Mozinho or Santa Luzia—for social events of a nature we do not yet recognize, and also monumental sauna structures such as those from Briteiros, Sanfins (Silva 1986: 53–60) or 'Castro das Eiras' (Queiroga *et al.* forthcoming). In fact, it appears that one of the strategies of acculturation was to develop the 'addiction to the urban life', which was so dear to the Romans. In order to accomplish this urban programme a fairly accurate idea of the size and nature of the population would have been necessary, therefore suggesting that some kind of population census must have taken place, either processed directly by the Roman administration, or 'farmed out' to the local chieftains who were collaborating with Rome.

It appears, therefore, that the Roman administration had a more important role in the development of the internal dynamics of indigenous communities (Pereira Menaut 1982; 1983; 1984) than traditional archaeology has recognized,

and thus it may be suggested that future study of the final phases of the Castro culture should always take into account the influence of Rome.

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Part III

The Celtic Heartlands

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12

From Austria to Arras: The Gold Armlets from Grave 115, Mannersdorf a.d. Leitha, Lower Austria

Ruth and Vincent Megaw, Peter C. Ramsl, and Birgit Bühler

17 July 1980 was indeed an amazing day when the then Federal Minister for Science in Austria, Dr Herta Firnberg, planned to visit the excavation of the La Tène cemetery of Mannersdorf a.d. Leitha. Dr Gertrud Mossler, Head of the Abteilung für Bodendenkmale, Bundesdenkmalamt Wien was waiting—after much preparation—for the chief guest together with Gustav Melzer, excavation assistant, and the two curators of the local museum at Mannersdorf, Friedrich Opferkuh, and Heribert Schutzbier. When the Minister arrived, she and her party were to lead him to the excavations, in particular to one recorded as Grave MD115 (figure 12.1). At that very moment the excavators found the two gold armlets which are the subject of this contribution. Barry Cunliffe, in his long career as a consummate excavator, has not been slow to bring out the drama of a new discovery so we hope that what follows will please him, covering as it does nearly the total

Our first debt is to the late Dr J.-W. Neugebauer who introduced us all to the richness of Lower Austria in the La Tène period and once more to F. Opferkuh and H. Schutzbier for allowing unfettered access to the collections of the Museum Mannersdorf. J.-J. Charpy (Musée municipal, Épernay), Professor Dr. R. Echt (Institut fur Vor- u. Frühgeschichte, Universität Saarbrücken), Dr T. Kemenczei (Magyar Nemzeti Múzeum, Budapest), Professor Dr F. Müller (Bernisches Historisches Museum Bern), Dr P. Sankot (Narodní Muzeum, Prague), Dr M. Schoenfelder (Römisch-Germanisches Zentralmuseum, Mainz) and Dr S. Verger (École des Hautes Études, Paris) also assisted materially at various stages of our enquiry. The analysis of the Mannersdorf material formed part of the FWF-project (P15977-G02) 'The Celtic cemetery of Mannersdorf in the context of eastern and western cultural contact' (Dr Anton Kern, Dr P. C. Ramsl) and of an APART-scholarship (10/2001—Österreichische Akademie der Wissenschaften) 'Migrationsphänomene in der Frühlatènezeit' (Dr P. C. Ramsl). The SEM/EDS analyses were financed by the Austrian Fonds zur Föderung der wissenschaftlichen Forschung as part of the research project 'The Sânnicolau Mare (Nagyszentmiklós) Treasure'.

Fig. 12.1 Dr Herta Firnberg and Dr Gertrud Mossler at Grave 115 in Mannersdorf
Photo: Friedrich Opferkuh

spread of his own overviews of the European Iron Age (Cunliffe 1979; 1997; 2003).

THE MANNERSDORF CEMETERY *(PCR)*

The Iron Age cemetery of Mannersdorf am Leithagebirge, lying in the district of Bruck an der Leitha, Lower Austria, is situated on a gravel ridge by the River Leitha which in prehistory probably virtually enclosed the site. It is positioned at the foot of the Leithagebirge (figure 12.2), the line of hills which mark the border between Lower Austria and the Burgenland. The site lies to the west of the modern village of Mannersdorf. The smooth slopes and the plain beyond were intensively settled in prehistoric and early historical times (Neugebauer 1991: 298–9 and cat. no.18; id. 1994: 56).

The first reference to prehistoric finds from Mannersdorf is in a letter of 1879 from Mathias Kornmüller to the former Director of the Anthropologisch-

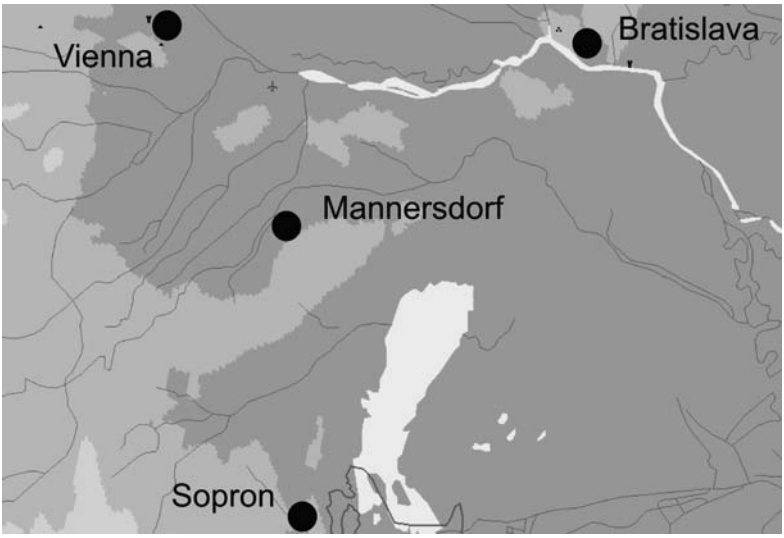


Fig. 12.2 Location of Mannersdorf in Eastern Austria

Ethnographischen Abteilung des Naturhistorischen Museums, Vienna, Ferdinand von Hochstetter. Between 1905 and 1911 more than twenty Iron Age graves were found while digging for sand. Not until 1912 was Alexander von Seracin allowed to carry out an official excavation by order of the k. k. Zentralkommission and the Niederösterreichisches Landesmuseum (Seracin-Zehenthofer 1916).

At Reinthal Süd, between 1976 and 1984, ninety-six inhumation and cremation graves dating from the early to middle La Tène period (together with some graves dating to the early and late Bronze Age) were excavated by the Museum Mannersdorf am Leithagebirge and the Bundesdenkmalamt Wien (for a detailed account of the site see Ramsl in press).

The cemetery itself, oriented northwest–southeast, extends over an area of *c.* 200 by 45 m (figure 12.3). Twenty-three of the graves were surrounded with circular or square ditches—some of them linked together. Grave 115, placed in the middle of the cemetery, was surrounded by a circular enclosure contiguous with another burial to the southeast.

At a depth of 0.32m was an area of limestone boulders measuring 2.8 by 2.1m laid in a SSW to NNE direction. Below this, from 0.45 to 1.15m and measuring 2.2 to 1.7m, several further layers of limestone boulders surrounded the grave.

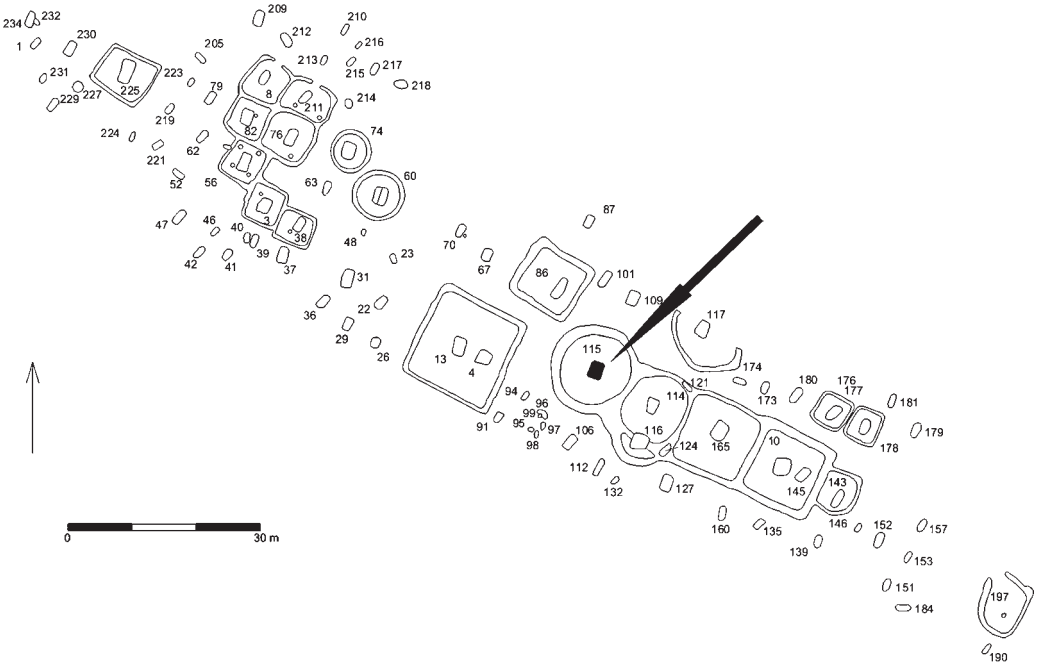


Fig. 12.3 Plan of the La Tène cemetery of Mannersdorf, Flur Reinthal Süd indicating the position of Grave 115

THE FINDS (FIGURE 12.4)

In the area of the skull and shoulders three bronze brooches were found (nos. 9–11); a gold armlet (no. 8) and a silver finger-ring (no. 6) lay at the left hand and a second gold armlet (no. 7) by the right wrist. Two bronze rings (nos. 5a, b) had been placed around the ankles, while in the northeast corner of the grave there was a further bronze brooch with a small chain (no. 4), bird bones (domestic goose—*Anser anser f. domestica*), an iron knife (no. 2) and some unidentifiable iron fragments (no. 1).

The first two brooches (nos. 9 and 10) have a circular foot and somewhat elongated and finely rilled bows. Similar forms are to be found in Grave 4 of the Mannersdorf cemetery. There are further parallels from the famous Duchcov, okr. Teplice hoard (Kruta 1971, pl. 32:1), Melnické Vitelno 1 (Waldhauser and Salač 1977, 48 and obr.3:14 ; Waldhauser, 2001, 332) and—though not so close—Saint-Sulpice, Ct. Vaud, Grave 21 (Kaenel 1990, Pl. 32).

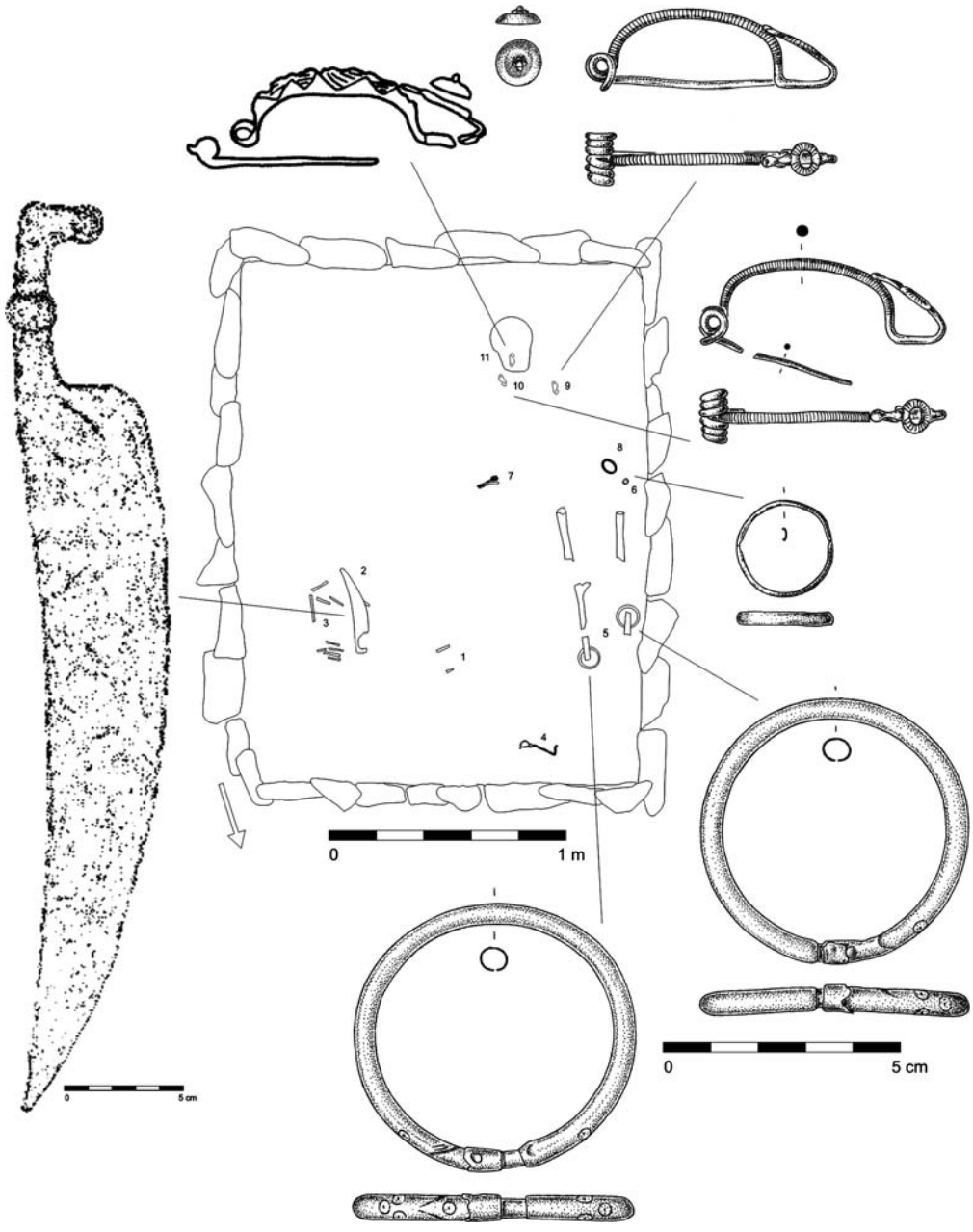


Fig. 12.4 Plan of MD Grave 115 indicating some of the relevant finds
Plan: P. C. Ramsl; artefacts: M. Imam

As to the form of brooch no. 11 from Grave 115 little can be said, as it has been lost. What has remained, however, is the terminal disc filled with red enamel—more properly a vitreous glass paste—and the central bronze rivet formed in the shape of a cross. A good parallel to this type of rivet can be seen on two Swiss brooches, one from Stettlen-Deisswil, Kt. Bern, Grave 31 (Rey 1999, Taf. 8:59) and another from Muttenz-Margelacker, Kt. Basel-land, Grave 2 (Müller 1981, Abb. 15:3). Comparing the profile of the brooches from Mannersdorf 115/11 and Muttenz, Grave 2, not to mention one from Münsingen-Rain, Kt. Bern, Grave 49 (Hodson 1968, Pl. 22:800), one can assume that the brooch from Mannersdorf bore similar ornament (figure 12.5).

The brooch with small chains (no. 4) is unfortunately also lost, while the plain silver finger ring (no. 6) can be described as band-shaped. The pair of hollow-cast anklets (nos. 5a and b) possess in each case a catch mechanism. At each side of the catch there is a simple circular stamp followed by another three stamped circles set in a triangle.

The iron knife (no. 2) found beside the goose bones is a typical *Hiebmesser* with a hook-formed handle with a centrally placed knob. This may be compared with others of the so-called 'Dürrnberg type' as found at the type-site, for example in Grave 45 (Penninger 1972, Taf. 49/2; see also for the typology of the *Hiebmesser* Pauli 1978: 248–58 and Osterhaus 1981); one may also compare it with the knife found at Ménföcsanak, Györ-Moson-Sopron m., Grave 6 (Horvath 1987, Pl. 5:1).

The two gold armlets (nos. 7–8; figures 12.6, 12.16a–d, and 12.24) are described further below.

While the sex of the human skeleton could not be determined with certainty, on the basis of what we know of material indications of gen-

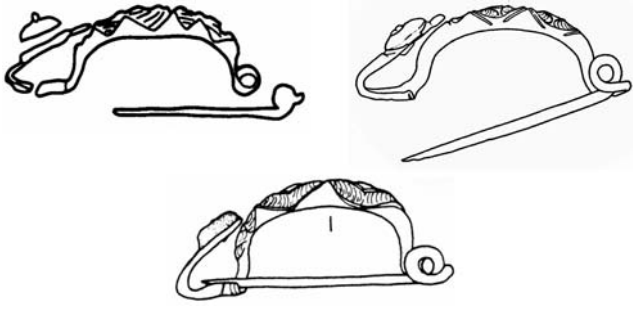


Fig. 12.5 Comparison of the brooches from Mannersdorf 115/11, Münsingen 49/800 (Hodson 1968, pl. 22) and Muttenz-Margleacker (Müller 1981, Abb. 15: 3)

der—in particular the presence of foot-rings—it is safe to assume that we are dealing with a female grave. Equally, due to the poor preservation of bone, estimation of age can only be placed in a broad bracket of nineteen to sixty years. It is remarkable that this grave does not contain the pottery usually associated with similar La Tène burials. In this MD115 can be compared with Pottenbrunn, Grave 1003 in the Traisental (Ramsl 2002b, Taf. 79) and more generally with the '*Akeramischen Horizont reicher Frauengräber*' first postulated by Karel Ludikovský (1964). The burying of a domesticated goose as a food offering is likewise remarkable. Geese occur in La Tène period graves only rarely and thus must be assumed to have been of particular significance. Particularly from later sources, we know that it was considered to be of considerable cultic importance (Ross 1967: esp. 270–3; see also Megaw 1981). Elsewhere in the Mannersdorf cemetery only one other goose offering was noted. This was in Grave 13 in combination with a domesticated pig; this grave is also distinguished by other indications of high status, especially an Italic bronze situla (Neugebauer 1994: 100 and Abb.39:5).

As far as dating goes, Grave MD115 belongs to the group of Mannersdorf burials called '*Gräber mit einem Fussreifpaar*' (Phase II). Some fifteen graves can be assigned to this horizon. As to dating, comparison with MD115 may be made with some nine other graves, MD 3, 4, 10/II, 60/II, 106, 116, 124, 153 and 165. Graves 3, 4 and possibly 60/II which contain various versions of solid cast rings, the rest undecorated rings of hollow sheet bronze. On this basis MD115 may be dated to the end of La Tène B1, more precisely B1c, which in absolute terms is *c.* 350–325 BC.

As has been mentioned above, the Mannersdorf cemetery stands at the western limit of the Leithagebirge and thus at the eastern edge of the Vienna basin. This location represents a geographical roundabout, in that both western and eastern, as well as northern and southern influences are noticeable. Thus western influence is to be seen on a pot from Grave 157, which though eastern in form bears ornament typical of the Marne; western also is the openwork sword-scabbard from Grave 117 (see here also Megaw, Megaw, and Neugebauer 1997). On the other hand, stamp decorated vessels from Graves 127 and 116 reflect eastern patterns.

The ribbed bowl from Grave 114 and the moulding applied pot with appliqué decoration from Grave 112 are Alpine types, while from south of the Alps are the Italic—though not necessarily Etruscan—situla from Grave 13 and the horse brooch from Grave 143, the latter being typical of the Trentino-Alto Adige region. Extensive trade contacts as well as local interrelations with southwest Slovakia and western Hungary can also be observed (Ramsl 2002a).

It may be said that Mannersdorf is a microcosm of the through-way—the '*zentraleuropäischer Korridor*'—that was the Central European *Keltiké* with all its evidence for influences and developments, both temporal and stylistic (Ramsl in press). Comparing the Mannersdorf cemetery, for example, with that from Pottenbrunn in the Traisental (Ramsl 2002a, b), as well as with Andelfingen, Münsingen, or Saint Sulpice (Kaenel 1990), one may observe similar phenomena, though with some regional variations.

The graves from Mannersdorf show a strong local character in their inventory but also strong links with far-distant areas—so strong that one may also have to consider, among other factors, actual individual mobility and consequent settlement from other regions. As in much later times, migration in the Iron Age, whether in smaller or larger groups, was a feature of Lower Austria (Ramsl 2002a; on this general topic see most recently Arnold 2005).

THE GOLD ARMLETS FROM MANNERSDORF, GRAVE 115—TECHNOLOGICAL ASPECTS *(BB)*

Construction of Armlet MD115/7

Each of the two parts of the more complex gold armlet from Mannersdorf consists of four long beaded wires, a piece of 'cable wire' and a large ball or granule (the part with a hook-shaped clasp is referred to here as Part I, the other part as Part II). The centre of the narrow hoop is formed by a long piece of round wire (diameter *c.* 1.0 mm), which has been folded in the middle and the two parts wound around each other (figure 12.7). The cable wire produced in this way is then framed by two beaded wires. The solder joins between the central 'cable wire' and the beaded wires are remarkably fine (figure 12.8). Each of the two decorative elements with figure-of-eight ornament appears to consist of two long, parallel pieces of beaded wire (diameter *c.* 1.2 mm), which have been soldered together in some places, bent into shape and soldered onto the hoop (figure 12.9). Between each of the four figure-of-eight motifs, a single, large granule (diameter *c.* 3 mm) has been soldered in place (figure 12.10 and 12.11). Like the majority of solder joins on this armlet, those between the grains and the beaded wires are fine. This seems to suggest that techniques such as diffusion bonding or reaction soldering were used, rather than hard soldering with gold/silver/copper alloys (for useful summaries of gold working techniques in the La Tène period see Tolosa 2002: 69–76; Hauteneuve 2005: 138–80).

Fig. 12.6 MD115. The two gold armlets (nos.7 and 8)
Drawings: M. Imam

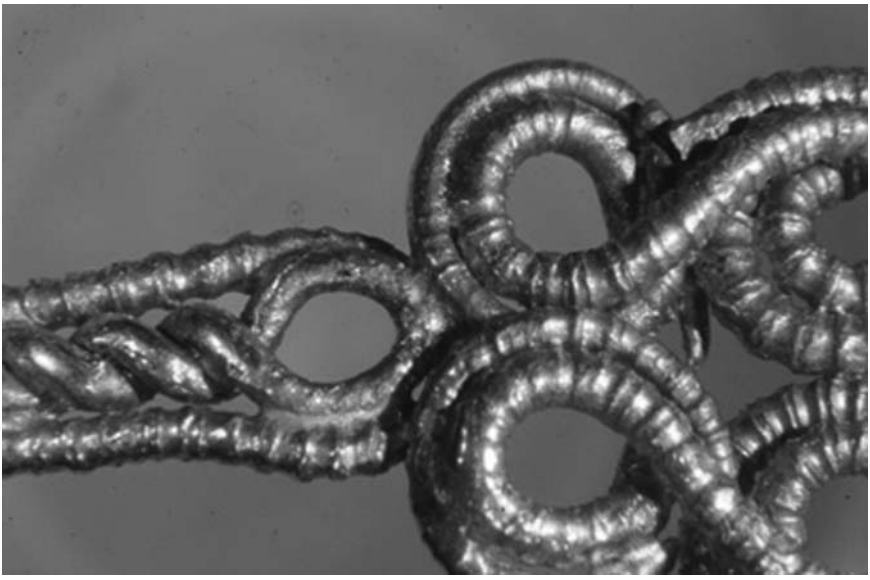


Fig. 12.7 Mannersdorf 115/7. Gold armlet. Part I, detail. Optical Microscope (x 8)

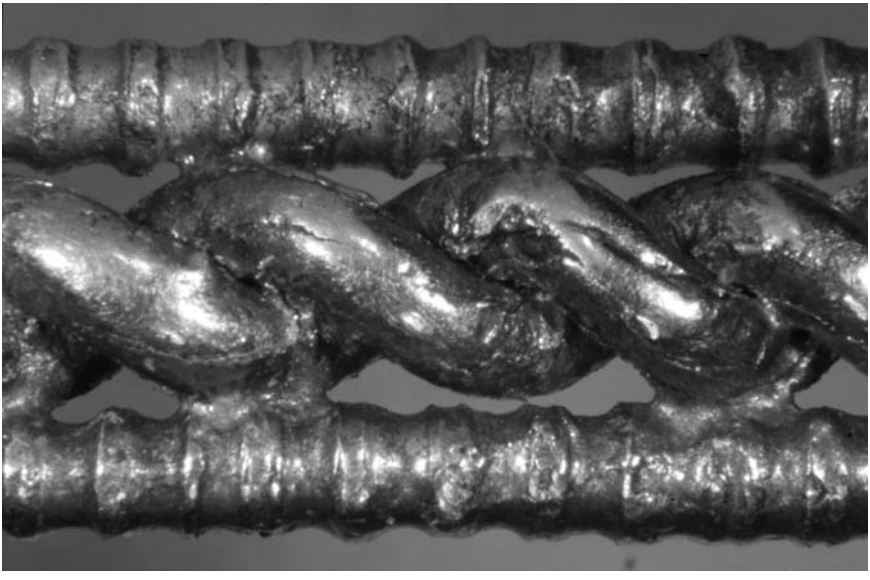


Fig. 12.8 Mannersdorf 115/7. Gold armlet. Part II, detail. Optical Microscope (x 20)

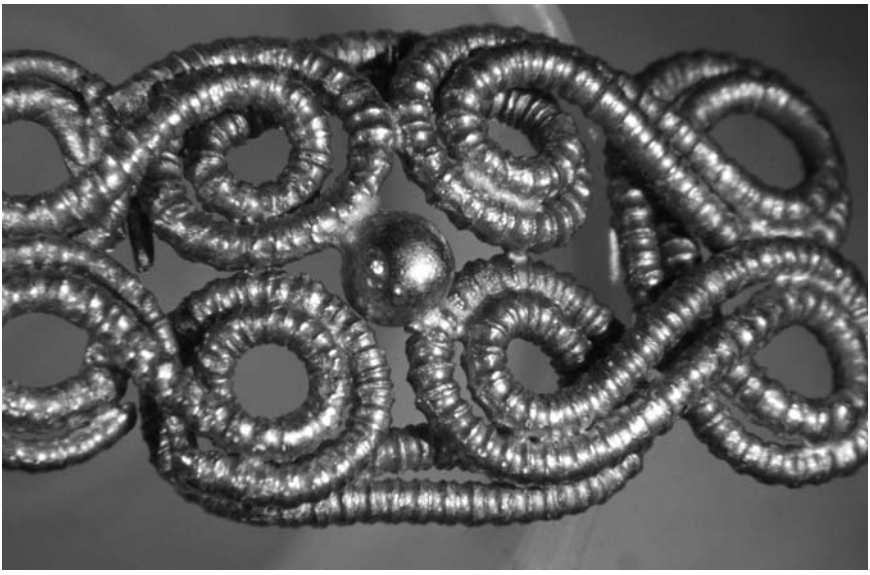


Fig. 12.9 Mannersdorf 115/7. Gold armlet. Part I, detail. Optical Microscope (x 6)

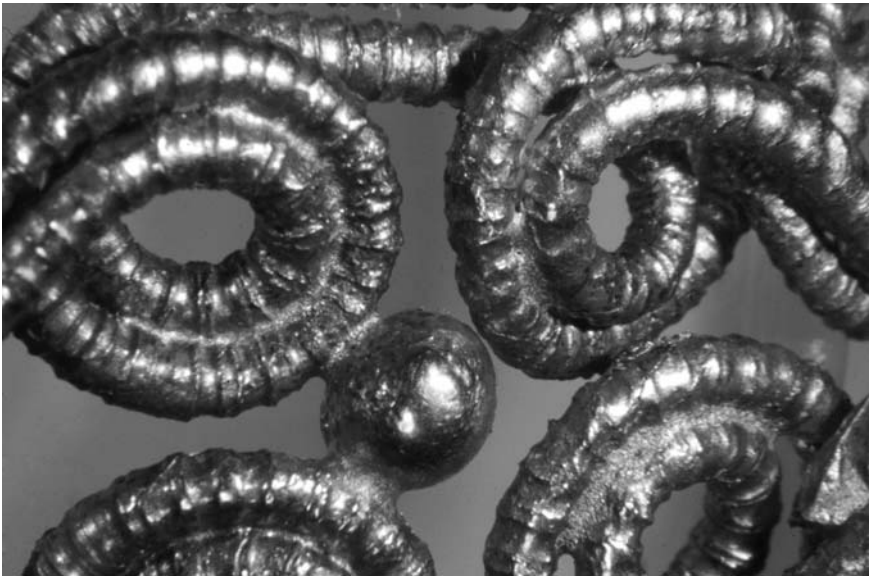


Fig. 12.10 Mannersdorf 115/7. Gold armlet. Part II, detail. Optical Microscope (x 10)

Fig. 12.11 Mannersdorf 115/7. Gold armlet. Part 1, detail. Optical Microscope (x 10)

WIRE PRODUCTION

Beaded Wire

The beaded wires from which the gold armlet 115/7 was made have an average diameter of 1.0 to 1.2 mm and are characterized by remarkably thin biconical beads with an 'equatorial cut' (Whitfield 1998: 63 with further references), whereas the gaps between the individual beads are quite large in comparison (figure 12.12). The presence of an equatorial or median cut around the widest part of the bead suggests that the beaded wire was produced by rolling with a tool with one or more sharp edges: When a blade is rolled over a round wire, a V-shaped groove is formed and metal displaced to form a bulge on both sides of the groove. At the point where two such bulges merge to form a bead, there is a kind of seam—the so-called 'equatorial cut'.

The beaded wires of the armlet are slightly irregular as to shape and size of the beads as well as the size of the gaps (see figure 12.12). However, they are not sufficiently irregular to justify using the term 'notched wire' (which is produced by irregular rolling with a tool with a single cutting edge). In the present case it is not quite clear whether the beaded wires were produced by rolling with a single- or a multi-edged tool.

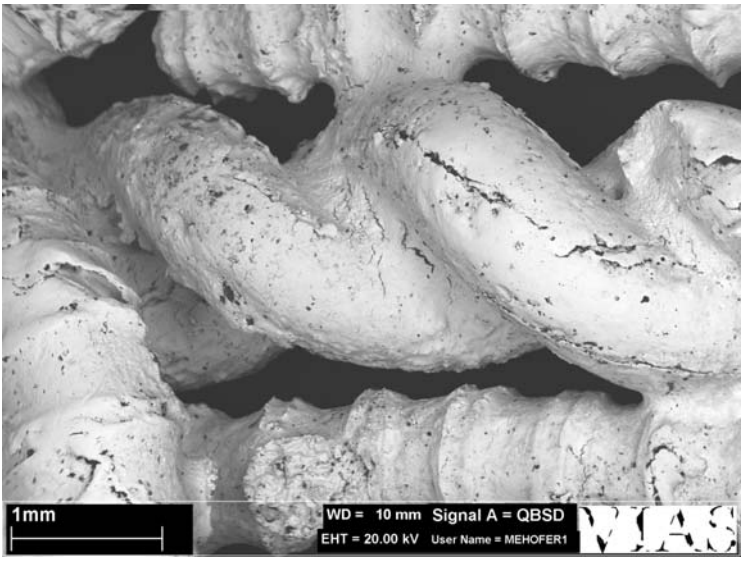


Fig. 12.12 Mannersdorf 115/7. Gold armlet, Part II. EDS SEM
Photo: M. Mehofer, VIAS

The beaded wires on the great gold torc from Vix (Cote d'Or, France; approx. 500 BC) are one of the oldest examples of this type of decorative wire from the Celtic area of settlement. Due to minor corrections which are apparent in some sections, Nicolini (1995: 461–3) has come to the conclusion that this remarkably fine and regular beaded wire having a diameter of only 0.4 mm., and with thin, slightly biconical beads was produced by rolling using a tool with three cutting edges.

With their remarkably fine biconical beads and relatively wide gaps, the gold beaded wires (diameter *c.* 0.6mm) on the mid- to later fourth century BC Agris helmet (Charente, France: Nicolini 1995: 463) are similar to the beaded wires on the Mannersdorf gold armlet, though the latter are larger in diameter (*c.* 1.0–1.2mm); as has been commented above (see p. 189) the Mannersdorf armlet is to be dated to La Tène B1 or *c.* 350–325 BC.

Round Wire

The beaded wires were produced using solid, round-sectioned gold wires, which had been made by 'block-twisting' a strip with a rectangular or square section and subsequently smoothing it, for example by rolling between two

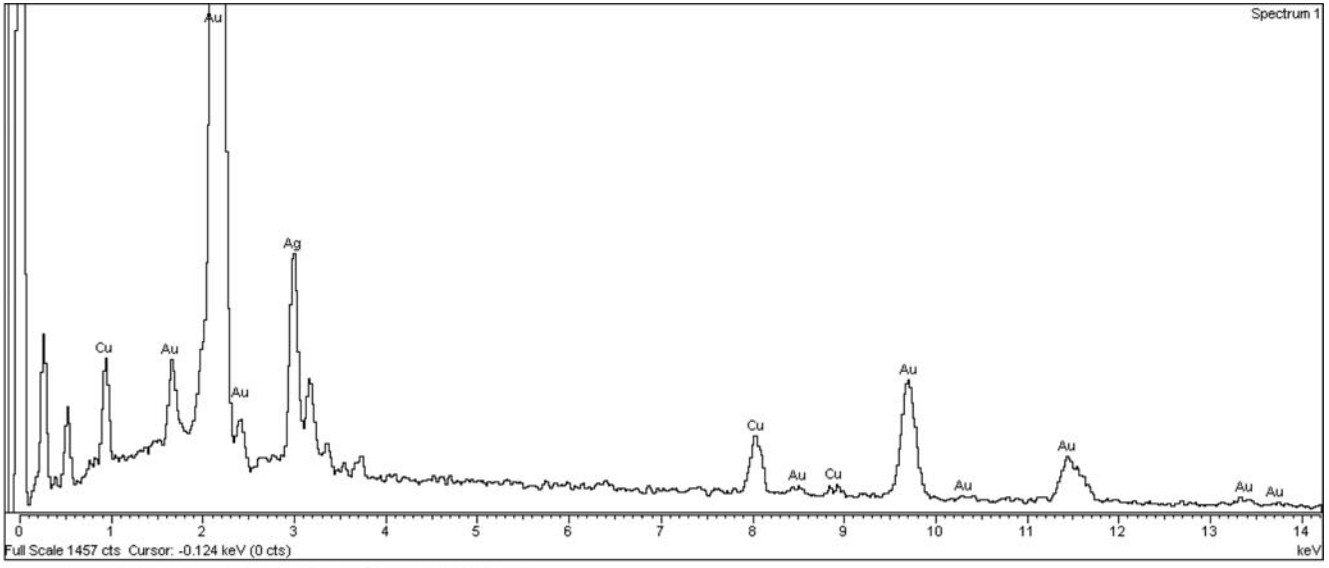
smooth stones (marble) or slats of hard wood (Wolters 1996a: 206; Oddy 1977: 83–6; Ogden 1991: 97–100; Nicolini 1995: 453–7). Up to four spiral seams are visible on the surface of the round wires used to make the different cable wires, which suggests that these round wires were produced by block-twisting a gold strip with square cross-section (Wolters 1996a: 206). Spiral seams—the main characteristic of this technique—can also still be seen on the surface of some of the beaded wires of the hoop of 115/17 as well as on its decorative figure-of-eight elements. In the vicinity of the hook-shaped clasp, the successive characteristics of three different stages in the production process can be clearly discerned: a metal bar with square cross-section; round wire with spiral seams produced by block-twisting; slightly irregular beaded wire.

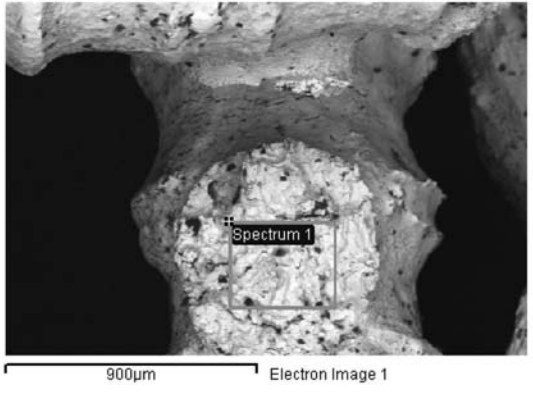
Before the invention of wire-drawing in the early Medieval period, for thousands of years block-twisting and strip-twisting were standard techniques for the production of fine round wires.

BONDING TECHNIQUES

The term 'reaction soldering' (Nestler and Formigli 1993; Wolters 1996b) denotes a historical technique for hard-soldering precious metals where naturally occurring or man-made copper compounds are used instead of metallic solder alloys. These copper compounds were mixed—in powdered form—with an aqueous solution of organic glue, applied to the area to be soldered and heated. The formation of a solder join relies on the chemical reduction of the copper compound, resulting in the formation of true metallic copper. The latter then forms an alloy on the metal surface of the components to be joined.

The only way to distinguish, with any degree of certainty, between reaction soldering and other bonding techniques which characteristically produces extremely fine solder joins, sintering (also known as diffusion bonding or eutectic bonding: Echt and Thiele 1987: 213–22; Carroll 1974: 35–6; Baines 1991: 44–6), is to demonstrate that there is copper enrichment within the solder join. Nevertheless, there are some optical differences between reaction soldered and sintered joins which may be detected on examination in a scanning electron microscope: While the more or less hour-glass-shaped solder joins which are characteristic for reaction soldering usually have a dendritic structure, sintered joins typically have a granular material structure (Echt and Thiele 1987: 213–22). The chemical composition of sintered joins does not differ significantly from that of the basic gold alloy, as neither a solder alloy nor a copper compound is applied to the area in question. On the other hand, one





Spectrum processing :
No peaks omitted

Processing option : All elements analyzed (Normalised)
Number of iterations = 3

Standard :
Cu Cu 1-Jun-1999 12:00 AM
Ag Ag 1-Jun-1999 12:00 AM
Au Au 1-Jun-1999 12:00 AM

Element	App Conc.	Intensity Corrn.	Weight%	Weight% Sigma	Atomic%
Cu K	1.86	1.1459	7.04	0.42	16.83
Ag L	2.74	0.6606	17.97	0.60	25.32
Au M	16.13	0.9328	74.99	0.68	57.86
Totals			100.00		

Fig. 12.13 Mannersdorf 115/7. Gold armlet, Part II. EDS EDS-Spectrum—broken solder join with copper enrichment
Photo: M. Mehofer, VIAS

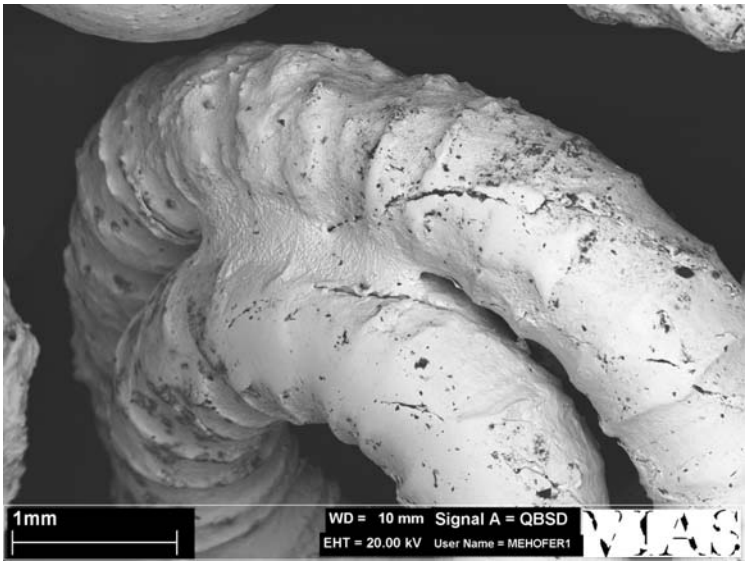
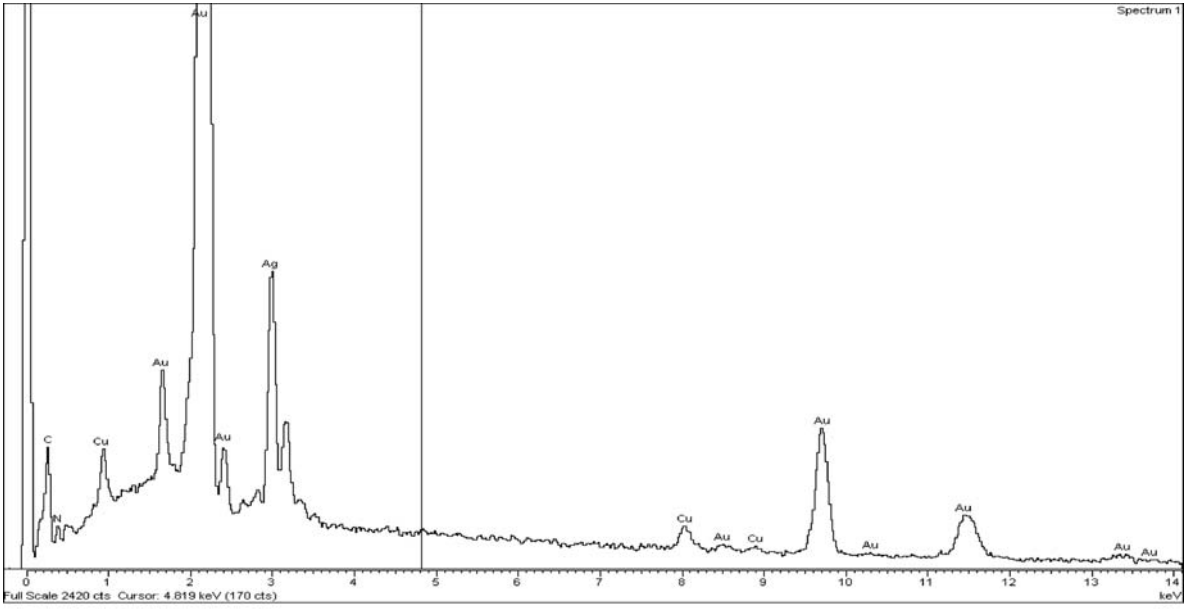


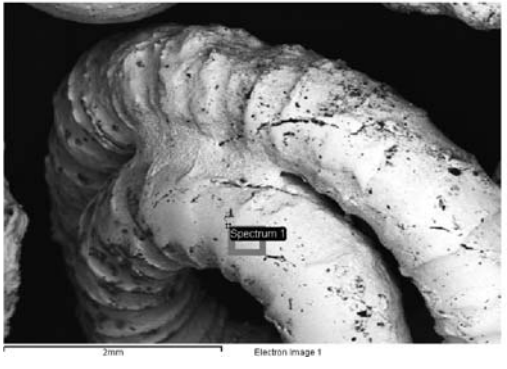
Fig. 12.14 Mannersdorf 115/7. Gold armlet, Part II. EDS Detail, SEM
Photo: M. Mehofer, VIAS

would certainly expect the silver, and in many cases also the copper concentration, to increase significantly in joins hard-soldered with a gold/silver/copper solder alloy. At the same time, such solder joins are usually much coarser and cover a larger surface than either sintered or reaction soldered joins.

Frequently, the copper concentration measured on the surface of a gold object is well below the average copper content of the alloy in question. Possible reasons for this are the so-called surface enrichment of the gold (Echt 1988: 185; Lehrberger 1997: 137–40) as well as a significant decrease of the copper concentration in superficial layers of the alloy due to the intentional removal of copper-oxide-layers (caused by soldering) by pickling in acidic solutions (Brepohl 1962: 348–9; Echt and Thiele 1995: 437). In order to be able to detect copper enrichment in a solder join with any degree of certainty, it would be advantageous to be able to analyse a cross-section of the solder join and adjacent areas. However, this is possible on original artefacts only in exceptional cases (Parrini, Formigli, and Mello 1982: 118–21).

In order to identify the bonding techniques used to manufacture the gold armlet 115/7, non-destructive microanalyses with a scanning electron microscope (SEM with EDS) were carried out at the Vienna Institute of Archaeological Science (VIAS), Universität Wien (in cooperation with M. Mehofer): the SEM used was a Zeiss EVO 60 XVP with an Inca 300 integrated energy-dispersive X-ray spectrometer by Oxford Instruments.





Spectrum processing :
No peaks omitted

Processing option : All elements analyzed (Normalised)
Number of iterations = 3
Standard
Cu Cu 1-Jun-1999 12:00 AM
Ag Ag 1-Jun-1999 12:00 AM
Au Au 1-Jun-1999 12:00 AM

Element	App Conc.	Intensity Corrn.	Weight%	Weight% Sigma	Atomic%
Cu K	0.93	1.1569	2.17	0.25	5.65
Ag L	4.22	0.6507	17.49	0.46	26.83
Au M	28.55	0.9592	80.34	0.50	67.52
Totals			100.00		

Fig. 12.15 Mannersdorf 115/7. Gold armlet, Part II. EDS-Spectrum—surface of beaded wire. Photo: M. Mehofer, VIAS

As was to be expected, on the armlet slight copper enrichment could be detected—for example, on the surface of the solder joins between two beaded wires or between a granule and a beaded wire. While the average copper content of the gold alloy on the surface was approximately 2 per cent, on the surface of the solder joins the copper concentration measured was between 2.5 and 5.0 per cent.

However, the analyses carried out in the vicinity of a fine but broken solder join between two beaded wires of Part II of the armlet were much more informative: This provided us with the unique opportunity to carry out non-destructive chemical analyses within a solder join: an area scan on the surface of the broken solder join gave an average composition of 74.99 per cent gold, 17.97 per cent silver and 7.04 per cent copper. The copper concentration of the solder join had more than tripled as compared to the composition of the basic gold alloy (80.34 per cent gold, 17.49 per cent silver and 2.17 per cent copper) measured on the surface of an adjacent beaded wire, while the silver concentration had remained constant.

According to Echt and Thiele (1995: 437), there is evidence for reaction soldering on gold jewellery from Hallstatt D1, suggesting that craftsmen north of the Alps were already familiar with this technique in the sixth century BC. Tertiary gold solder alloys (gold/silver/copper), seem only to have been used in the Celtic area of settlement from Hallstatt D3 onwards. In the seventh and sixth centuries BC, both reaction soldering and sintering were part of the standard repertoire of techniques employed by Etruscan goldsmiths and seem to have been used particularly for the production of jewellery decorated with fine granulation. It therefore seems likely that in the early sixth century—a period of increased contacts between the Celts and the Mediterranean—reaction soldering was brought north of the Alps by means of technology transfer from Etruria.

CONSTRUCTION OF ARMLET MD 115/8

Technological studies on the gold armlets from Mannersdorf, particularly regarding the production of different types of wires, have focused almost exclusively on MD115/7. This is due to the fact that the surface of the gold wires on MD115/8 is very worn and it is therefore not possible to come to any definite conclusions regarding the production techniques of the gold wires. The latter, however, appear to be somewhat coarser and of larger diameter than those used to produce MD115/7, which is similar in terms of construction but not quite as worn as MD115/8.

Significantly, the solder joins between the different wires on MD115/8 are also very fine. Non-destructive microanalyses with a scanning electron microscope (SEM with EDS), also at Vienna Institute for Archaeological Science (in co-operation with M. Kucera), seem to suggest that reaction soldering was used as a bonding technique also on this armlet consisting of gold wires: The copper content in the solder joins (up to 4 per cent) is three to five times higher than in the basic gold alloy, which contains 0.5–0.8 per cent copper and 4–6 per cent silver (Kucera and Bühler, in press).

LA TÈNE B GOLD IN THE EASTERN LA TÈNE PROVINCE

The two most important sources of gold in what may be termed the 'eastern La Tène province' are located in the Eastern Alpine region and in Bohemia. The primary and secondary gold sources in the Eastern Alps, particularly the Tauern region (present-day Austria, especially the provinces of Carinthia and Salzburg) were particularly famous and their exploitation in the later La Tène and early Roman periods is attested by the historical sources, particularly by Strabo (Book IV/6, 12; see Eluère 1987: 14–20). In Bohemia, sources of alluvial gold were exploited, particularly in the neighbourhood of Písek, along the Rivers Otava, Berounka, and Vltava and there is also archaeological evidence for this from the remains of a wooden drain for La Tène B2–C1 washing of alluvial gold from Modlesovice, along the River Otava near Strakonice (Kudrnác *et al.* 1997: 65–9).

According to Waldhauser (1997: 224–5), there is also evidence for changes in settlement patterns in Bohemia, while there is little evidence of permanent settlement—and an absence of gold finds—in southern Bohemia, where alluvial gold occurs abundantly. On the other hand, in La Tène C–D1, gold objects are much more common throughout Bohemia and the gold content of objects found in Bohemia is higher than during La Tène B. This may imply that the gold sources in southern Bohemia—for reasons unknown—were not exploited in La Tène B1a–B2a, but that exploitation recommenced in La Tène B2b (Waldhauser 1997: 225). If we take this argument a step further, the paucity of gold objects in Central Europe during La Tène B may be related to a gap in exploitation of the sources of alluvial gold in southern Bohemia following much greater activity in the late Hallstatt and earliest La Tène periods (Sankot pers. comm.).

SUMMARY

The more complex gold armlet from Mannersdorf, inv. no. MD115/7, is a piece of jewellery of good if not outstanding quality. The techniques employed in its production (making round wire by block-twisting, producing beaded wire by rolling with a tool with one or more cutting edges or grooves and reaction soldering) had been standard techniques for the production of high-quality gold jewellery in the Mediterranean region for centuries. However, at the time this armlet was made (La Tène B1 or 380–325 BC), they were no longer entirely new in Celtic regions either. Non-destructive microanalyses with a scanning electron microscope (SEM with EDS) have produced evidence for reaction soldered joins on both armlets (MD115/7 and 8).

Signs of wear on the gold surface also show clearly that both armlets were considerably used. However, there is no evidence to suggest that the objects were subject to any changes in shape or purpose.

THE GOLD ARMLETS: A TYPOLOGICAL AND STYLISTIC ANALYSIS (*R & VM*)

As has been indicated, the two gold armlets from Grave 115/7 and 8 (figure 12.6), are of more or less similar size—respectively *c.* 75 and 60 mm in diameter and both with a maximum height of *c.* 10 mm—and both have a similar hook-and-eye fastening. The more ornate no.7, found on the lower right arm, appears also to have been open at the front which raises the question as to how it would have been kept in place on the wearer's arm; the plainer ring, no.8, was on the lower left arm.

While both armlets have been previously briefly described and illustrated (Neugebauer 1994: 56–61 and Abb.21), and a detailed descriptive and technical analysis provided in our previous section, a fuller stylistic discussion may be offered here, commencing with the more complex of the two rings.

MD115/7 (figure 12.16a–d)

The chief features are the two opposing elements comprising four figure-of-eights each with a central sphere or globule of gold. This has few parallels, the closest being two bronze armlets of twisted bronze wire, one from the famous Duchcov, okr. Teplice hoard (Kruta 1971: 68, cat no.469

Fig. 12.16a–d Mannersdorf a.d. Leitha, Grave 115. Gold armlet no.7. Max. diam. c.75mm

Photos: a–c, J. V. S. Megaw; d, A. Schumacher

and pls. 28: 5 and 38: 3) and a second from inhumation Grave 8 of the Hurbanovo-Bacherov majer, okr. Hurbanovo cemetery, one of a number of La Tène B–C cemeteries in southwest Slovakia (Benadík *et al.* 1957, esp.62–4, obr.17: 14 and Tab. 24: 2). The Duchcov ring was made of two twisted strands and although incomplete, seems to have had a hook-and-eye fastening; one section was expanded to form a pair of opposing triple spirals. Grave 8 at Hurbanovo-Bacherov contained the burial of a mature woman, judging from the associated grave goods, of considerable importance. In addition to no fewer than eight pots and a number of other bronze and iron brooches, arm- and foot-rings, the woman's skull showed signs of trepannation. The wire armlet, also made from two twisted strands, had a double ring fastening and a main central feature where the wires had been expanded to make an opposing pair of triple spirals.

Another small armlet from former Czechoslovakia, this time of gold but now unfortunately lost and known only from a late nineteenth-century illustration, comes from an early La Tène cemetery at Praha-Veleslavín, okr.

Fig. 12.17 Praha-Veleslavín, okr. Praha. Gold armlet. Max. diam. *c.* 52mm
Drawing after J. V. Jíra 1895

Praha (Lehrberger *et al.* 1997, Kat. Nr. c822, esp. 221–4, Abb.6.28:2 and Taf.47; Waldhauser 2001: 407–8; for an earlier general overview of gold working in Bohemia see Waldhauser 1991) (figure 12.17). With the rear bent in a flattened S not uncommon in a range of La Tène B–C rings—as for example the gold finger-ring from Nackenheim am Main illustrated by Gustav Behrens (1927, Nr.254)—the front part opens into two opposing but contiguous Ω- or heart-shaped loops which, viewed sideways, are suggestive of the pseudo- or 'Cheshire Cat'-faces of the Waldalgesheim or Vegetal style (Megaw and Megaw 2001: 113–17); the centre of this feature appears to be marked by a ball in the manner of our Mannersdorf armlet MD115/17 but this is not clear from the surviving evidence.

It is, however, absolutely clear on a finger-ring which is yet another candidate for that *Musée imaginaire* which is the all-too-extensive list of antiquities lost, stolen or strayed. Excavated by the Revd E. W. Stillingfleet in 1816 from the so-called 'Queen's Barrow', in the south-eastern Yorkshire barrow cemetery at Arras and probably of third-century BC date, the original account and the engraving published almost a century later (Greenwell 1906, 299 and fig. 51; figure 12.18), allowed the ring to be discussed in detail by the late Martyn Jope (1995). Since Jope's description of the probable construction of the ring appears to have several points of similarity to those just noted for the Mannersdorf armlet, it is worth quoting *in extensio:*

A continuous loop of gold wire of about 0.7mm gauge, some 90mm across, had been squeezed together (and presumably hard-soldered) to make a double strand for about two-thirds of its length. This double strand divides towards each end, the strand thinning slightly to about 0.5mm, and opening into a reversed Ω-loop, the feet of each

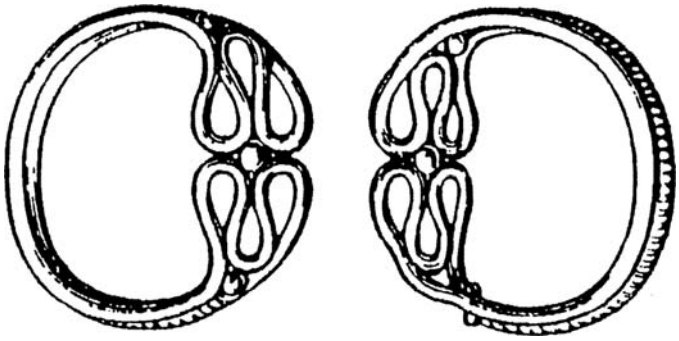


Fig. 12.18 Queen's Barrow, Arra, southeast Yorkshire. Gold ring. Diam. *c.* 21 mm
Drawing after W. Greenwell 1906

loop butted together to close the ring … On each side a gold ball about1.0mm across has been inserted between the two strands as they open apart, and another such ball (about 1.2mm) has been set in the central focal space. The soldered join between the two strands has been covered along its length by a cross-ribbed wire neatly stopped at each end by the gold balls set between the diverging strands.

(Jope 1995: 111).

Jope draws attention to the scarcity of gold in the Arras Culture burials which span the fourth to first centuries BC, peaking in the second century, and which display only sparse evidence for continental influence let alone settlement (Stead 1991: esp. 183–4). Notwithstanding, the Queen's Barrow ring would seem to be a strong candidate for such contacts, however sporadic.

In the light of the remarks made above concerning Etruscan influence on early La Tène fine metal-working particularly with regard to granulation, we can cite another pseudo-face. This can be discerned in the pair of silver finger-rings from Este, Casa di Ricovero, Grave 23 found with a Certosa brooch as well as a silver brooch covered with gold foil, a late version of an early La Tène type dated to the transition between La Tène A and B, Este IV; the grave may be dated to the third century BC (Chieco Biancihi 1987, esp. 204 nd fig.19: 47–8 and 22) (figure 12.19). The rings are formed of spiral twisted and plain wire with the 'nose' formed by a silver droplet.

Two other Continental gold rings exhibit less accomplished use of gold wire. First from Grave 13 of the cemetery at St-Memmie, 'Le Chemin des Dat' (Marne) is a ring made of three twisted square-sectioned wires with the addition of small gold droplets or granules (Charpy and Chossenot 1989, esp.26 and pls.8–9, 23:2) (figure 12.20). Associated with three 'Duchcov' brooches, a pair of armrings, a single-edged knife, two other finger-rings—one of bronze and the other of silver—the grave in all likelihood was in fact

Fig. 12.19 Este, Casa di Ricovero, Grave 23. One of a pair of silver finger-rings. Diam. 25mm
Photo: Soprintendenza Archeologica del Veneto, Padua

Fig. 12.20 St-Memmie, 'Le Chemin des Dat' (Marne), Grave 13. Gold finger-ring. Diam. 18 mm
Photo: Christian Bedoy

the site of two burials, the older of which was associated with the brooches and the other metal objects; Charpy assigns this material to 'La Tène ancienne IIb' of the Hatt-Roualet scheme or La Tène A2/B1. The St-Memmie ring is something of a rarity; as Stéphane Verger has commented in his important thesis on chariot burials in graves in Champagne (Verger 1994: esp. 453–4) gold rings are rare and not just in these otherwise high-status contexts; where

Fig. 12.21 Hurbanovo-Bacherov majer, okr. Hurbanovo, Grave 10. Bronze finger-ring. Max. diam. 23 mm
Photo: Archeologicky ústav SAV, Nitra

gold rings do occur, they are of simple manufacture and found in isolation in contrast to the situation in the Middle Rhine and Central Europe.

A similar attempt to produce another finger-ring with, in the place of a bezel, a motif of opposing *Ω* forms comes from another burial in the Hurbanovo-Bacherov cemetery. Grave 10 contained the disturbed skeleton of a mature woman and was associated with a number of brooches as well as a simple buffer-ended torc, all indicative of a date late in La Tène B. There were also two plain silver finger-rings on the left hand and two others of bronze on the right hand, one of which was made of three strands of twisted wire which, though distorted, was clearly of the same basic form as the Marnian example just described (Benadík et al.1957, 65–66, obr.17:2 and Tab.23:17) (figure 12.21).

This is not the place to offer an excursus in detail on gold finger-rings in early La Tène; over the past forty years there have been a number of studies of varying degrees of helpfulness (e.g. Megaw 1966; von Dolsperg 1986; Waldhauser 1998; Echt 1999: 58–60; Shoenfelder 2003), but there are three more gold rings to consider before turning to offer some comments on the second gold armlet from Mannersdorf. Firstly, Echt, in his wide-ranging monograph on the princess's grave of Reinheim, Saar-Pfalz-Kreis, comments briefly on the similarity of construction between the Mannersdorf armlets and the gold finger-ring from Reinheim especially in regard to the technique whereby the latter is constructed of two rows of undulating meanders formed of twisted wire fused between three plain rings (Echt 1999, 59 and Taf.3:1); once again a

Fig. 12.22 Veringenstadt, Kr. Sigmaringen. Gold finger-ring (now lost). Diam. 25 mm. Nineteenth-century watercolour from inventory book. Römisch-Germanisches Zentralmuseum, Mainz

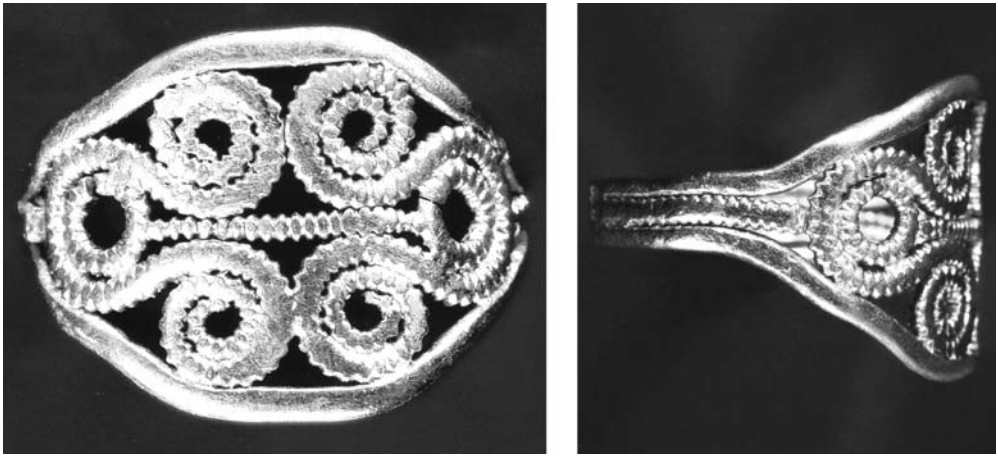


Fig. 12.23a–b Glauberg bei Glauburg-Glauberg, Wetteraukreis, Barrow 1, Grave 2. Two views of gold finger-ring. Max. diam. 22 mm

Photos: U.Saitz-Gray

Mediterranean source for the technique is suggested. Basically the same technique has been used in the manufacture of two La Tène A finger-rings recently studied by Schönfelder (2003); these are of very similar appearance but from two geographically separated regions. One—now lost—comes from Veringenstadt, Kr. Sigmaringen in Baden-Württemberg (figure 12.22) and one from the second 'warrior's grave' at Glauberg bei Glauburg-Glauberg, Wetteraukreis, Barrow 1, Grave 2 (Baitinger and Pinsker 2002, Kat. Nr.1.6) (figure 12.23a–b). Both rings exhibit the use of twisted wires forming opposed elements set between an outer frame of plain wire which we have already observed in several other pieces including armlet MD115/7.

MD115/8 (Figure 12.24a–b)

The second gold armlet from Mannersdorf is altogether simpler though, as noted, it has been manufactured employing the same range of techniques. The undulating elements between the outer wire are more irregular, consisting not of tight undulating—and continuous—meander but rather supine S's; the armlet is fastened with a simple hook-and-eye. The closest parallel, particularly with regard to the fastening mechanism, is the La Tène A finger-ring

Fig. 12.24 Mannersdorf a.d. Leitha, Grave 115. Gold armlet no.8
Photo: J. V. S. Megaw

from Münsingen-Rain, Kt. Bern, Grave 12, which contained the body of a young girl accompanied by no fewer than three necklets—one comprising 142 amber beads—brooches, a pair of armlets and a pair of anklets, both of bronze, as well as a number of other trinkets (Furger and Müller 1991, cat. no.50a; Waldhauser 1998, Fundkatalog Nr.1 and Abb1:1—where it must be said that the drawing does not do justice to the original) (figure 12.25). Here the continuous meander pattern is perfectly formed.

Armlets of meander form—most frequently of bronze—are a particular feature of the La Tène B 'Münsingen-Duchcov' horizon and have been the subject of a recent detailed typological study (Delnef 2003), being particularly well represented in the Marne, the flat grave cemeteries of Switzerland and the Czech Republic, as well as being represented in Mannersdorf, Grave 114 (Neugebauer 1994) and Pottenbrun, Grave 54 (Megaw, Megaw, and Neugebauer 1997: 719–23 and fig. 4:8). As a regional variation, in the Alpine region, concentrated in the Ticino, but extending into the Valais, a number of armlets and finger-rings, of silver not gold and of local production, are also of basically meander or Ω form (Wyss 1974: esp.114–17 and 9:17; Furger and Muller 1991, cat. no.99; Bergonzi 1995; Piana Agostinetti 2000: 121–2 and fig.6; Pernet *et al.* 2006: 120 and fig. 4:13).

Fig. 12.25 Münsingen-Rain, Kt. Bern, Grave no.12. Gold finger-ring. Diam. 12 mm
Photo: Bernisches Historisches Museum, Bern

Delnef's final paragraph states that:

> La répartition des armlets méanderformes, tant chronologique que spatiale, semble donc être le fruit de nombreux échanges commercaux et culturels entre les différentes foyer laténiens, notammernt entre la Bohême-Moravie, la Champagne et la Suisse.
>
> (Delnef 2003, 286)

And this is a view which might well be applied to the other material we have studied here.

CONCLUSIONS

The two La Tène B gold armlets from Mannersdorf may seem rarities indeed, not least in the light of the general paucity—with the exception of finger-rings—north of the Alps of other gold objects in this period, particularly in Central Europe from Bohemia to Transdanubia (Waldhauser 1998). Suffice it to cite the evidence of the cemetery of Kosd, Pest where the only gold objects recovered from some 75 graves were two finger-rings and

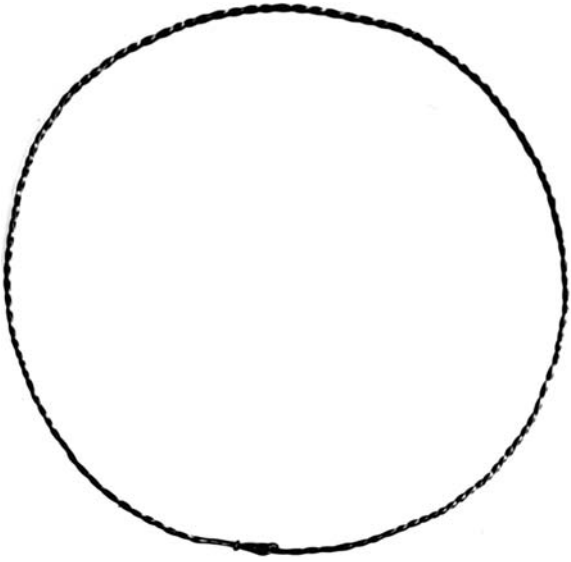


Fig. 12.26 Kosd, Pest m. Gold neck-ring from unidentified grave. Max. diam. 135 mm

Drawing: Magyar Nemzeti Múzeum, Budapest

a neck-ring formed of a single strand of twisted square-sectioned wire once more fastened with a simple hook-and-eye (Kovács and Raczky 1999, 109 and Kat.74) (figure 12.26). In addition, the wear on both the Mannersdorf armlets indicates that they must have been much prized by their owner—or owners. It seems that gold ornaments—and particularly finger-rings—were the prerogative of high-status women though there are exceptions, for example, the finger-ring from Glauberg (figure 12.23a–b). We will not repeat the remarks noted above on the general nature of gold-work during La Tène B. Schönfelder (2003) in his study of the very similar finger-rings from the Glauberg and Baden-Württemberg, and who also draws attention to the rings from St-Memmie and the Queen's Barrow, is certainly right in expressing caution—for example in regarding the two finger-rings from the Glauberg and Veringenstadt as products of an identical workshop. On the other hand, there seems little reason to consider the Mannersdorf rings as having been made at any great distance from their last resting place. Whatever else, they and the other pieces briefly reviewed here underline the way in which, during the earlier La Tène phase, not only motifs but sophisticated metallurgical techniques spread over a considerable area of Europe, indeed linking Arras to Austria.

ADDENDUM

While this paper was in the press, we became aware of another north-eastern French find which is of particular interest to the material we have been discussing. This is a gold finger-ring from grave 196, one of four chariot burials, all female, from a cemetery of some 230 graves at Bucy-le-Long, 'La Héronnière' (Aisne). The ring with a diameter of 16 mm is basically of the opposing Ω form in the manner of Arras and MD115/7 with the addition of three flattened gold balls flanking a central ball. The undulating wire of which the ring is basically constructed appears to be of square cross-section and shows some degree of wear; it has also been scored cross-wise as if to imitate twisted wire.

The ring from grave 196 is dated to La Tène B1, a late phase of the cemetery's use which commences in La Tène A1, and thus fits closely with the chronology advanced above for the Mannersdorf gold. Though the final report has been completed for several years, as yet Bucy-le-Long remains largely unpublished. A colour photograph of the ring and a brief account of the site may be found in Desenne and Oibard 2004. We are grateful to Sophie Desenne and Jean-Paul Demoule (INRAP) for this information in advance of the long-awaited publication of this major site.

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13

Bourges in the Earlier Iron Age: An Interim View

Ian Ralston

Berry in central France figures frequently in assessments of the level of complexity in western temperate Europe at the annexation of *Gallia comata* in 52 BC. Information from a number of sites, particularly Levroux (Indre: e.g. Büchsenschütz *et al.* 1988; 1992; 2000; Krausz 1993), contributes to what is now a tolerably well-understood pattern, contrasting markedly with the poorly known settlement record for the earlier Iron Age of the area. One site forms a conspicuous exception. For the end of the Hallstatt Iron Age and the initial phase of its successor—broadly the decades either side of 500 BC—Bourges (Cher) is now known to be of critical importance, not only in regional terms, but also as a variant of the elite phenomenon known as the *Fürstensitze* that occurs widely across west-central temperate Europe. It will come as no surprise that the first English-language author to recognize the emerging importance of this site was Barry Cunliffe in *The Ancient Celts*, and it is thus with pleasure that this interim statement on Bourges and its immediate hinterland at the time of the transition from the Hallstatt to La Tène Iron Age has been prepared.

Since 1995, with Jacques Troadec, the municipal archaeologist, Olivier Büchsenschütz, Pierre-Yves Milcent and others, the author has been excavating within and on the periphery of Bourges—by the first century BC certainly *Avaricum* of the Bituriges—as part of a long-term rescue project on that site and its surroundings. A few, selected aspects of this are considered below. The

Inevitably, much of this brief account is founded on work by, and discussions with, colleagues at Bourges and in Paris, principally but not exclusively Laurence Augier, Olivier Büchsenschütz, Jean Gran-Aymerich, Alexis Luberne, Pierre-Yves Milcent, and Jacques Troadec. They are thanked for their wise counsel, but blameless for the uses to which I have put it. Much of this account draws on the copious 'grey literature' on the site, the annual project-based *documents finals de synthèse*. All are accessible in Bourges, or at the Service Régional de l'Archéologie, Orléans. Underpinning all this is the work of a large band of students primarily from Paris, Edinburgh, Toulouse, and Tours.

pace of development, and evolving legislative arrangements for rescue archaeology, mean that other important sites in the commune have been examined by Alexis Luberne and colleagues in the State Archaeological Rescue Service, INRAP, and reference to some of their work is included below. The rate of change in and around the city, particularly as military establishments—many initially set up at the time of the 1870 Franco-Prussian war—are redeveloped for light industry, and new housing, transport and other infrastructure is constructed, provides much scope for new discoveries; what follows is thus by necessity provisional. To date, for example, less than one-fifth of a 30 ha site at Port Sec Sud, our current field project, has been stripped and examined.

THE WIDER SETTING

The territory within the early diocese of Bourges, ascribed to the Bituriges Cubi in the first century BC, consists substantially of the *départéments* of Cher and Indre, totalling some 15,000km^2. As with other Iron Age *civitates*, its reconstituted boundaries are subject to a measure of uncertainty in detail, considered recently by Ferdière and Villard (1993). It is often suggested that the Bituriges were established here centuries earlier, although for that period territorial holdings are unknown.

There are two key episodes, attested in the Classical literature, when the Bituriges are of particular significance; the second forms the events leading up to the siege of 52 BC. The first concerns the Biturigan diaspora, recounted by Livy (*Early History of Rome* v), in which two nephews of a king, Ambigatus, were despatched to invade and settle central Europe and Italy, at a date that appears from internal evidence to be around 600 BC. At this time, there is little evidence for settlement at Bourges itself, although indication of the area's importance, both earlier (e.g. Hallstatt C sword distributions: Milcent 2004: fig. 64) and, as we shall see, later, are apparent. Christopher Pare noted that several tribes recorded by Livy as having participated in the La Tène A invasions of Italy were located four centuries later in east and central France, and proposed that 'it is likely that the general area inhabited by the tribes described by Caesar... corresponds approximately with the homeland of many of the tribes which invaded Italy' (Pare 1991: 198). His map (ibid.: fig. 10) demonstrates that the Bituriges, if already located in Berry, lay on the northwestern limit of the groups mentioned. This 'semiperipheral' location is borne out by some artefact distributions, which show that types favoured further east often attain, but do not extend westward of Berry in this broad period (e.g. Chaume 2001: figs 94, 111).

The significance of Bourges in this context is as a site where southern imports (Gran-Aymerich 1995a, b; 1997) become important towards the end of Hallstatt D, but which—unlike some *Fürstensitze* (Gran-Aymerich and Almagro 1991; Gran-Aymerich 1992)—does not cease as a settlement focus at, or before, that period's end. Evidence for continuing use of Bourges through much (although not all) of the pre-Roman Iron Age can be rehearsed, but settlement sequences of equivalent longevity are otherwise absent in the region. The long-term use of the site, and its major development in Roman and subsequent periods, are not however our primary concern here, although recurrent occupation has had a substantial bearing on the survival, and on the accessibility, of remains attributable to the earliest occupation horizons.

The importance of Bourges owes much to geography (figure 13.1). Lying near the southern margin of the Paris Basin, its immediate hinterland comprises the *Champagne berrichonne*, a gently undulating limestone plateau, averaging *c.* 150m in altitude. On its eastern margin, hillier uplands border the Loire, here flowing northward before turning west in a wide curve towards the Atlantic. The free-draining plateau, capped by fine silts, was used to rear sheep and goats until last century, with settlement being located preferentially at confluences (as is Bourges) and along the river valleys. By the first century BC, according to Caesar (*de Bello gallico*, VII), this was considered the most fertile land within the *civitas*.

This area near the Middle Loire is traversed by river valleys that offer important communication routes. The Cher, for instance, rising on the north-eastern margin of the Massif Central, provides a short cut from the Loire, with overland porterage of some 30km, from its confluence with the Allier, to Tours, where it rejoins the major river. Alternatively, the Cher's affluent, the Yèvre, could have served as the link. Either would economize significantly on the distance travelled if the Loire valley itself was employed. The east–west route across eastern Berry making use of the Yèvre—passing Bourges—is advocated as a through-route at several periods during prehistory (Ferdière 1975).

The Iron Age record of Berry has been well-studied since the 1960s, capitalizing on remarkably thorough nineteenth century research undertaken by important local scholars, significantly Alphonse Buhot de Kersers, at a time when agricultural improvement and industrialization spurred new finds. Much of the First Iron Age material then known, primarily from burials, was incorporated in Freidin's synthesis (1982), while the late Martine Wuillaume (1985) used the important collections in the Musée du Berry as the basis for her study. From the early 1970s, however, new fieldwork has focused first and foremost on the middle and late La Tène settlement records. Since that time, although aerial photography over parts of Berry has been productive, no definite new hillforts have been added to the corpuses (Provost

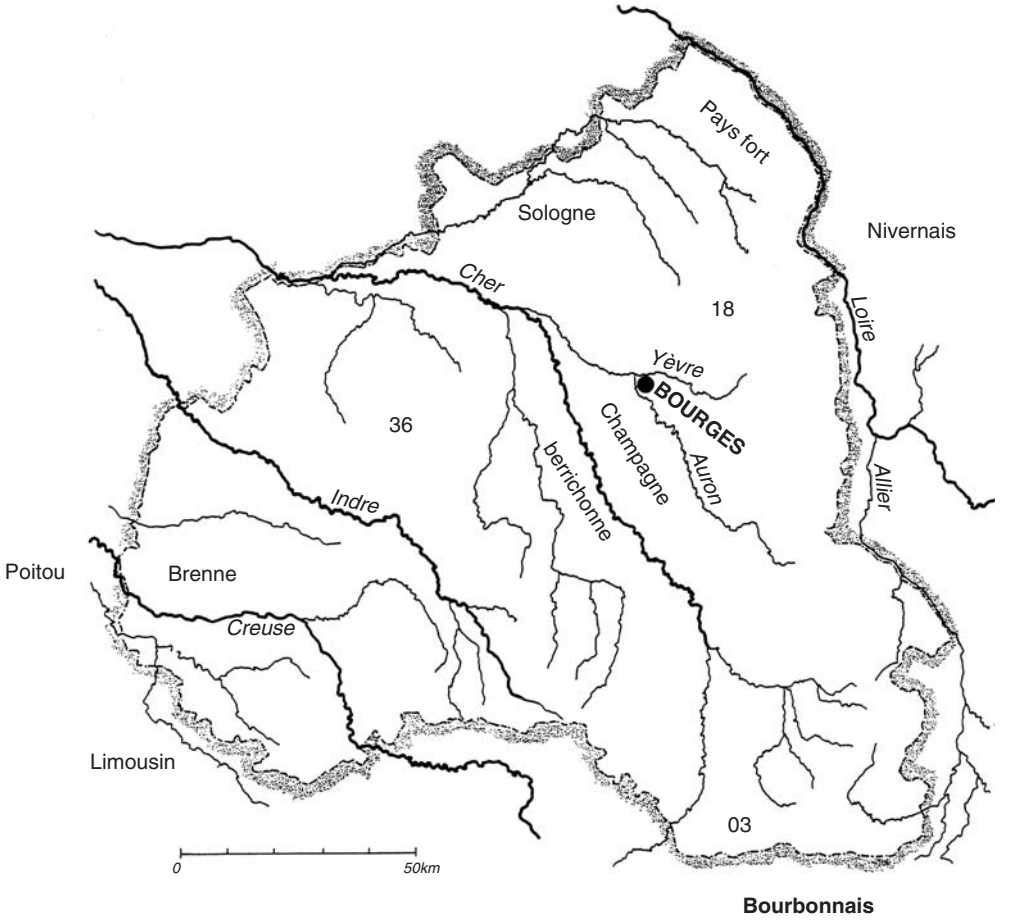

Fig. 13.1 Map of Berry, showing the site of Bourges and the boundaries of the first century BC *civitas*

et al. 1992a, b). One possible site dominates the confluence of the River Indre and a tributary at the Pied de Bourges, Clion, Indre (Provost *et al.* 1992b: 122 and fig. 64), but field evidence is less than wholly convincing. Enclosed sites remain much less frequent than further north in the Paris Basin, where ditched 'fermes indigènes' are now known in their hundreds as cropmarks and, increasingly, from excavation.

Excluding research and rescue excavations on later La Tène settlements, important work on settlement archaeology has been tied to major infrastructure projects, notably motorway construction: the A20 across Indre, and the A71 across

Cher, have been examined by the Direction des Antiquités historiques du Centre (e.g. Ferdière and Rialland 1994; 1995; Massat 1995). The most recent general overviews of Iron Age field evidence are the individual reports in the *Carte Archéologique de la Gaule* (Provost *et al.* 1992a, b) and the Berry atlas project (Batardy *et al.* 2001), which confirms that evidence for unenclosed settlement remains rare, and geographically restricted (Menu and Büchsenschütz 2001: 58–9 and map 60). First Iron Age material culture has been comprehensively re-assessed by Pierre-Yves Milcent as part of a wider synthesis (2004).

Excluding Bourges and its periphery, archaeological evidence for Iron Age settlement continues to be dominated by major hillforts, although these are often not set in prominent positions. This is essentially a function of the landscapes of Berry. Several are marked by the substantial flat-bottomed ditch and massive bank characteristic of Wheeler's Fécamp series, with ditch profiles conforming to the underlying bedded limestones. In general, these sites rarely exceed 20 ha, with *Argentomagus*, a promontory of some 27 ha at St Marcel, being the largest. Most are attributable to the end of the Iron Age (Ralston and Büchsenschütz 1975). The small (4 ha) promontory fort at La Groutte (Cher), was refortified in the late La Tène, but—unusually in this area—has evidence of late Bronze Age and Hallstatt fortification. Contrastingly, at Moulins-sur-Céphons in Indre, a substantial coin hoard (Nash 1978: 308 no. 25) was placed in a low-lying contour fort; but its *Kastenbau*-style defence is attributable to the third millennium BC (Duval and Büchsenschütz 1979). Enclosed Iron Age settlement definitely earlier than the second century BC remains rare.

Many of the sites included by Julius Caesar among the *amplius XX urbes* (*BG* VII, 15) of the Bituriges were thus of relatively humble scale. The writer proposed (1988) that the spatial pattern of these sites, and their fit to rank-size criteria, indicate a relatively complex proto-urban tissue, compared with some neighbouring *civitates* (e.g. Ralston 1992). Such a pattern has been noted to correlate with longer-established urban systems, making it tempting to juxtapose this observation with the view that the Bituriges had occupied this area for a considerable time. These sites are however generally new installations in the second century BC or immediately thereafter. Bourges, although not necessarily substantially bigger than these sites in late La Tène, is exceptional in regard to the character of the use of the locality in the fifth century BC.

BOURGES

At Bourges itself (Milliard and Delabesse 1988; Troadec 1996a, b; Almagro *et al.* 1990), rescue excavations mounted during the 1980s and early 1990s

revolutionized knowledge of its early settlement history. The present day town, focused on the cathedral of Saint Etienne, occupies the apex of a long, gentle-sided promontory bordered by the Auron valley on its western side; to the north, the marshy environs of the river Yèvre, now transformed into gardens, restrict access to the heart of the modern city. Their confluence occurs immediately northwest of the city centre. Although land use changes mean that flows are now much reduced, the Auron was certainly navigable as far upstream as the city in early modern times, as contemporary illustrations (e.g. Braun and Hogenberg 1575) show. Alain Ferdière (1977) examined Roman port facilities on the Auron near the La Vernusse villa, immediately south of the present conurbation. The Yèvre's use as a through-route from the Loire has been mentioned, so that the location may have served as a transhipment centre. To the immediate north of Bourges are found the most extensive iron ore resources in Berry in the Forêt d'Allogny (Dieudonné-Glad 1992), an asset for which the Bituriges were later celebrated. Access to the promontory itself is easiest from the southeast, and subsequent defences, late Roman and medieval, were at their most substantial here (Troadec 1996a). Caesar's investing works during the siege of 52 BC are most likely to have been here too.

Since the third quarter of the nineteenth century, when industrialization and military redeployment led to the rapid expansion of Bourges, finds from the commune have hinted at the major importance of the site, particularly around the middle of the last millennium BC (accessibly presented in Freidin 1982; Willaume 1985; Brun 1997; and now Milcent 2004). Where these have contexts, either burials, or 'special deposits' within the marshy lowlands, are normally indicated, although some less-well-known finds may indicate domestic occupation within the 'Etablissements militaires' sector; the unpublished archives of local scholar Jules Dumoutet (Bailly 1975: 349; Milcent, pers comm.: see below) remain to be exploited. As early as the mid-1970s, Daphne Nash (1976) percipiently suggested Bourges as a likely focus for long-term Iron Age settlement, although at that time secure evidence of settlement *per se* was substantially lacking.

Assimilation of old and new finds now strongly suggests lengthy, although not yet continuous, Iron Age use of the site. The sequence derives from excavations by the Service Archéologique Municipal, AFAN (now INRAP), and ourselves, as well as reconsiderations of the early finds from Bourges and its vicinity by Pierre Bailly (1987; 1993; 1995), and by Milcent (2004); study of the more recently discovered imports by Jean Gran-Aymerich and Martin Almagro Gorbea (1992; Gran-Aymerich *et al.* 1990; 1993; 1995a, b; 1997); and the development of a local pottery sequence, initially by Almagro's colleagues, and its considerable refinement by Laurence Augier. Diverse indications point

to a 'high water mark' attained early in the fifth century BC, and it is that horizon that is considered here. Only a brief and selective overview is possible, but full publication of a key site, Saint Martin des Champs, under the auspices of the Service Archéologique Municipal, is anticipated shortly. A number of summaries of the emerging evidence complement this account (e.g. Gran-Aymerich 1992; Troadec 1996a, b).

In rescue excavations since 1980, significant First Iron Age deposits have been identified at a number of locations in the heart of the present-day town (figure 13.2). These span the later sixth to perhaps the early fourth centuries BC, although the total area examined before 2000 was diminutive. Sites providing significant material are dispersed topographically, and all were salvaged prior to urban redevelopment. They include the north of the promontory (CES Littré, and rue de la Nation sites: Ruffier 1990) and its western slopes (the Enclos des Jacobins shopping centre: residual material from an excavation that did not attain protohistoric levels). Finds from this phase of rescue work are however not restricted to the promontory and around the Cathedral, and thus within the Roman and medieval defences (and, inferentially, the earlier Iron Age circuit too). Further significant discoveries were made outside the line of a massive late Iron Age ditch, itself identified in a major excavation conducted by Troadec's team before the construction of the new Hotel de Ville. This findspot, Saint Martin des Champs (Ruffier and Troadec 1985), lay on the south-eastern margin of the easiest approach to the promontory, and nearly 1.5km as the crow flies from the settlement sites at the apex of the promontory. The key structural evidence here consisted of rectilinear semi-sunken workshops, some disrupted by the insertion of medieval burials, interspersed with post-holes and a few storage pits. Since that time, further examples of workshops have been located to the south of the late Iron Age ditch line, in the grounds of the former military hospital (Hôpital Baudens).

The Littré site produced a portion of a wealthy, very probably aristocratic, dwelling. This had been rebuilt three times between the later sixth and the second quarter of the succeeding century; the remains were fortuitously protected by major Roman masonry foundations. From successive builds of Littré, southern imports including Attic Black- (*étape* 1) and Red-Figure (*étape* 3) sherds were recovered, as well as evidence for painted wall-plaster and more game meat than normal, but the scale of the excavation was severely restricted. Use of the site perhaps starts early in the last quarter of the sixth century BC. The evidence from Saint Martin des Champs is chronologically the latest of this set: here artisans made jewellery in copper alloy and lignite, crafted bone and horn, as well as being engaged in textile production (spinning, sewing and weaving) and in working both iron and copper alloys. They

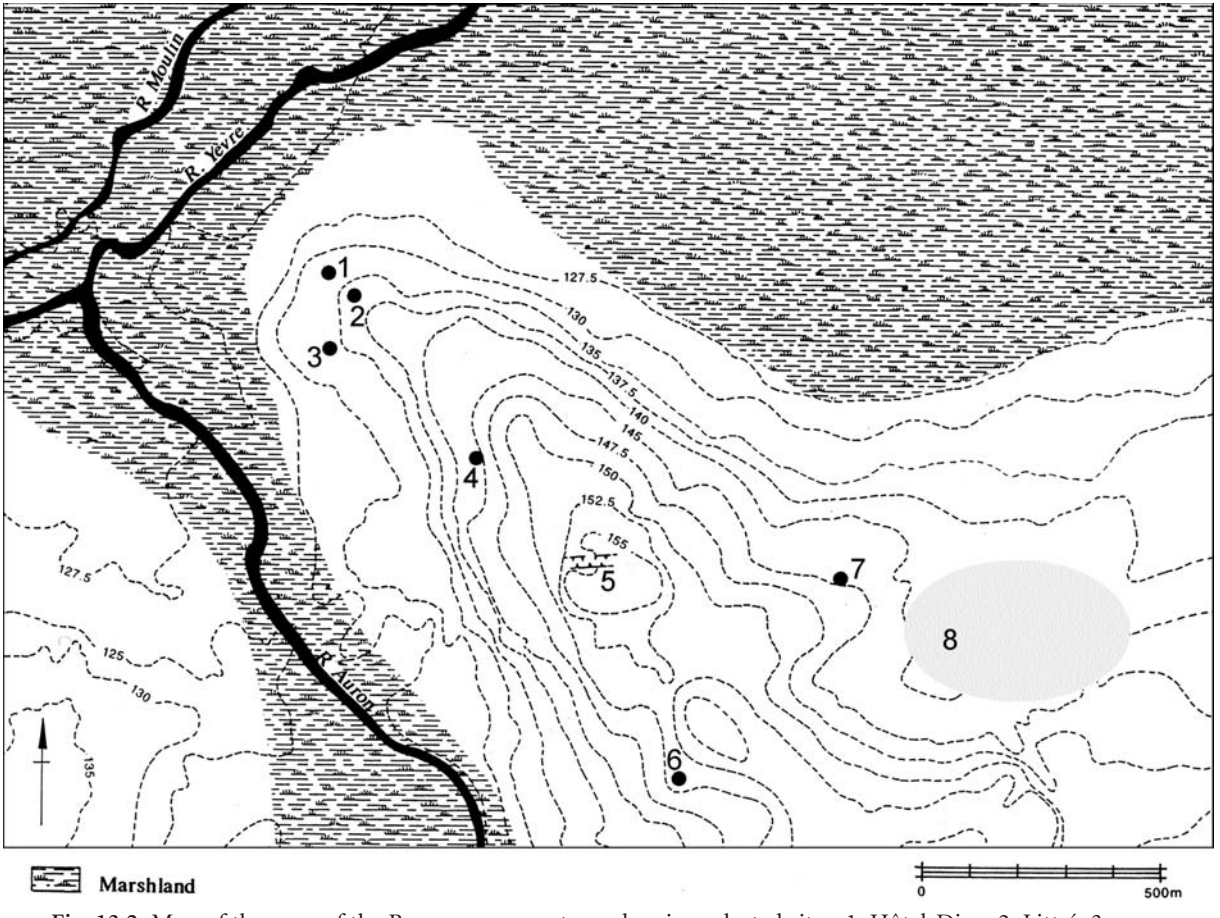

Fig. 13.2 Map of the apex of the Bourges promontory, showing selected sites: 1: Hôtel-Dieu; 2: Littré; 3: rue de la Nation; 4: enclos des Jacobins; 5: position of later La Tène ditch, on rue Moyenne adjacent to the new Hôtel de Ville; 6: Hôpital (militaire) Baudens; 7: Saint Martin des Champs; 8: Etablissements militaires (principal nineteenth century discoveries)

seem to have been active for perhaps three-quarters of a century in the fifth century BC, but clearly beginning later than e.g. Littré. Unusually, they also had access to southern imports, including Attic Red-Figure pottery and Massaliot amphorae. A fragment of a discarded Etruscan bronze dish was also recovered here. The best parallel for St Martin seems to be the unenclosed site of Bragny-sur-Saône, which extended to at least 3 ha and included evidence for diverse crafts (e.g. Collet and Flouest 1997). Saint Martin may have been as sizeable.

A first set of domestic settlement locations had thus been identified to complement the wealthy burials known from nineteenth-century discoveries in the town and in its vicinity. In total, some eighteen copper alloy objects of Etruscan or Italic manufacture had by then been recovered from Bourges and its immediate hinterland, although in some instances exact findspots are not known, and there are instances where the provenance may have been unscrupulously added to enhance value (Bailly 1987; 1993). The importance of Bourges towards the end of the Hallstatt Iron Age is underscored by the number and unusual wealth of these finds, although none individually appears of first-rank *Fürstengrab* status. The Saint Martin des Champs deposits, examined in 1984 and again in 1993, demonstrated conclusively that use of the locality continued into the early La Tène, and are particularly important in suggesting a different milieu for Attic imports than the 'top-tier and top-down' contexts that underscore models of temperate European interaction with their southern neighbours at this time. Josset (1990) felt able to argue that elite wealth was more widely distributed within the upper echelons of society in Bourges and its environs than in comparable situations further east (see also Gran-Aymerich 1997).

In the meantime, the evidence for continuing use of the site after the La Tène A period appears distinctly fragmentary and is even less straightforward to interpret. There seems, from the core of the town itself, to be a gap in the record centred on the fourth and third centuries BC. A possible exception is offered by Ruffier's work in the rue de la Nation. Following a period of abandonment following the First Iron Age occupations (perhaps spanning three quarters of a century from *c.* 530/520 BC), excavation revealed a deposit apparently consisting primarily of several dozen pig skulls and mandibles, accompanied by a deliberately-damaged iron sword, on which basis a sanctuary has been tentatively claimed (Ruffier 1990: 34–6, figs. 6 and 8). However this is interpreted, the evidence available at present seems to point very markedly to change and a downturn in the site's fortunes during the fifth century BC.

Opportunities to examine the deeply stratified First / transitional Second Iron Age deposits in the core of Bourges are generally restricted to sites where substantial redevelopment is taking place; even in these cases the development

Fig. 13.3 Excavations beneath the demolished wing of the hospital at the Hôtel Dieu produced an admixture of fifth-century BC, Augustan and medieval remains

may penetrate insufficiently into the accumulated deposits to impinge on the relevant horizon. An exception occurred in the courtyard of Bourges's medieval hospital, the Hôtel-Dieu, where we were able, as a research exercise, to excavate within and beneath the foundations of a demolished nineteenth century wing (figure 13.3). This site crowns a slight terrace projecting north-westwards from the principal promontory to a break-of-slope above the lowlands bordering the Yèvre, and a medieval cut paralleling it, the Yevrette. Our medieval colleagues' research indicated that this courtyard had never been built up in medieval or subsequent times, allowing the possibility that earlier material might survive relatively accessibly at greater depth. Re-excavating the basement of the nineteenth century building offered the prospect of identifying protohistoric deposits on a larger scale than previously, and without the expense of examining overlying Roman and medieval horizons. Furthermore, these layers might represent a continuation of the rich deposits encountered in the underground gymnasium of the Littré school, located less than a hundred metres away. Good fortune meant that some Iron Age deposits had indeed survived at the Hôtel-Dieu, indicating that the Littré occupation did extend, albeit in attenuated form, in this direction. Although there was considerable early Roman and subsequent disturbance, structural traces—including a massive dump of clay lumps suitable for building—survived in places, and were accompanied by an admixture of pottery types comparable to the second and third phases of Littré, including locally-made pottery finished on the slow wheel (a type represented here in Hallstatt D3 but more common on La Tène A sites), and further fragments of Massaliot amphorae. Hôtel-Dieu thus extends the evidence for First Iron Age settlement on the promontory further towards the Yèvre valley.

LAZENAY—VAL D'AURON, AND THE AURON VALLEY

During the 1990s, opportunities to examine the immediate vicinity of Bourges were most plentiful on the south-western margin of the town, around Lazenay-Val d'Auron. Here development of a substantial, formerly agricultural area, lying within the circuit of the by-pass, has allowed a number of fieldwork interventions to take place. This sector, acquired by the municipal authorities for recreational purposes and housing, displays a locally well-developed cropmark record, recorded by J. Holmgren (Delabesse and Troadec 1988; Villes 1988).

Ferdière's examination of the Gallo-Roman port facility on the margin of the Auron in the 1970s—an area now dammed to form an artificial lake—prefaced

this series of campaigns. Most of the subsequent projects are published in Büchsenschütz and Ralston (2001). On the northeastern side of the rounded summit bordering the Auron, the Service Archéologique Municipal has examined an extensive Gallo-Roman cemetery, already in use before the conquest. V. Deloffre-Roumégoux revealed evidence for a further small cemetery comprising four extended inhumations set within an earlier rectilinear enclosure (Provost *et al.* 1992a: 83 and fig. 40.3; Augier 2001), itself surrounded by a ring-ditch of earlier date. At lower altitude, work by AFAN staff at les Chassepins (Barbé and Luberne 1988), towards the base of the slope bordering the Auron flood-plain, revealed traces of an Iron Age settlement, comprising a substantial ditch, seemingly for a palisade, and a scatter of pits, post-holes and quarry scoops, most of which were considerably older than the palisade trench (of middle La Tène). This site, the limits of which are not securely known, was in use for much of the Iron Age. It seems essentially rural in character.

In addition, a number of substantial features not apparent on aerial imagery were encountered during machine trenching evaluation of the slope descending to the Auron. The excavation of one of these produced two skeletons, one clearly beheaded, deposited in the fill of a substantial storage pit. Surface finds from the vicinity included—tantalisingly—a sherd of Greek Red-Figure ware dated by Gran-Aymerich to the fifth century BC and a fragment of Campanian bowl stamped 'NIKIA', datable to the end of the third century BC (Gran-Aymerich *et al.* 1993: 219; 2001). Olivier Büchsenschütz and the present writer excavated this site from 1995, producing a further fragment of Campanian A of earlier second century date.

The Chemin de Gionne structural evidence is dominated by substantial storage pits. They were distributed in a narrow band along the contour towards the base of the slope. An alignment of these pits may have formed the western limit of the site (Büchsenschütz and Ralston 2001: fig. 55). Towards the southeast, however, increasingly intermittent features continue in the general direction of the Chassepins site, some 400m distant. Direct structural evidence for settlement is sparse: a few postholes were identified in 1995, and a more numerous scatter, of examples of a variety of sizes, riverwards of the main storage features examined in 1996. No coherent building plans were identified. Interspersed with the storage pits is evidence for quarrying, in the form of large polylobate pits with intersecting fills. From its pottery content a large example dug in 1996 seems to be the earliest datable element on site: this includes fragments of coarse vertical sided vessels with raised cordons with finger impressions; recognisably La Tène material is wholly absent from it. Manifestly later than at least some of the storage features, as it cuts though them, is a detached length of substantial V-cut

ditch, of uncertain function, its western end falling within the 1995 excavation. The site clearly has time-depth, although few storage pits impinge on each other.

The storage pits are assumed to have served that function, despite their proximity to the Auron; there was no evidence of dampness to contradict this hypothesis. One contained carbonized cereals in quantity: sub-samples producing total counts (analysed by Benédicte Pradat) of some 40,000 grains suggesting a crop predominantly (98 per cent) of *Hordeum vulgare* (barley), with minor components of emmer, other wheats (both *T. monococcum* and *T. aestivum/durum*) and oats. The associated weed seeds indicate cultivation not only of the neighbouring limestone terrain but also of wetter areas, presumably close to the river (e.g. *cf. Polygonum lapathifolium*; *Ajuga cf. reptans*). The admixture of weeds also suggests soils enriched by manuring. The scale of these storage features strongly indicates farmers sufficiently confident to deposit on occasion six tonnes, and routinely two to three tonnes of grain, in a single pit. An accomplished agricultural system is indicated. Storage pits of this size are recorded elsewhere in Berry—again without dense settlement evidence in their immediate vicinity—notably in rural contexts on the line of the A20 through Indre.

In all, eight adult skeletons were recovered from these storage pits, generally within secondary fills, of layered limestone gravels and brown loam, overlying the initial talus cone deposited through the features' original apertures. Some, including one where the cervical vertebrae were found with the skull some distance from the remainder of the skeleton, indicate decapitation, but this is not universally the case (for detailed study see Delattre 2001). Some had grave-goods in the form of copper alloy bracelets, including examples dated to La Tène B1 (Büchsenschütz and Ralston 2001: fig. 93). This evidence forms one of several strands which strongly indicate that the post-storage use of these pits was—in some instances at least—not for the routine dumping of domestic rubbish, echoing of course interpretations of examples at Danebury and other southern British sites (Cunliffe 1992; Hill 1995). Pierre-Yves Milcent (2004) has noted how the condition of skeletons recorded by Dumoutet (Bailly 1975) in his observations of the areas on the eastern side of the town taken over for military use seem to resemble those encountered at Gionne, suggesting not only that such practices were more widespread, but perhaps indicating that the area of the 'Etablissements militaires' had been used for farming and settlement before becoming one of the key sectors for burial on the margins of the settlement.

The skulls of smaller livestock are absent at Gionne, whereas those of large mammals are present. These include two cattle skulls in the pit which produced the burnt cereals grains, and a horse skull upended in a niche cut

in the side of a massive pit which is interpreted as a storage feature abandoned before completion. The only other significant find from this example was a complete newborn infant's skeleton from the uppermost fill, a location again echoing evidence from Danebury. While several pits contained few finds, the earliest, from which only a late copper alloy variant of a late Hallstatt *Paukenfibel* and a small near-complete carinated vase with a narrow neck were recovered, suggest that the area was already in use in the fifth century BC. The infilled late ditch produced a number of significant finds, notably a length of sword chain and a fragment of what appears to be iron sword sheath; a localized dark-stained upper fill contains seemingly redeposited domestic material, including two potin coins, the only examples of coinage recovered from the site.

The size of the individual pits and the apparent duration of the site's use for storage, as well as the occurrence of storage pits elsewhere, indicate the agricultural use of (and by implication settlement on) the coteau de Lazenay for much of the Iron Age. Horse bones from Gionne are perhaps, with imported ceramics, an indication of relative prosperity. There were, however, no amphorae. Evidence for iron work is sparse. Although far from conclusive, these sites may provide an indication that the seeming absence of evidence for the centuries immediately following the fifth BC in the archaeological evidence from within the town itself may be simply a result of the lack of availability, so far, of appropriate contexts, rather than an indication of desertion. This is not, however, the writer's preferred view. There does seem to be little reason to doubt that the size and status of the central settlement contracted very considerably, maybe absolutely, after the fifth century BC, and the contrast is thus with the survival of essentially rural settlement in the vicinity, as seems to be evidenced at Chassepins and Chemin de Gionne.

A further important site was examined near here in advance of further development, at Les Carrières de Bachon, primarily by Dr Milcent. This offers a different perspective on the status and use of the Lazenay area. Close to the summit of the ridge to the east of the Auron, this consisted of the eroded remains of a very substantial barrow of composite construction, surrounded by a major ditch; this was undetected until identified in mechanical trial-trenching. The overall diameter of the barrow was of the order of 40m. Robbed in antiquity, this produced the rich interment of a child in a central rectangular grave and a secondary dry-stone cist, probably representing an adult female burial, as well as the remains of a pyre that produced the fitments from a burnt vehicle box with, secondarily inserted into it, a gold pin decorated with a ram's head, the first-known gold jewellery—of La Tène A—from Bourges. A robber's trench, dug down through the limestone-capped turf central mound, had emptied a central pit, of a size that might

initially have contained a cordoned bucket or similar item. With a barrow at Les Grands Danjons, across the Auron three kilometres to the west of central Bourges (Baillieu 1990), which Milcent (2004: 276) argues may have included a vehicle in a robbed secondary grave datable to Hallstatt D3 associated with it, Les Carrières de Bachon is the most significant addition to the corpus of early burials from substantial barrows near Bourges. Others are however known as cropmarks.

The Auron valley itself provides other indications of substantial wealth from the period around 500 BC. For example, upstream, at Saint Denis de Palin, some 15km from Lazenay, the examination of two groups of differently-sized barrows on the plateau-edge produced a range of finds atttributable to Hallstatt and the beginning of La Tène (Favière *et al.* 1964: Freidin 1982). Although these mounds were earth-built, of soil considered to have been imported from the adjacent river valley which contained sherds presumably related to earlier settlement there, there is no clear evidence for a major enclosed site nearby. The Dun-sur-Auron area may thus include a satellite tier of important settlements and burials around Bourges. The linear distance from Bourges is some 25km, however, about twice that between the Cathedral hill and Morthomiers (Cher), towards the valley of the River Cher, with its Etruscan *Schnabelkanne* among the finds from one of the barrows dug there in the nineteenth century (Wuillaume 1985: 98).

THE EASTERN OUTSKIRTS

The most substantial recent extension to fifth-century Bourges has been the identification, across the marshlands of the Yèvre from the main promontory, and some 3km from the Cathedral, of a further extensive area displaying variations on the kind of workshops identified at Saint Martin des Champs, and also subsequently recovered closer to the town centre in the grounds of the military hospital at Baudens by Alexis Luberne. This is the sector which is currently being examined by Olivier Büchsenschütz and the writer at Port Sec Sud (figure 13.4), a former military base flanking the main road and rail lines running east from Bourges; parts of a similar suite of features were previously examined a little further north (at Port Sec Nord: Augier *et al.* 2001). With most of Port Sec Sud still to dig, the provisional interpretation of the site suggests that the main surviving traces are of further semi-sunken workshops, in this instance apparently very dispersed across the landscape and accompanied by relatively few other features. Post-holes, for example, are all but absent and we are forced to hypothesize that buildings had been built in styles

that are not conducive to good archaeological survival. Storage pits are also represented, but so far only single examples have been identified. It seems safe to conclude, however, that further structures did indeed occur here, for the volume of finds infilling at least some of the workshops, and their unabraded character, suggests they must have derived from roofed buildings in the close vicinity. The accumulating evidence from Port Sec Nord and Sud indicates that a number of craft industries were carried out here, including copper-alloy jewellery manufacture (sometimes with detailing in bone or coral), spinning and weaving. The presence of large ornate pins as well as brooches signals, as does other of the evidence from Bourges, that fifth century fashions here were slightly conservative compared to what was favoured further east in France. The relatively low density of features suggests that we are close to the transition between 'town' and 'country'. A range of imports—Attic Red Figure, Massaliot and (occasional) Etruscan amphora sherds, *céramique à*

Fig. 13.4 Excavations in progress in 2005 at the site of Port Sec Sud, across the Yèvre marshes from the promontory of central Bourges

pâte claire from the Mediterranean hinterland, even a triangular bronze arrowhead—indicates however that the wealth and range of activities present at Port Sec must have been intimately linked to the settlement on the promontory of Bourges itself, some 3km away across the Yèvre. The indications here too point to a brief effervescence, precisely in the decades around 500 BC with, for example, few instances of such classic archaeological indications of longevity as intercutting features. The evidence looks very different from that encountered at Lazenay, with its indications of relatively long-lived small-scale settlements and then, from the later part of the Iron Age into the Roman period, the use of that peripheral area for burials. Even in Roman times, setting to one side the aqueduct that traverses it, the Port Sec area shows little direct archaeological evidence for use, throwing into high relief the exceptional character of the fifth-century features scattered across it.

CONCLUSION

The evidence recovered piecemeal since last century from Bourges and its immediate environs indicates that the fifth-century BC data from here is likely to be of critical importance for our understanding of a key episode in the long term development of west-central France during the Iron Age. The core of the site at this time seems to have been on the promontory that was subsequently the focus of the oppidum of *Avaricum*, its Gallo-Roman successor, and then successive settlements extending into the present millennium. The major addition to our evidence for this area is that gained from the courtyard of the Hôtel-Dieu and it seems likely that opportunities for further work in the core of the site—particularly those that reach and encounter surviving Iron Age deposits, given the considerable stratigraphic depths of archaeological deposits in the town—will be rare, albeit not non-existent. Personnel from the town archaeological service do however continue to make additional discoveries, as development opportunities arise. In contrast, we can anticipate further information from the peripheries of the town, particularly in the east and southeast where former military holdings are to be redeveloped. These should help to clarify the extent of the settlement dependent on the core area, and make more plain the distinction between, on the one hand, the craft and funerary areas that edge the core, and the neighbouring rural sector, as is apparent in some of the Lazenay sites and, for example, at Le Porteau, east of town near the boundary with the commune of Saint-Germain-du-Puy.

The whole area around the confluence between the Auron and the Yèvre, extending beyond the promontory on which it is reasonable to suppose the fifth-century BC site is focused, looks set to offer a marked variant on the development of places of social and political complexity in the earlier Iron Age of non-Mediterranean Gaul, in keeping with models of regional variability which have found favour in recent years. With only very partial, physically discontinuous, and chronologically successive excavation evidence to draw on, it is of course very hazardous to estimate the overall size of fifth-century BC Bourges, not least because the available sites suggest the limit between 'core' and 'periphery' was not clearly drawn. Gionne, for example, seems essentially a rural site, but includes the occasional import and a funerary ritual seemingly duplicated closer to the core within the 'Etablissements militaires'. A quadrilateral area extending from Port Sec Sud and Littré in the north, to Saint Martin des Champs and Baudens in the south, would cover several hundred hectares, and at present we can only guess what proportion of this was actually in use during this time. Of course some of the marshy, low-lying areas within this zone would have been effectively unusable, and the machine-clearance of large areas of Port Sec suggests very substantial voids within the occupation there. Although only the crudest of estimates, it does seem hard to reduce the overall extent of the settlement much below 150/250 ha, an area even so substantially more extensive that that most likely covered by the oppidum or indeed its Roman successors. Whether this precocious but short-lived large settlement provides any archaeological support for the significance of the site in the mid-first-century BC, when it sees the light of recorded history in Caesar's account is, however, far from demonstrable at present.

Geographically the nearest parallel for the kinds of evidence emerging at Bourges seems to be within the city of Lyons, bordering the key Rhône–Saône route to the Mediterranean, where evidence from rescue projects conducted within the city points to it having been the setting for extensive settlement in the mid-first millennium BC (Ayala and Monin 1996). Further east, continuing work at some of the classic *Fürstensitze* is demonstrating that these too were more extensive settlement foci than had seemed to be the case. The Heuneburg itself is perhaps the most notable example. More generally, a number of north Italian sites of similar and slightly earlier date may have provided a model for the kind of extensive but rather informal juxtaposition of settlement, craft, and funerary evidence that characterises the evidence from Bourges, as Milcent (2004) has noted. They also seem to have been, in some instances at least, unstable and relatively short-lived. In the Golasecca area, for example Como, at some 150 ha, seems to have replaced sixth-century BC Este and Padua in the following century (Pearce 1998: 572), although for the moment it is impossible to argue for wider influences in the general settlement pattern from this area:

the kind of polycentrism discussed by Pearce not being apparent at all in Berry. Bourges undoubtedly has much still to reveal.

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14

British Potins Abroad: A New Find from Central France and the Iron Age in Southeast England

Katherine Gruel and Colin Haselgrove

One of Barry Cunliffe's abiding research interests has been in the character of cross-Channel interaction during the Iron Age, a topic that he has pursued and illuminated through a sustained programme of excavations and artefact studies in southern England, northern France, and the Channel Islands. Although the exchanges were undoubtedly two-way—and must also be seen in the context of a longer-term pattern of maritime contacts between Britain and its neighbours across the ocean (cf. Cunliffe 2001)—it remains true that for the late Iron Age, much of the material evidence for relations between Britain and France is in the form of continental imports found in Britain (e.g. Cunliffe 1987), rather than the other way around. We are therefore very pleased here, following a new find of British Iron Age coins in France, to be able to offer Barry a study of a relatively rare example of a group of objects moving in the opposite direction, not least because another of Barry's contributions over the years has been to ensure that the Celtic Coin Index in Oxford has continued to develop into the unparalleled research tool for Iron Age studies that it represents today.

The British exports in question are four Flat-Linear potin coins found in a mid-first-century BC context in ongoing excavations at the hilltop *oppidum* of Corent, in the Auvergne region of central France, over 600km from their home territory in southeast England (figure 14.1). Coins belonging to this series have been previously recorded from northern France, where there have also been a number of new finds in recent years, but never south of the Loire. We will begin by describing these new discoveries

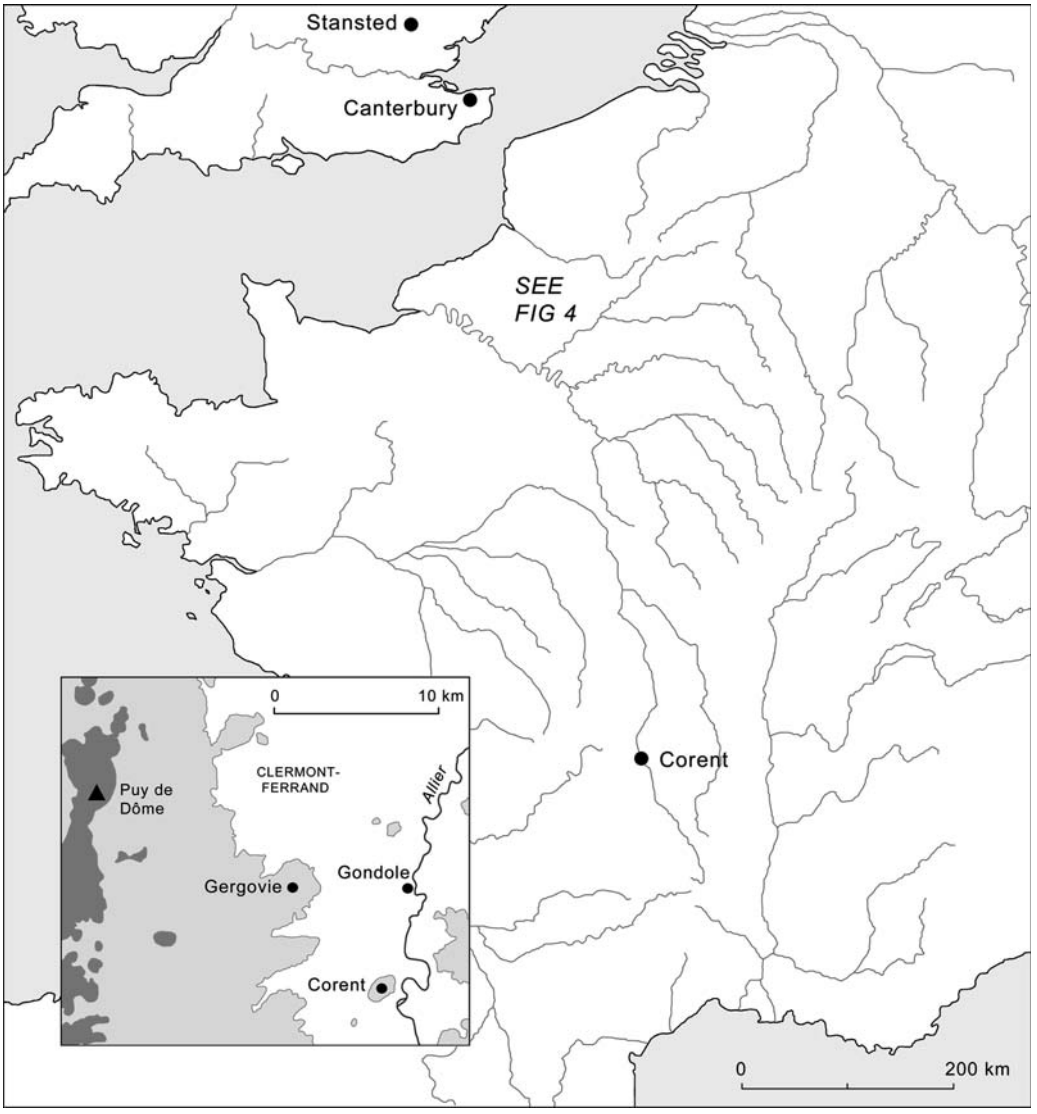

Fig. 14.1 Map showing general and specific location of Corent

in more detail, starting with Corent, before going on to assess their implications for our understanding of the late Iron Age in southeastern England, which are considerable. In conclusion, we will offer some possible explanations as to why these coins may have been exported to France in the first century BC.

A FIND OF BRITISH POTIN COINS AT CORENT (PUY-DE-DÔME)

The plateau of Puy-de-Corent lies some 15km south of Clermont-Ferrand, in the commune of Veyre-Monton in the department of Puy-de-Dôme, at the heart of the territory belonging in pre-Roman times to the Arverni. In recent years, Corent and the neighbouring *oppida* of Gondole and Gergovie (figure 14.1 inset) have been the subject of a major programme of archaeological research to investigate their respective and relative occupation histories before and after 52 BC, when Julius Caesar and his Roman army famously confronted the Gaulish rebels led by the Arvernian noble, Vercingetorix, at *Gergovia* (Provost and Mennessier-Jouannet, 1994).

At Corent, the excavations—initiated in 1992–3 by Vincent Guichard and John Collis, and directed since 2001 by Matthieu Poux—are focused on a large late La Tène and Gallo-Roman sanctuary, which in its pre-Roman phase comprised a ditched enclosure with substantial internal structures. From its size, there can be little doubt that this was one of the principal cult places of the Arverni. Associated with it were a rich series of finds, including remains of feasting, and deposits of weaponry, human and animal remains, coins, and other prestige goods and imports, indicating intensive activity from the late second century BC (La Tène D1b) to the early Augustan period (Poux *et al.* 2002; Poux 2006). In the destruction levels were various fragments of Gaulish and Roman weaponry and other military equipment (Poux *et al.* 2002: 69–70). Several coin dies have been found during survey work on the plateau, and in 2002, the first of the four British potins from Corent was found in the fill of a pit dug to house a basalt altar stone in the interior of the sanctuary and dating to La Tène D2b.

In 2005, the excavations were extended outside the sanctuary, to the far side of the modern track, which runs along its northern side. The aim of the present three-year campaign is to characterize the nature of the structures in this area and establish their chronological and functional relationship to the sanctuary. The principal remains of first-century BC date comprised a large construction of basalt blocks tightly fitted together and surrounded to the south, north and east by smaller structures on drystone foundations, with laid surfaces of cobbles and/or amphora sherds. The finds from these surfaces were less abundant than from the sanctuary, and, while disturbed by ploughing, are essentially of La Tène D2 date. Underlying the late Iron Age deposits were traces of earlier, Bronze Age and Iron Age occupation.

In one of these late Iron Age buildings, abutting the western side of the large basalt construction, three more British potin coins (nos. 1, 3 and 4) were

found together in a layer overlying a laid surface of amphora sherds, presumably a small hoard, or perhaps the contents of a purse. Other finds from the same deposit included a pair of La Tène D2 gold brooches with incipient wings linked by a short chain (Poux *et al.* forthcoming), not unlike those found near Winchester (Hill *et al.* 2004), along with other objects likely to be of Roman military origin, including decorated hobnails, bronze fittings and a seal-box decorated with an effigy of Mercury.[1]

The finds from the upper level and the surroundings of the stone construction included several more pieces of late Republican weaponry and military equipment, which are currently undergoing more detailed study. Among them were iron harness fittings of non-indigenous type, the hilt guard of a dagger or *gladius*, a bronze belt attachment, and more decorated hobnails. Other finds included fragments of late Republican bronze vessels, various small toilet or surgical instruments, and another bronze seal-box of pre-Augustan date. Seal-boxes of this date are rare outside the south of France, with the notable exception of the Alésia battlefield of 52 BC.

The four British potins (figure 14.2)—or more strictly high-tin, cast bronze coins—belong to a series with Kentish origins studied in detail by Derek Allen (1971), who identified fifteen main types, which he divided into two principal groups: Class I (Types A–L) and Class II (Types M–P), the former being the

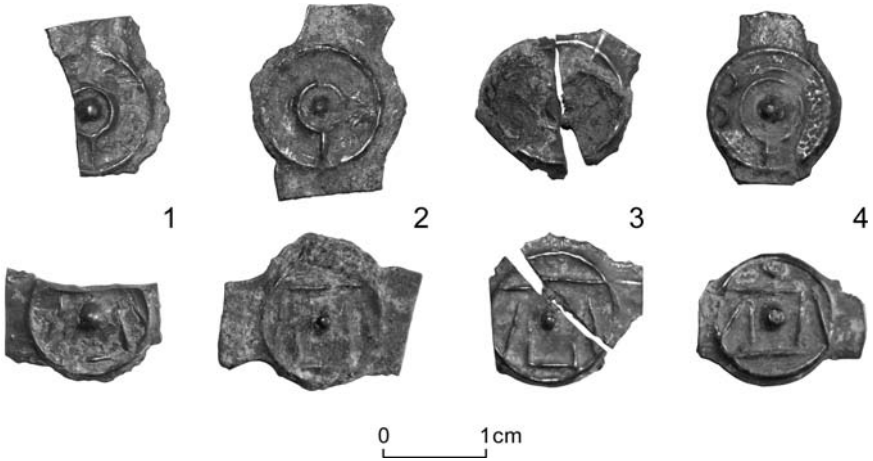

Fig. 14.2 The four British Flat-Linear potins from Corent
Photo: K. Gruel

[1] We are very grateful to Matthieu Poux and Matthieu Demmière for unpublished information on the context and associations of these coins and on the other finds.

earlier. Since then, Van Arsdell (1989) has added further insights to our understanding of the manufacturing process, demonstrating that the series experienced several stages of technical experimentation before optimal methods of mould formation were evolved. Owing to their flatness and the linearity of the design of all but the earliest varieties, and to distinguish them from earlier potin types circulating in the same region, they are commonly known as Flat-Linear types (Haselgrove 1995).

All four Corent coins belong to Allen's Class II. Their description is as follows:

Obverse: highly stylized helmeted head; central boss
Reverse: highly stylized bull on 'exergual line', single crescent over, central boss
Allen Types O–P; Van Arsdell 137–9; BM 717–723; LT 9541
(1) Corent 2005, context 15588, wt: 0.78g, diameter: 12mm, A:9. 'Head' left?
(2) Corent 2002, context 11623, wt: 1.49g, diameter: 12mm, A:9. 'Head' right.
(3) Corent 2005, context 15588, wt: 0.86g, diameter: 12mm, A.
(4) Corent 2005, context 15588, wt: 1.28g, diameter: 12mm, A:9. Head left.

The distinction between Allen's Types O and P is often difficult to draw and probably not in any case of great chronological significance. Coin 4 still preserves something of the original outline of the head, as with Type O. On the other three, this is reduced to the eye and two small crescents representing the front of the face, as on Type P. However, on Coins 2–3, the central boss is less prominent than with most Type P coins, which can also have a diameter as little as 11mm. Nevertheless to all intents and purposes, the Corent potins lie at the end of the typological sequence.

All told, the excavations at Corent have so far yielded 945 Iron Age coins, seventy-seven Roman, and eleven from Marseille. Many of them are in a poor state of preservation and as yet unidentified. The majority (75 per cent) of the Gaulish coins are small struck bronze types, including eighty with a horse on obverse and reverse and 186 with a head and a fox. These two types are only known from Corent. All told, 84 per cent of the bronzes are types circulating primarily in the Auvergne, with smaller numbers from Berry (8 per cent) and *Narbonensis* (5 per cent). Five bronzes come from the middle Loire region, two from east-central France and two from Belgic Gaul.

Potins are relatively poorly represented compared to the bronzes (16 per cent), but are again dominated by regional types, the so-called potins 'au long cou' (figure 14.3). The middle Loire is represented by a number of 'tête diabolique' and 'swastika' potins, while fifteen 'grosse tête' potins again indicate some links with east-central France. Belgic Gaul is again negligibly represented, by the potins 'au personnage courant'. Most of the

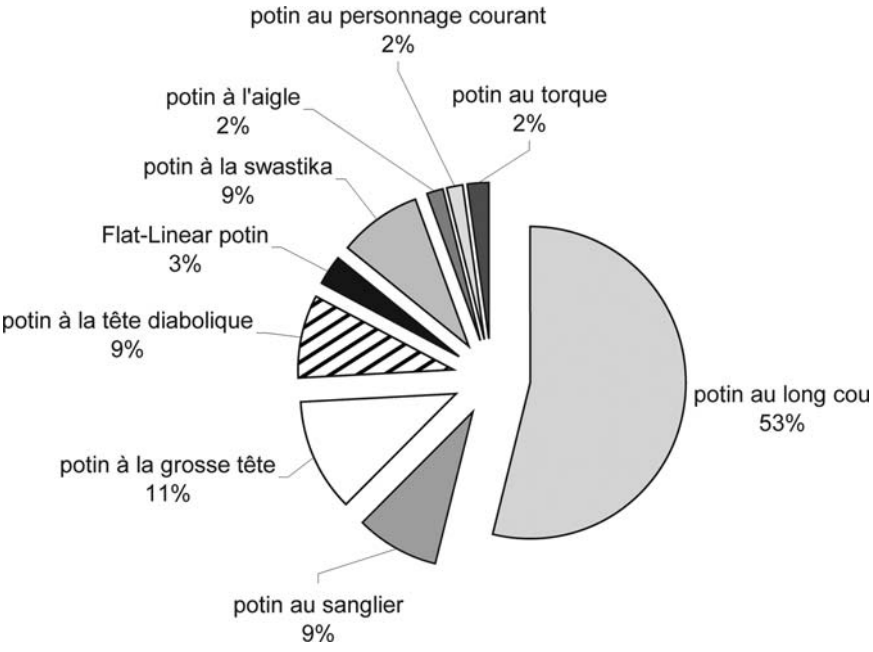

Fig. 14.3 Iron Age potin coins from Corent by type

remaining excavated finds are of silver (9 per cent), again mostly regional types; only two are of gold.

The primary emphasis of the Iron Age coin assemblage, then, is firmly on the Auvergne and the surrounding regions, with only a handful of coins coming from areas further afield. This merely makes the presence of the four British Flat-Linear potins stand out even more than was already the case. Even if three of the coins had not been found together, the inference must be that the British coins reached Corent as a group and by the same mechanism.

BRITISH POTIN COINS IN NORTHERN FRANCE

The Corent coins are not, by any means, the first overseas find of Flat-Linear potins. As long ago as 1878, two Class II coins of Derek Allen's Type P were found together with a large number of Gaulish coins in northern France, in excavations at Mont César, Bailleul-sur-Thérain (Oise) in Picardy (Barthélemy 1881). The precise character of this hilltop site is unclear, but the

Table 14.1 British Flat-Linear Potins from Northern France.

Bailleul-sur-Thérain, le Mont César (Oise)	*Oppidum* and/or sanctuary	2 Class II, Type P	Barthélemy (1881), no. 53 (2 exemplaires)
Bennecourt (Yvelines)	Rural sanctuary	1 Class II, Type M	Amandry and Dhénin (1999), no. 63
Chilly (Somme)	Rural sanctuary	1 Class I, Type L	Scheers (1982), no. 180
Fesques (Seine-Maritime)	Rural sanctuary	3 Class I, inc. 1 Type F(?)	Delestrée *et al.* (1997), nos 300.50, 302.14b, 303.1
Liercourt-Érondelle (Somme)	Early Roman camp	2 Class I, Type L	Delestrée *et al.* (2003), no. 9; L.–P. Delestrée pers. comm.
Rouvroy-Les-Merles (Oise)	Sanctuary complex and Roman fortress etc	1 Class II, Type M–N	Delestrée *et al.* (2003), no. 8
Saint-Laurent-Blangy, Actiparc (Pas-de-Calais)	Early Roman fortlet	1 Class I, Type L	Gricourt (2003), no. 1
Vron (Somme)	Rural sanctuary	1 Class II, Type O–P	L.–P. Delestrée pers.comm.

nineteenth-century finds clearly indicate that there was a major late La Tène and Gallo-Roman sanctuary there (Fichtl 1994), and the site may well have been an *oppidum*. Overall, there is more than a passing resemblance to Corent.

Since 1980, a further ten British potin coins have been found in northern France, from seven separate sites, mostly late La Tène and Gallo-Roman sanctuaries, but also including at least two Roman forts (see table 14.1). Most of these additional findspots are from western Picardy or the neighbouring departments immediately to the north or south, with an outlier at Bennecourt (Yvelines), west of Paris (figure 14.4). All eight sites lie within the general region defined as Belgic Gaul by Caesar (*BG* I, 1), and all but one of them within the core territory, which he called *Belgium*.

Six of the new coins are excavation finds: from the sanctuaries at Bennecourt, Chilly (Somme), and Fesques (Seine-Maritime, 3 coins), and from the early Roman fortlet in the Z.I. d'Actiparc at Saint-Laurent-Blangy (Pas-de-Calais), near Arras. The other four coins are surface finds: from Liercourt-Érondelle (Somme, 2 coins), Rouvroy-Les-Merles (Oise) and Vron (Somme). The two Liercourt coins were both found within the early Roman camp, which abuts the late La Tène *oppidum* of Les Catelis, overlooking the Somme valley near Abbeville. Small-scale excavations in the 1960s yielded finds of first-century BC date, including Gaulish coins, pottery and amphorae (Agache 1976: 218–23) and the Roman fort is certainly pre-Augustan. The exact findspot of the coin from Rouvroy-Les-Merles is unknown; there was a

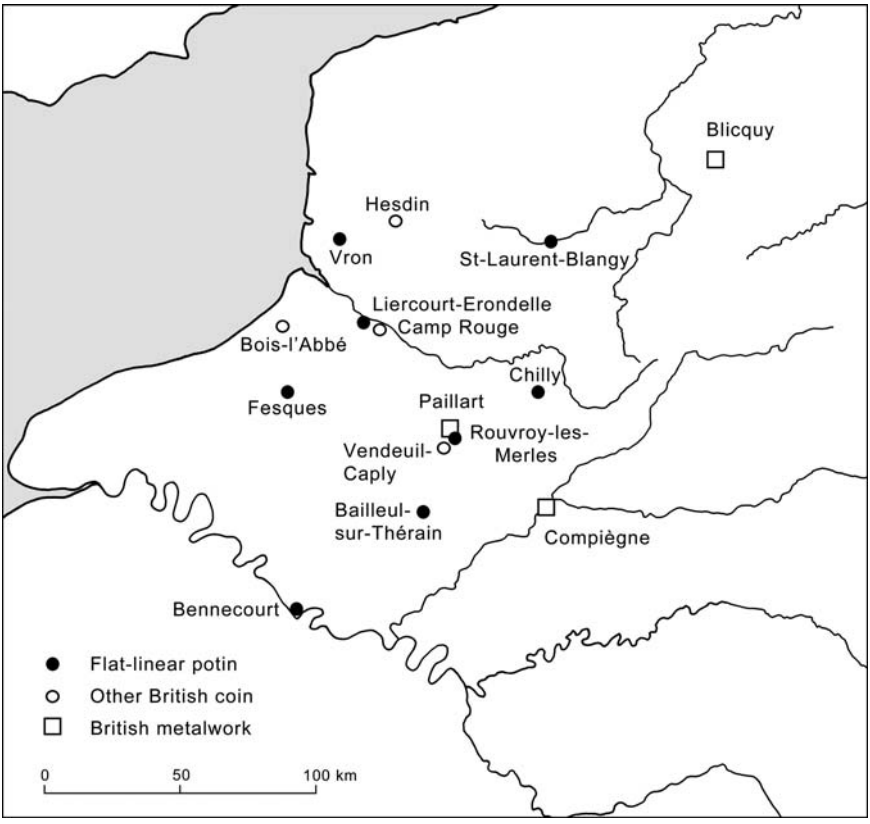

Fig. 14.4 Findspots of British Flat-Linear potins in northern France

major Gallo-Roman sanctuary complex here at the source of the river Rouvroy, but also a Roman legionary fortress on the border with the neighbouring commune of Folleville (Somme) overlooking the source, and at least one villa. Vron is the site of a small Gallo-Roman rural sanctuary.

Apart from Fesques, where one—and perhaps all three—of the coins appears to be of Allen's Type F,[2] the northern French finds all belong to the later stages of the Flat-Linear series. The coins from Chilly, Liercourt-Érondelle, and Saint-Laurent-Blangy are all Type L, the latest of the Class I coins, while those from Bennecourt and Rouvroy-Les-Merles are Types M–N. The Mont-César and

[2] In the report, all three potins are described as Mack (1964) 17–17a, which is Allen Type L (Delestree *et al.* 1997). However, a photograph of 303.1 (CCI 00.0506) suggests that it is in fact Type F. There are no photographs of the other two potins in the Celtic Coin Index, but from the diameter, 300.50 could be of the same type. The third coin was found corroded to an early base gold coin belonging to the so-called 'sword group' (302.14a–b).

Vron coins are of Types O–P, as at Corent. At the three sites where more than one British coin has been found, they seem to be similar, suggesting that they, too, arrived together. The discovery of most of the coins at religious sanctuaries or cult sites need not surprise us, as this is a common occurrence with Iron Age coins far outside their territory of origin. What is far more intriguing, given the Roman military origins of much of the Corent material, is the presence of British potins at two Roman forts (and in the close vicinity of a third).[3]

Two of the excavated British potins from northern France are from contexts that may be even earlier than Corent. The first is the Type L potin from Chilly, which formed part of a hoard of 121 coins deposited in a late Iron Age ditch beside the *fanum* (Scheers 1982). The pottery and brooches from the relevant ditch fill are of La Tène D1b–D2a character (Collart 1987), while the other dateable Iron Age coins in the ditch are types that were in circulation well before the Roman invasion of northern Gaul.[4] Although Scheers (1982) initially suggested that the hoard was deposited after the Roman Conquest, the date is unlikely to be later than the mid-first century BC. The other probable early find is that from Fesques, where one of the three British coins came from one of a ring of pits, which forms the earliest structural arrangement at the centre of the site. The excavator dates this arrangement to La Tène C2–D1 (Mantel 1997). None of the other Iron Age coins from pits forming part of this structure are conspicuously later.

The remainder of the excavated potins from northern France are from Augustan-Tiberian contexts (Bennecourt; Saint-Laurent-Blangy), or from deposits that contained Augustan coins and pottery alongside earlier material (Fesques). Deposits at religious sanctuaries were particularly prone to subsequent disturbance, and the Fesques coins in particular could easily have been deposited rather earlier, but there is no way now of knowing for certain.[5]

[3] Given the limited extent of the excavations at Liercourt-Érondelle, it would be unwise to rule out the possibility of earlier or later activity on the site of the Roman camp. At Vendeuil-Caply (Oise), for example, the early Roman fortress overlooking the source of the Noye was established on the site of an earlier sanctuary.

[4] Most of the coins belong to a series which is almost unknown elsewhere (Scheers 1982), but four types in the hoard and/or associated ditch fill occur in La Tène D1b contexts (Scheers 120, 152, 163–IC, 191; see Haselgrove 1999) and none of the others need be later than the mid first century BC (Scheers 75, 122, 123). Many of the hoard coins were overstruck on other coins, but the undertypes do not assist with their dating.

[5] One of the Fesques coins was found in the wall trench (300) of a rectangular structure which replaced the earlier pit arrangement in La Tène D1–D2, while the other came from the central pit (302) of a second rectangular structure (301), which was constructed in the La Tène D2–Augustan period to replace it. Both structures were later disturbed and the fills yielded coins of Augustan date alongside (mostly) earlier Iron Age types. A *quinarius* of Trajan was found in pit 302. The Bennecourt potin was associated with Augustan—Tiberian pottery in a deposit which antedated the building of the stone *fanum* (Bourgeois 1999); here coin deposition seems to have resumed in La Tène D2 after a gap, so the potin could be an earlier discard.

So far, relatively little information has been published about the Roman fortlet at Saint-Laurent-Blangy, but it is stated that the British potin was found in the fort ditch along with seven local issues, four of which are later first century BC inscribed types (Scheers 46, 109-II, 158), the other three slightly earlier, and a Vienne *dupondius* of *c.* 36 BC (Gricourt 2003). Based on the associated finds, the fortlet was founded *c.* 50–40 BC and occupied up until the early Tiberian period (Prilaux *et al.* 2002; Jacques and Prilaux 2003).

OTHER BRITISH IRON AGE COIN EXPORTS TO CONTINENTAL EUROPE

Although they are the commonest single series, the Flat-Linear potins are not the only British Iron Age coins to have been found in continental Europe (figure 14.5). Leaving aside the possibility that some early Gallo-Belgic gold types were actually struck in Britain and exported to France, rather than the reverse (Burnett 1995), more than thirty other British coins can be securely provenanced to continental Europe.[6] To these may be added the twenty or so

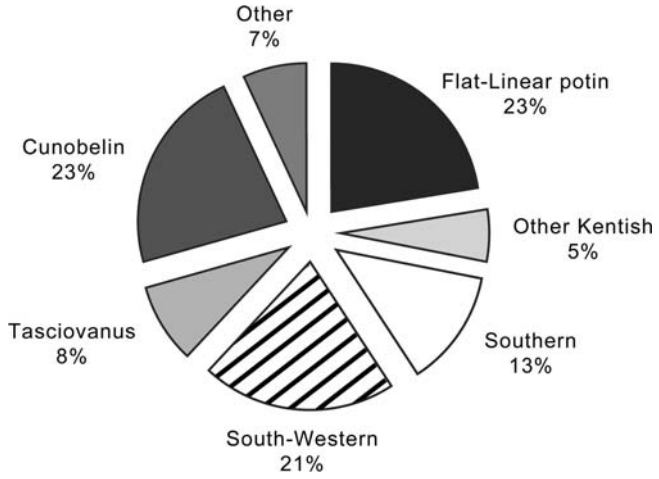

Fig. 14.5 Proportions of coins from different areas of Britain found on the continent (including Le Câtillon and Rozel hoard coins)

[6] This figure excludes a number of doubtful or unprovenanced coins, such as the stater of Tasciovanus in Rouen Museum and a second coin of the same type (BM 1628) 'procured . . . from a peasant at Rome' (Evans 1864: 270); or the 'découverte ancienne d'autres monnaies des Britanni, des chefs Bodvoc et Catti' at Pernois, near Amiens (Bertrand 1912: 176). The so-called

insular issues from the hoard found in Jersey in 1957 at Le Câtillon, and two from the 1875 Rozel hoard.[7] Two British coins have been found as far afield as Denmark, but the other findspots are all west of the Rhine. The main concentration of finds is once again in Picardy, but this time the overall spread is noticeably greater, with finds coming from both the Rhine and the Rhône valleys and from Aquitaine (e.g. Boudet and Noldin 1989: fig. 3). A mixture of metals is represented: the Jersey hoard coins and about two-fifths of the later single finds are gold or silver types (about a quarter of these are plated); the rest are struck bronzes.

Their findspots are also more diverse, ranging from villas and other rural settlements to large agglomerations like Boulogne, Lyons, Reims, and Saintes. Proportionately fewer are known sanctuaries and/or *oppida*. There is one more find from a Roman fort—an East Anglian uninscribed silver type from Ludwigshafen-Rheingonheim, in Germany—although others might be, such as the three recent finds from Mont des Châtelets, Vendeuil-Caply (Oise), where a Roman fort and native sanctuary occupy the same site. So far, a plated stater of Cunobelin from Mont César (Delestrée *et al.* 2003) provides the only instance of a further British coin type being found on the same site as Flat-Linear potins.[8] Otherwise, we see the same pattern as before: multiple finds from a single site tend to be from the same region and are often minted by the same ruler—or in one case—by successive rulers.

Excluding the Jersey hoards, over three-quarters of these other British exports are inscribed issues of Tasciovanus and especially Cunobelin, from north of the River Thames. Later Kentish type exports are restricted to an uninscribed bronze from the Titelberg, and gold and bronze coins from Bois-L'Abbé (Seine-Maritime)—although since Cunobelin's coins (especially his earlier issues) circulated fairly freely in Kent (Holman 2000; 2005a), some of them may have been exported from south of the Thames, rather than directly from their home territory. Apart from the group of South-Western types in the Le Câtillon hoard, none of the other coin-using regions are represented by more than a handful of coins.

'anchor' variety of 'British QA' triple-tailed horse staters was probably minted in Gaul (Haselgrove 1999) and these coins are omitted from the total. For details of continental finds up to 1987, see Allen (1960) and Haselgrove (1987). Details of more recent finds from France are given by Boudet and Noldin (1989) and Delestrée *et al.* (2003).

[7] Similar problems of attribution exist for some of the early, uninscribed silver coins present in these hoards, which could still turn out to be British or Gaulish (e.g. Scheers 1977, no. 53-III). More recent finds imply that the silver coin type inscribed Ammi/Sec listed among the 1875 Rozel finds is British, but it is also likely that the coin is actually intrusive to the hoard (Holman 1999).

[8] A group of four British bronzes (two each of Tasciovanus and Cunobelin) from an unspecified site near Breteuil (Oise) could be finds from either Rouvroy-Les-Merles—which has a British potin—or Vendeuil-Caply. Both complexes are within a few kilometres of Breteuil. Vendeuil-Caply has yielded two coins of Cunobelin (and one of Tincomaros), while two Kentish issues were found at Bois L'Abbé.

Whilst the majority of these other British imports are most probably later in date than the Flat-Linear potins, a few types are potentially contemporary. One is the British L stater (BM 306) recently reported by Delestrée *et al.* (2003) from Hesdin (Pas-de-Calais)—although found some time ago—which is likely to date to the mid first century BC. The other is an uninscribed 'cock' bronze of Cottam's (1999) Type 2, found at Camp Rouge (Somme) near the *fanum* (Delestrée 2003). This series has findspots all over southeast England (including Kent), but the largest concentration is in central southern England, the home territory of various thin silver types with which the cock bronzes have some affinity (Cottam 1999: 14). The cock bronzes have yet to be independently dated, but some of the thin silver coins were present in the Le Câtillon find and ought therefore to overlap the Flat-Linear series, as should the other British coins in the hoard.[9] On the other hand, at least one of the British coins from Rozel—the South-Western starfish type (BM 1270)—is apparently later, as in all probability is the hoard itself.

In sum, therefore, although the findspots of both series of British coin exports are concentrated in western Belgic Gaul, the two groups appear to be contextually and chronologically discrete, occurring on separate sites and with other British coin types of the same period, rather than with coins of the other group—although this could be partly a function of the relatively small number of coins involved, when compared to the many hundreds of Gaulish types recovered from the same sites (Delestrée *et al.* 2003). In passing, we might also note the presence of a few items of late Iron Age decorated metalwork apparently of British origin in the same general region as the coins. These include a mirror handle from near Compiègne (Oise), long thought to be from Autun (Guillaumet and Schönfelder 2001); the enamelled harness mount from Paillart (Oise); the decorated linch-pin found at Blicquy (Hainault, Belgium); and the mirror from Nijmegen in the Netherlands (Demarez and Leman-Delerive 2001; Dunning 1928; Leman-Delerive 1968). There is also the bronze bowl from Leg Piekarski in Poland (Megaw 1963), like the two British coins from Denmark, a reminder of other contacts with other areas still further afield.[10]

[9] This is not the place for detailed reassessment of the date of the Le Câtillon hoard. Suffice it to say that the pairs of silver and bronze La Tène D2 boss-on-bow brooches with external chords are typologically early forms compared to the gold examples from Corent and Winchester. A date *before* rather than after the mid-first-century BC now seems more likely for the Le Câtillon brooches, disposing of one of the main arguments which has previously been advanced for a later dating of the hoard itself. Equally, while the silver chain necklace could still be of Roman origin (Fitzpatrick and Megaw 1987), this does not provide a particular *terminus post quem.*

[10] The Danish coin finds are a British KBO stater (BM 3152), originating in the East Midlands, from Vildbjerg, Jutland (Allen 1960: 183); and a stater of Tasciovanus-Sego (BM 1625) from Munke-Bjergby, Zealand—incorrectly attributed to Ricon in the gazetteer (*ibid.*: 224).

FLAT-LINEAR POTINS AND THE IRON AGE IN SOUTH-EAST ENGLAND

Irrespective of how the different types of British coins crossed the Channel to France, which we will discuss below, the Flat-Linear potins from well-dated contexts at Corent, Chilly, and, to a lesser extent, Fesques, have significant implications for our understanding of developments in southeast England. According to current wisdom, Flat-Linear potins derive from the earlier East Kentish Primary potins (Haselgrove 1995; Holman 2000), which in turn have close affinities with another series of early Massalia imitations in the Paris Basin (LT 5284).[11] The Kentish prototypes apparently date to the second century BC—although there is less hard evidence than one would wish (Haselgrove 2006)—allowing a late-second-century BC starting date for the Flat-Linear derivatives (e.g. Holman 2005a). This is implicit in the pottery associations of the earlier Flat-Linear I types—which occur predominantly in contexts containing only Middle Iron Age wares (Haselgrove 1988)—but the metalwork which might provide more precise dating is unfortunately lacking.

Following Allen (1971), the introduction of Class II types is generally placed in the mid-first century BC, although Haselgrove (1988: 110) noted that there were some grounds for supposing this might have occurred in the first half of the century. The manufacture of potin is thought to have ended in the later first century BC, probably by *c.* 30 BC, as struck bronze coinage came into more general use (e.g. Holman 2005a; Van Arsdell 1989), but conclusive evidence is again notable only by its absence. Indeed, more than five times as many Flat-Linear II coins have been found in contexts of first-century AD date than in deposits of first-century BC date. This imbalance is usually explained—somewhat uneasily—as a function both of continued use of potins long after production ended and a high incidence of residuality at intensively occupied sites like Canterbury (Haselgrove 1988).

A complicating factor, as Allen (1971: 136) recognized, is that some Flat-Linear types probably overlapped chronologically and they do not therefore form a unilinear typological sequence. Over time, the centre of gravity of British potin circulation appears to shift from East Kent up the Thames, and some Flat-Linear II coins may even have been made north of the river, where they strongly outnumber Flat-Linear I coins, rather than in Kent (Haselgrove 1988; Holman 2000). This possibility has been further strengthened by the hoard of fifty-one potins found at the Airport Catering Site at Stansted, Essex

[11] Some of the early Massalia potin imitations found in France could conceivably be British exports, and *vice versa*, but no definite examples have been identified to date.

(Van Arsdell and Northover 2004). Six of the hoard coins are apparently normal Kentish varieties, but the others have been identified as a new variety, which is so far unknown elsewhere, and might well have been produced locally. The imagery of the Stansted coins resembles later Flat-Linear I types, but they are the size of Flat-Linear II types (*ibid.*: 117–18). In other words, the evolution of the Flat-Linear potins is probably geographical as well as chronological, and Class II coins may be (partly) contemporary with later Class I varieties.

The Corent finds provide a new fixed point for Type O–P coins, which is both earlier and more secure than any of those from Britain (see Haselgrove 1988). The pit in which the first of the four coins (Coin No 2) was recovered is dated to La Tène D2b, which in the Auvergne covers the period *c.* 60–40 BC (M. Poux pers. comm.), thereby providing a *terminus ante quem* no later than *c.* 40 BC. The coin was securely stratified beneath the basalt altar stone, and its affinities are, if anything, with Type P rather than Type O. More caution is required with regard to the other three coins, as the deposit in which they were found was disturbed by ploughing and also contained a certain amount of residual material. Nevertheless, the character of the find suggests that the coins were *in situ* and, based on the other material found nearby in the same levels, the excavator suggests a date range of *c.* 60–30 BC for their deposition, supporting the implication of the first find that Type O–P coins must already have been in circulation in or very shortly after the mid-first century BC.

A marginally earlier *terminus ante quem* of *c.* 60/55 BC for the Type L potin from Chilly is given by the associated La Tène D1b–D2a finds. Several of the Belgic coins from the ditch are in fact types that were in circulation by the early first century BC; none are demonstrably later. A similar date is indicated by two settlement finds from Kent. At Bridge Hill, near Canterbury, a Type L potin was recovered from a scoop with a La Tène D2a brooch, sherds of Dressel 1 amphora and late Iron Age pottery (Haselgrove 1987: 472). And at Farningham Hill in west Kent, a Class I coin, probably of Type L, was found in the upper enclosure ditch fill, together with the spring and pin of a La Tène D1b–D2a brooch and mid to late Iron Age pottery (*ibid.*: 473).[12]

Finally, the earlier, Type F, potin from the La Tène C2–D1 structural phase at Fesques has an implied *terminus ante quem* of *c.* 90/85 BC. The relevant pit also yielded a running-person bronze (Scheers 163-IIa) and a sherd of combed pottery, while the other pits in the arrangement yielded mainly

[12] A middle Iron Age involuted brooch was found elsewhere in the upper fill of the enclosure ditch. A second potin, this time definitely Type L, was found in a pit in the interior, again associated with mid to late Iron Age pottery (Haselgrove 1987: 483). The pit is placed in the preceding occupation phase.

hand-made late Iron Age pottery, one Early and one Middle La Tène brooch, and nine coins. Several of the latter are types current in La Tène C2–D1 (Scheers 163-1a; 191; 206; LT 7405) and again, none are definitely later; among the latter is an example of Scheers 111, thought to be the prototype for the British cock series (Cottam 1999).

If we take the most conservative view, using the latest dates indicated by these *termini ante quos* and assuming that each potin type crossed the Channel when new and was immediately interred, the current late second to later first-century BC dating of the series might just about stand. On the other hand, the dating could easily be brought forward by up to a generation: the coins need not have been brand new when they were exported and/or could have been deposited before the end of the phase in question. Opting for a position somewhere in between the two extremes would still produce a date range for the series from the third quarter of the second century to the mid-first century BC, bringing the switchover from potin to struck bronze in southeast England more into line with developments in France, where the mid-first-century BC is now seen as the significant watershed (Guichard *et al.* 1993; Haselgrove 1999).

In the current state of knowledge, this seems a reasonable proposition. A mid-first-century BC date for the end of potin production north of the Thames—if this is where the latest Flat-Linear types were made—and perhaps even a little earlier in Kent, would allow more time for the development of the earliest struck bronze coinages in both regions. It may well be relevant that the earliest Kentish uninscribed bronzes show close affinities with types circulating in western Picardy, where struck bronze appears relatively early (Haselgrove 1999).[13] Moreover, stratified finds that could support a earlier date for the circulation of Flat-Linear II potins are at last coming to light north of the Thames. At the Stansted Airport Catering Site—where occupation is dated *c.* 75–25 BC—a potin similar to those in the hoard was found in the gully (408) of one of the *earliest* circular buildings on the site (Havis and Brooks 2004: 98). This would be difficult to reconcile with a date for the coin later than the mid-first century BC.[14] Other suggestive finds occur at Gatesbury

[13] Some overlap in date between the latest Flat-Linear potins, if these were produced north of the Thames and/or further upstream, and the earliest Kentish struck bronze issues would help explain why the two groups have fairly similar archaeological associations (Haselgrove 1995: 122, fig. 58).

[14] Stansted has an unusually early Italian amphora assemblage, including two Dressel 1A rims (one possibly Graeco-Italic), and no less than three British variants of Nauheim brooches (Havis and Brooks 2004: 121–3; 166–9). It is possible therefore that the proposed starting date of *c.* 75 BC is in fact too conservative. The potin hoard was deposited in the gully of the latest circular structure (550) in the northwest part of the site (*ibid.*: 99–104).

Track, Braughing—where a Type P potin was discovered in ditch F41 with sherds of Dressel 1B amphora and a late Iron Age pottery assemblage similar to Stansted (Haselgrove 1987: 428; Havis and Brooks 2004: 163–5), and at Trumpington, Cambridge, where a variant Flat-Linear II coin was found, together with an early iron-hinged brooch with affinities to the Nauheim type (N. Crummy pers. comm.).

It seems clear then that the occupants of some sites north of the Thames were already using potin coins—whatever their function—*and* receiving Italian wine from across the Channel by the mid-first century BC. This has major implications for our understanding of late Iron Age developments in the region. In particular, it opens up the possibility that agglomerations like Baldock and Braughing-Puckeridge—both of which have Dressel 1A amphora finds—originated before Caesar's invasions, rather than being linked to the political and economic realignments that followed the Roman conquest of Gaul. More generally, it implies that certain cultural and technological innovations that we associate with the latest Iron Age began earlier and occupied a longer time span than we have allowed.

South of the Thames, the evidence from Canterbury needs to be re-assessed. There, Flat-Linear potins account for 44 per cent of the Iron Age coins, made up entirely of late Class I and especially Class II types (Holman 2005a). Haselgrove (1987) originally interpreted this to mean that Canterbury was founded between 50 and 25 BC, but following the chronology proposed here, a mid-first century BC date or earlier now seems likely.[15] The Marlowe area was probably the focus of the new complex, as it here that the proportion of potins is highest (*ibid.*: 141–3). Indeed, there is a notable contrast with Belgic Gaul, where most major sites first occupied in the mid- to late first century BC yield relatively few potins (Delestrée 1996; Guichard *et al.* 1993). While this might simply reflect different trajectories of development on opposite sides of the Channel after Caesar's invasion—or even other factors—it does nothing to weaken the case for an earlier foundation.[16]

[15] There is a tendency to date late Iron Age pottery assemblages in East Kent later than their counterparts north of the Thames, although there is no particular reason to so. The imported amphorae from Canterbury include Dressel 1B, but no earlier types.

[16] It could be that the occupation at Canterbury was particularly intensive at the outset, or that the coins finds include religious offerings. Although no traces of an Iron Age sanctuary have been found *per se*, the presence of baths, a theatre and architectural fragments potentially from a classical style temple (Holman 2005b) implies that one existed in the Roman period.

BRITISH POTIN EXPORTS IN THEIR ARCHAEOLOGICAL AND HISTORICAL CONTEXT

How then do we explain the export of Flat-Linear potins to France? As we have seen, the Type F coin from Fesques stands out as early, and probably left Britain by the end of the second century BC, along with the other two British potins found at the site, although they were both found in later contexts. Being base metal, it seems unlikely that these coins were used in the same kinds of social and political payments as Iron Age gold coins; we should think presumably in terms of other kinds of interaction or the movement of individuals.

A possible context for the export of the Fesques coins exists in the widespread displacement of other potins belonging to the same stage in the series (Types E–H) from Kent to other areas of southern Britain, particularly East Sussex, but also further along the South Coast, into southwest England and up the Thames Valley. Overall, there is a strong coastal and riverine emphasis to the distribution (Haselgrove 1988: fig. 7), implying a strong maritime element in this diaspora. Plausibly, the offshore island of Thanet in East Kent acted as a hub for long-distance contacts in the same way as Hengistbury Head further along the South Coast (Cunliffe 1987). Given the strong cultural links that existed from this period onwards between Normandy and Picardy and the facing areas of southern England (e.g. Cunliffe 1984), it is hardly surprising that one group of British potins should have reached the north French coast—and Fesques is only 29 kilometres inland, close to the river Eaulne. Rather than arriving directly from Kent, it is also possible that these coins arrived from a secondary home in East Sussex, or by means of the Solent-Seine axis.

The other British potin exports belong to the late stages of the Flat-Linear series and there is little evidence to suggest that they arrived before the mid-first century BC. The one possible exception is the coin from Chilly, but the other three French examples of Type L are from Roman forts. Most suggestive of all are the new finds from Corent, far from Belgic Gaul where the other discoveries are concentrated, but only eight kilometres from Gergovia, where in 52 BC, only two years after the second invasion of Britain, Caesar confronted Vercingetorix's army. Moreover, they were apparently deposited in the company of military equipment, both Roman and Gaulish.

Is it possible that potins were among the booty taken from southeast England by Roman legionaries or auxiliaries in Caesar's army, or—less likely—formed part of indemnities paid by the Britons (which will surely

have mainly been in gold)? Caesar also took hostages and may have recruited British auxiliaries from friendly peoples like the Trinovantes, another way in which coins could have left the island. Although his visit in 55 BC was a short one, in 54 BC he campaigned throughout Kent and also north of the Thames, in the area where some of the Flat-Linear II coins apparently originated. If the British potins found in Gaul were mostly taken away by the army in 55–54 BC, they should be broadly representative of the types circulating in the areas where he campaigned—in other words, according to our revised chronology, a combination of late Class I and Class II types—as is the case.[17]

There is plenty of evidence associating Iron Age coins with Roman troop movements, both legionaries and auxiliaries, most obviously the nineteenth century finds from the Alésia battlefield and the new finds from the Roman camps around the perimeter (Fischer and Gruel 2001)—although no British types have been discovered there and relatively few from Belgic Gaul. Significant numbers of Gaulish (Furger-Gunti 1981) and Celt-Iberian issues (Gruel 2002: 209) have been found in the Augustan camps on the Rhine, and the same phenomenon is apparent on a smaller scale in Britain in the Claudio-Neronian period (Haselgrove 1987). In a case which in some ways recalls Corent, Lambot and Casagrande (1997) have suggested that a bronze coin of Ebusus (Ibiza) found at St-Thomas (Aisne)—widely assumed to be the *oppidum* of the Remi named *Bibrax*, was brought by the Balearic slingers sent by Caesar to the aid of the garrison (*BG* II, 6–7).[18] The identification of St Thomas with *Bibrax* seems as secure as any, lying as it does an appropriate distance from the Roman fortress at Mauchamp, a prime candidate for Caesar's battlefield camp beside the river Aisne, where in 57 BC his army defeated the Belgic coalition.

Caesar suffered a major reverse at Gergovia and his army must have left behind a substantial amount of military equipment and personal items, which might have included the British coins. It would not be surprising if some of this material found its way to a major sanctuary like Corent, to be dedicated as offerings, either in the immediate aftermath of the victory or as an act of remembrance a decade later—as may also have happened at Alésia. Although three of the four coins were found in the area outside the sanctuary enclosure,

[17] Both of the other early British coins found in Belgic Gaul—the British L stater and the Cock bronze—are types that circulated in the areas where Caesar campaigned, although the home of the bronze coins was probably central southern England. Some of the items of late Iron Age decorated metalwork found in northern France could conceivably be Caesarian booty.

[18] The coin is the only Ebusus issue found in France north of the Rhone delta. Interestingly, however, there are six such finds from East Kent, including two from the important late Iron Age site underlying the Roman temple at Worth (Holman 2005b: 273; P. de Jersey pers. comm.). Might some or all these coins have reached Britain in 55–54 BC, and in the case of the Worth coins, at least, ended up as offerings?

the character of the other finds from here, which also included human skull fragments, implies that they too reflect cult activity. Another possibility—not necessarily conflicting—is that the coins (and late Republican military equipment) came to Corent with Roman troops sent to garrison the plateau, whether in 52 BC or after Vercingetorix's defeat.

As for British potins found in Belgic Gaul, Caesar fought several subsequent campaigns there and over-wintered his legions in the region in 55–54, 54–53, and 51–50 BC, ample opportunity for some of the coins to have got into local hands. The early Roman fort at Liercourt-Érondelle and adjacent *oppidum* could even be one of the winter camps involved, while the St-Laurent-Blangy fortlet was founded between 50–40 BC, early enough for the garrison still to have been carrying coins taken from Britain.

Given the intensity of Roman military activity in Belgic Gaul, it is not surprising that some of the British potins should have ended their lives at sanctuaries. From their composition, Delestrée (1996: 39) argues that six of the hoards found at Bois L'Abbé are of military origin[19]—albeit of later first-century BC date—and notes the presence of a Roman fort next to the sanctuary, a combination we also find at Rouvroy-les-Merles and Vendeuil-Caply. In the Netherlands, Roymans and Aarts (2005) suggest that the coin offerings from Empel might be linked to the careers of Batavian soldiers recruited as auxiliaries, being deposited during communal rites held to mark the passage of young males to warrior status, or dedicated by individual warriors who had reached the end of their service to fulfil vows made at earlier date.

As we indicated, most of the remaining British coin exports to the Continent are much later types. Some were probably exported after the Claudian invasion, for instance as the possessions of soldiers who were posted elsewhere, notably the Icenian silver coin from Ludwigshafen-Rheingonheim, and some of the bronzes of Tasciovanus and Cunobelin, whose issues also turn up occasionally at Roman forts in other areas of Britain. Others may have been taken out by discharged soldiers returning to their homeland or in the pockets of officials, accounting for the scatter of late British coins from centres as far afield as Lyons, Reims or Saintes. However, the main cluster of finds is again in western Belgic Gaul and we should probably look to the regular movement of traders between there and eastern England from the Augustan period onwards as one contributory factor. The strong cultural links between the two regions may also have played a part, as may diplomatic missions and

[19] Bois L'Abbé hoard 1976–1–244 contained an early Western (or Southern?) silver unit (BM 2950), as well as Roman issues up to 39 BC.

refugees, and some of these later coins undoubtedly reached the continent while Britain was still ruled by nominally independent client kings.

CONCLUSION

It is widely accepted that the British Flat-Linear potins are the objects to which Julius Caesar was referring when he mentioned the use of *aere* as currency in Britain in 54 BC, alongside *nummo aureo* (*BG* V, 12). According to the evidence presented here, the Flat-Linear potins were probably first produced in the third quarter of the second century BC. Their initial homeland was in East Kent, but over time they spread into East Sussex, up the Thames, and eventually into the area north of the river. The series was already in its final stages by the time of Caesar's invasions, and soon after gave way completely to struck bronze issues, although the latest types continued to circulate for some decades.

Crude as they are in our eyes, the Flat-Linear potins were clearly of value to their Iron Age users and we should not be surprised if some of them were taken back to Gaul by individual Roman legionaries or auxiliaries, even if any larger payments extracted by Caesar (Suetonius, *Div. Iulivs*, 25) were mostly of gold. Although other explanations cannot be entirely ruled out, it is very tempting to see the British potins from the continent—and the new finds from Corent in particular—as a rare case where archaeology directly reflects events recorded in historical sources. A few potins, however, were probably earlier exports, just one more episode in what Barry Cunliffe has reminded us was a long-term pattern of interaction between peoples on both sides of the Channel, and a relationship which he, in particular, has illuminated through his work.

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15

Mapping Celticity, Mapping Celticization

John T. Koch

'Celticity' means the quality of being Celtic. 'Celticization' means the process or event(s) of becoming Celtic. Thus, Celticity involves a static or synchronic perspective and Celticization a dynamic, diachronic one. 'Celtic' is used here in a linguistic sense, because the debates of the past few decades over the term 'Celtic' seem to have left intact the concept of the Celtic languages as a proven and closely definable scientific fact, whereas Celtic culture (including Celtic art), Celtic identity, and so on, remain controversial and are prone to ambiguity (see e.g., James 1999; Sims-Williams 1998). Therefore, 'Celtic' here means belonging to the Indo-European sub-family of languages represented by the living Irish, Scottish Gaelic, Welsh, and Breton. These four, together with the recently extinct and now revived Manx and Cornish, and the ancient Celtiberian, Gaulish, Galatian, and Lepontic together form a genetic language family. That means, rather than having anything to do with biological genetics *per se*, that these languages show systematic similarities—more closely with one another than with any other attested language or group of languages—implying that they descend from a single proto-language, usually called 'Common Celtic' or 'Proto-Celtic', which had been the speech of a people, who had once formed a coherent community, occupying a particular geographic territory, at a particular time. The principle is the same as Latin and the Romance languages (French, Italian, Portuguese, Romanian, and Spanish), but in the case of classical Latin and its daughter languages the ancient proto-language is fully attested and its epicentre can be pinpointed in time and space.

It is highly unlikely that Celtic or a language directly ancestral to it was the first language spoken by human beings in any part of Europe. For example, Celtic was not the language of Palaeolithic France nor of Mesolithic Ireland. Proto-Celtic is the descendant of another reconstructable language, Indo-European, which itself dates, according to various experts, somewhere within the Neolithic or Early Bronze Age (Mallory 1989).

How does a language appear in a country? We shall consider three general paradigms. In Paradigm I, a group moves into a new country and retains their

old language. A new language then can appear overnight, and we need no sociolinguistic theory to understand this. In the case of Celticization, Paradigm I is the model of mass migration or the so-called 'Invasion Hypothesis'.

In Paradigm II, a people stay where they are, but acquire a new language and pass it on to their descendants. At some subsequent stage, this bilingual people give up the first language. Paradigm II requires generations and possibly centuries, particularly if bilingualism and then the new monolingualism gradually spread from community to community over a wide territory. For example, in Ireland, English–Irish bilingualism began *c.* 1169 and will continue beyond all our lifetimes. Paradigm II requires sociolinguistics to explain why people saw advantage in learning a new language and in passing it to their children, and then why some subsequent generation of bilinguals began raising their children speaking only the second language.

Because languages are always changing, there is also Paradigm III. Thus, for example, Latin enters Gaul with the Roman Empire and there evolves into a new language, French. A language already divided into mutually intelligible dialects can evolve (or 'co-evolve') into a new language with dialects. Thus, English has never been dialect-free. With Celtic, Paradigm III would mean that undifferentiated (or, at least, pre-Celtic) Indo-European evolved into Celtic within a territory and stayed there (as per Renfrew 1987; 1989). To understand Celticization by Paradigm III requires historical linguistics.

We need not assume that Celticization occurred the same way everywhere Celtic speech is found. It is possible that Celtic remained in its core area where it had evolved from Indo-European, then came by Paradigm I to another area then spread by Paradigm II to further neighbouring areas or *vice versa*.

THE DISTRIBUTION OF THE ANCIENT CELTIC LANGUAGES (FIGURE 15.1)

For explaining past cultural developments in their geographic context, maps have advantages over unadorned discursive texts. For well documented historical periods, maps can usefully illustrate the spread of languages. For example, a map of the Roman Empire showing its staged expansion with different colours representing the territories annexed at various dates and/or dated arrows representing the successful campaigns of Roman generals will be of first relevance to an account of the spread of Latin in ancient times or of the distribution of the Romance languages today.

Fig. 15.1 The distribution of the ancient Celtic languages

Ancient Celtic languages had a huge territorial distribution—about 4,000 kilometres from the Atlantic seaboard to Central Asia Minor—in the period before the expansion of Rome. In many parts of Europe, a Celtic language is the first attested language of the region. Unlike Latin, the study of the early Celtic-speaking peoples thus awkwardly straddles the periods of text-aided and text-free evidence.

On the basis of historical evidence, inscriptions on stone, coin legends, ancient place- and group names, and the like, figure 15.1 includes Ireland and Britain, the northern and western halves of the Iberian Peninsula, parts of northern Italy including the valley of Po and Adriatic coast down to Ancona, most of the Alpine region, Gaul from Armorica eastward to the Rhine and beyond to Bohemia and Moravia, with evidence for Celtic eastward to Pannonia, about the Tisza, Transylvania, down the Danube to the neighbourhood of Belgrade (ancient Singidūnon), even to the Danube Delta, where one finds the often overlooked pocket of Celtic names (the group name *Britolagai*, the place-name *Uergobrittiani*, and the doublets on either side of the river *Nouiodūnon* 'the new fort' and *Aliobrix* 'the other hillfort'). Further to the southeast on the Black Sea was the Celtic kingdom of Tylis (see now Falileyev 2005), and then the Galatians about Ancyra in central Asia Minor. Though suggested mostly by archaeological material, a Celtic presence in the Pontic Steppes is confirmed by the *Karrodunon* ('stone fort' or 'chariot fort') situated in Ptolemy's Geography beyond the Dnester; Falileyev tells me that the site is near Kamjanec Podilskyj, western Ukraine. There would have been linguistically mixed areas, such as southern Portugal and the eastern Celtic world in general. In northern Italy, Celtic was interleaved with Rhaetic, Venetic, and Etruscan. At this distance in time, we should not presume that wherever we have evidence for ancient Celtic it must have held a position of exclusive predominance.

This linguistic distribution map has the advantage—if it is an advantage—of text-based purity, but it lacks all dynamism and time depth. Here the Celtic languages were in the final pre-Roman Iron Age, without explanation as to how they got there. It maps Celticity, not Celticization. If such an ahistorical representation suits us, we should also eschew any title along the lines of 'The Celtic Languages at their Greatest Extent', which would imply a smaller territory at an earlier stage or stages—great, greater, greatest.

Two remarkable details call out for an explanation referring to events and processes of an earlier stage: first, the fact that a single branch of Indo-European was spread over so much territory at such an early date; second, the close similarity of the Celtic languages at this stage to one another. If it were not for the inscriptions in regional scripts (on which see Eska 2006b)—the ogam alphabet used for Primitive Irish, the Etruscan-derived scripts used

for Cisalpine Celtic, and the Phoenician/Iberian-derived script of Celtiberian—and all we had was ancient Celtic written in Greek or Roman letters, the observable differences would suggest not very different dialects of a single language, rather than distinct Celtic languages.

THE COMING OF THE CELTS (FIGURE 15.2)

Maps which show this linguistic distribution as one of their chief functions have long been a commonplace in books about the ancient Celts, European prehistory, Indo-European studies, and related subjects. Most of these maps have attempted to do more than figure 15.1, that is, not only show the distribution, but somehow explain it, i.e. to map Celticization. From this point onwards, this article offers a brief discussion of how such a diachronic explanatory map has been and might be drawn—inferences that can be taken from it, intentional and unintentional implications built into it, and some brief remarks on how likely or unlikely these inferences and implications are.

Figure 15.2—representing mid-twentieth-century assumptions—differs from Figure 15.1 in that it synthesizes three disciplines and reflects a threefold synthetic concept of the Celts: speakers of ancient Celtic languages = users and consumers of La Tène A (and possibly also Hallstatt C–D) material = people called *Κελτοί* or Celtae (also *Γαλάται* and Galli) by the classical authors. With such synthetic Celts (an integral feature of such masterful works as Powell's *The Celts* and Piggott's *Ancient Europe*), it was possible to write a continuous narrative, allow archaeology to pick up the baton, for example, whenever language and history gave out.

Usually (and without replicating details of obsolete scholarship not relevant to the present topic), Figure 15.2's outward outline—'the Celts (= Celtic languages) at their greatest extent'—would be much the same as figure 15.1's, but within this there would be an outlined or shaded 'core area', often so called, reflecting a La Tène A heartland (perhaps together with Hallstatt C–D on its south). Implicitly or explicitly, this is intended as the Celtic homeland. Around that core, there are often areas of lighter shading indicating zones of expansion of different dates and dated black arrows leading outwards, towards the periphery. For Britain, Armorica, and central Europe, these arrows were often based on the spread of La Tène-type artefacts and burials and get no dates or rounded-off dates. In Italy and the Aegean region, the arrows have close dates for documented invasions.

Before the Invasion Hypothesis was challenged, figure 15.2 offered an elegant symmetry. The unknown was commonsensically inferred from the

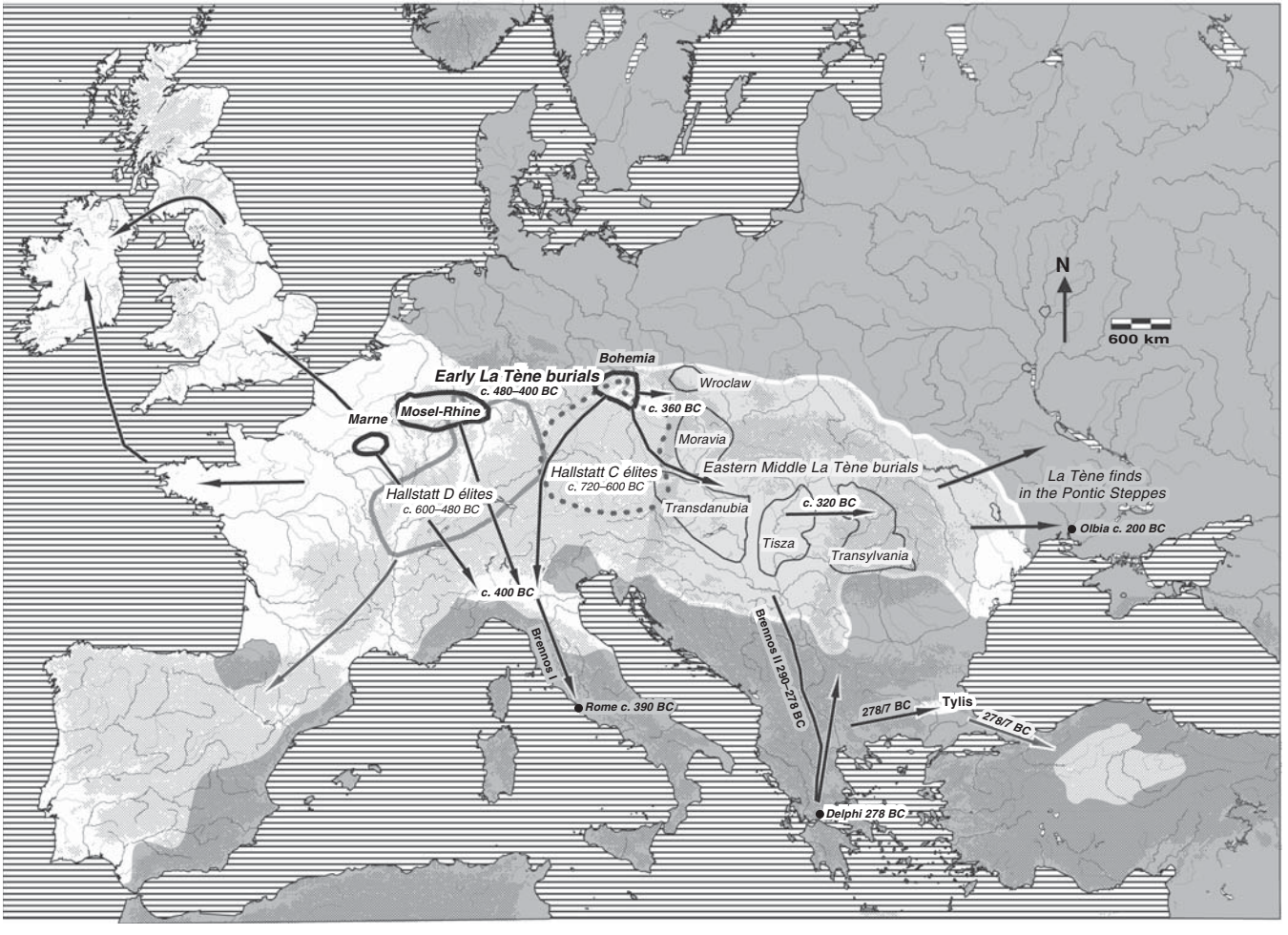

Fig. 15.2 The coming of the Celts

known: the immediate impression is that the westward arrows represent essentially the same type of event as the Brennos I (*c.* 390 BC) and Brennos II (290–278 BC) affairs—massive, rapid, and violent movements—and not many centuries outside the Early to Middle La Tène date range.

Though the accompanying standard account of the Celts often includes words to the effect that the Celts never built a great unified empire, these words are unintentionally subverted by this iconic 'Coming of the Celts' map, which uses the same visual conventions as a map illustrating the expansion of a historical empire, like the map of the Roman Empire described above. But the possibility of an actual Celtic Empire is easily excluded by text-based evidence. Comparing the attested Celtic languages the highest Proto-Celtic level of political authority is the *rix* 'king' of the **toutā* 'tribe' (Koch 2006a; 2006b), which seems to have been of modest size in all its local manifestations. Similarly, wherever we have detailed historical accounts—such as the arrival of Galatians in Asia Minor, Caesar's campaigns in Gaul, Boudica's revolt, or pre-Viking Ireland—we find small-scale societies, with joint action at levels higher than a single tribe (or Old Irish *túath*) being most often short term and based on intricate patterns of alliance and obligation between kings.

THE NON-EQUIVALENCE OF *Κελτοί*, LA TÈNE A, AND SPEAKERS OF ANCIENT CELTIC LANGUAGES (FIGURE 15.3)

Within British prehistoric archaeology, figure 15.2 foundered with the debunking of the Invasion Hypothesis (Clark 1966; cf. Waddell 1978), after which invasion and mass migration have been abandoned as models of prehistoric culture change (including Celticization), especially for Britain, Ireland, and the rest of the Atlantic Zone. This intellectual development was partly theoretical—the explosion of the assumption: an assemblage = a culture = an ethnic group = a language—but also based on the simple recognition that there was more evidence for continuity than for massive influxes of new population in prehistoric record of Britain and most of Europe.

Henceforth, there is no symmetry in the map: in other words, Paradigm I is still seen as the prime vector of Celticization in the text-aided record of the south and east, but in the north and west, probably Paradigm II, probably earlier.

When an explanatory model loses its elegant symmetry, we naturally wonder if we have gone off on the wrong track. Are we seeing Celticization by invasion only in the south and southeast because this is the only quarter we have historical evidence for and text-free archaeology is inadequate to reveal Paradigm I Celticization in the Atlantic Zone?

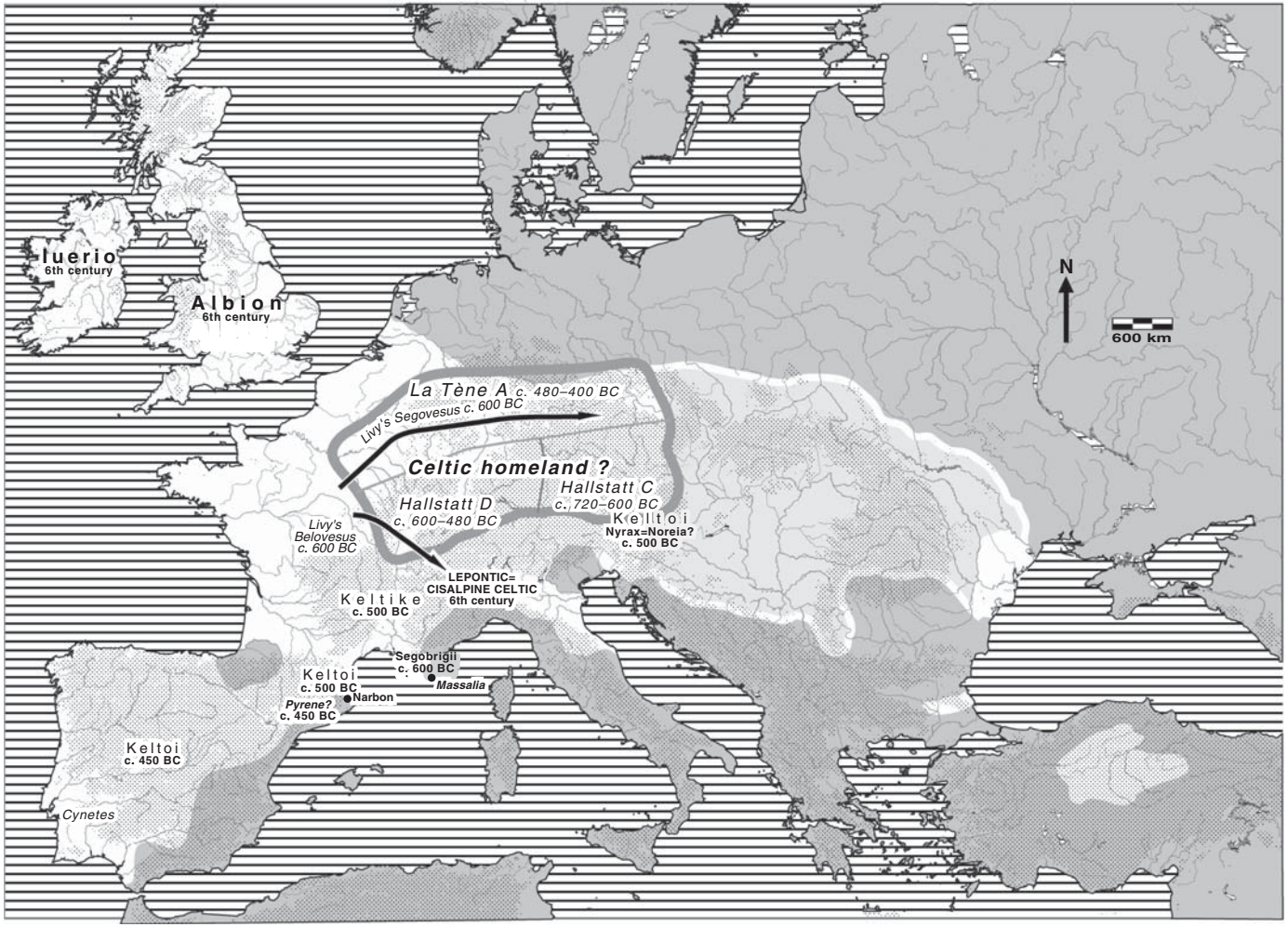

Fig. 15.3 The non-equivalence of *Κελτοί*, La Tène A, and speakers of ancient Celtic languages

Unfortunately, the advance in British archaeological thinking has been slow to be satisfactorily presented to other disciplines and even the Iron Age archaeology of other European countries. Post-invasionism has become tangled up with related but more florid arguments of British archaeology's Celtic controversy in the following years, which raises the awkward question of whether British exceptionalism *vis-à-vis* models of Celticization is somehow connected with the fact that the only modern state whose identity and existence has been challenged by Celtic nationalism is the United Kingdom, which lost twenty-six counties in 1922 in events stirred by this ideology (Koch 2001). However, we need not pursue this potentially inflammatory line. Figure 15.2's symmetrical Paradigm 1 Celticization and multidisciplinary synthetic Celts run afoul of basic facts.

There is abundant evidence that Celtic languages were already spoken far outside the 'core area' well back in the Early La Tène period, or even before its inception *c.* 480 BC. Thus, we have inscriptional evidence for Lepontic—the Celtic language spoken about the Italian Lakes District, north of the upper Po, corresponding closely to the territory of the Golasecca culture—from the sixth century BC (Eska 2006b). Furthermore, the thinking of Celtic historical linguists is increasingly favouring the idea that the language called 'Cisalpine Gaulish', found in northern Italy in the last centuries BC, was not a new language introduced from across the Alps in the La Tène period, but rather simply a later form of Lepontic (Eska 2006b). In other words, any arrows drawn from the La Tène A heartland (about the Marne, Mosel, Middle Rhine, and in Bohemia) over the Alps could be relevant to getting La Tène material into Italy, but it is no longer required to account for Celtic speech there. It also worth noting that Livy's story (*Ab urbe Condita* 5.34) of King Ambicatus of the Bituriges and the migration led by his nephew Belovesus into northern Italy is dated to the time the Roman king Tarquinius Priscus (616–579 BC) well back into Hallstatt D or even Ha C.

Though the controversy over the name 'Celt' has raised awareness that not all speakers of ancient Celtic languages were called *Κελτοί*, *Celtae*, or the like, we do, on the other hand, have evidence for Celtic languages in the territories of all groups called 'Celts'. The earliest surviving references come from Hecataeus of Miletus, writing *c.* 500 BC or shortly before.

> (Fragment 54) Narbon: trading centre and city of the Celts . . . Hecataeus calls them Narbaioi.
> (Fragment 55) Massalia: a city of Ligurians near Celtica, a colony of Phocaeans. [According to] Hecataeus in his *Europa.*
> (Fragment 56) Nyrax: a Celtic city. [According to] Hecataeus in his *Europa.* (Koch and Carey 2003: 5; trans. P. Freeman)

The reference to Massalia (Marseille) puts Keltike close to the Mediterranean, and that to Narbon brings the Celts right down to the sea further west. It is worth noting in this connection, that Trogus Pompeius's account (*Philippic Histories* 43.3) of the Phocaean Greeks' founding of Massalia (which occurred *c.* 600 BC, also coinciding with Tarquinius Priscus), gives the name of the local tribe of the region as the eminently Celtic *Segobrigii* 'people of the strong hillfort'. If Nyrax means Noreia or, at least, somewhere in Noricum, that would place the Celts near Hallstatt and our earliest documentary reference for them in the 'core area' of west-central Europe.

In the third quarter of the fifth century BC, Herodotus wrote:

> The Ister [Danube] beginning in the land of the Celts and the city of Pyrene, flows through the middle of Europe. The Celts live beyond the Pillars of Hercules and border on the Cynetes, who are the westernmost inhabitants of Europe.
>
> (*History* 2.33; Koch and Carey 2003: 5; trans. P. Freeman)

If Herodotus is correct about the source of the Danube, then he is locating the Celts in the 'core area'. But what he says next directs us to the Atlantic littoral of the Iberian Peninsula, suggesting that the mysterious Pyrene might lie near the Pyrenees.

Early names for the inhabitants of Ireland and Britain occur in the *Ora Maritima* of Rufus Festus Avienus—*gens Hiernorum* 'the race of the Iuerni (i.e. the Irish)' (line 111) and *insula Albionum* 'island of the Albiones (i.e. the British)' (112). Though Avienus's Latin text dates to the fourth century AD, he was using much older sources, and this portion is widely agreed to be based on a 'Coastal Itinerary of Massalia' of the sixth century BC. Both of the group names are Celtic, and both are derived from the necessarily even more ancient Celtic place-names, *Iueriu* 'Ireland' (etymologically 'the fat or fertile country') and *Albion* 'Britain'. I have written about these names at some length previously (Koch 1986; 1991). Recently, Patrick Sims-Williams (1998: 19–21) has cautioned that, though these names are indeed old and Celtic, the Greeks may first have learned them from Continental Celts as their names for peoples and islands not yet Celtic speaking themselves. Although this alternative must be considered, I think it less likely for several reasons. First, in the Goidelic languages the corresponding forms are extremely well attested and basic in the lexicon. *Ériu* is Ireland's national name in Old Irish. *Albu* or *Alba* is the usual name for north Britain, later the kingdom of Scotland, thus that part of Britain that is farthest from Gaul and Massalia. It thus looks like a relic, which has been gradually marginalized and restricted by successive newer group names, i.e. *Bretain* 'the (Romano-) Britons, the Welsh' < *Brittones* and *Saxain* 'the Anglo-Saxons, England'

< *Saxones*. Similarly, the group name *Iuerni* is found already marginalized in southwest Ireland in the Geography of Ptolemy, which is probably based on information of the mid-first century AD (Toner 2000), and this is where Irish tradition locates a people called *Érainn* (the medieval Goidelic form of the name *Iverni*), who are celebrated in the king tales as having once dominated Ireland, but having lost power in remote pre-Christian times. Furthermore, the eponymous Irish legendary founders include *Iär* (< Celtic **Iweros*) and *Íth*, which means 'fat'. In medieval Irish, neither of these names retains any obvious connection with *Ériu* or *Érainn*, but the shared etymology would have been clear in ancient Celtic. Old Irish also possesses a common noun doublet for the national name, *íriu* meaning 'land, soil, earth'. In all these details, we find no reason to distinguish, and every reason to identify, the form of Celtic in which the Greeks of Marseille first learned of Britain and Ireland and that ancient Celtic that became the Irish language and tradition. Even if we take Sims-Williams's point, the key implication of *gens Hiernorum* and *insula Albionum* is that Celtic speakers had close contact with, and detailed knowledge of, Ireland and Britain, whether or not they were already in the majority there (see further Koch 2003).

With figure 15.3, we must abandon the synthetic Celts: *Κελτοί*, La Tène A, and speakers of ancient Celtic languages are plainly not interchangeable. The last category completely contains the former two. In other words, ancient people called *Κελτοί*, etc., almost always occur together with further evidence for the Celtic speech: for example, the Celtici of southwest Spain are close to place-names with the Celtic elements *-brigā* 'hillfort', *eburo-* 'yew', and *sego-* 'strong'. Similarly, apart from stray objects out of their usual contexts, wherever we find groups using La Tène material, there is evidence for Celtic speech. But the converse is not true. We find the eminently Celtic Primitive Irish (i.e. ancient Goidelic) in the southern half of Ireland without La Tène culture and without *so far as we know* these people being called or calling themselves 'Celts'. Similarly, there is little or no La Tène material in the country of the ancient Celtiberian language of east-central Spain. And Asia Minor's Galatian language—many of whose names are indistinguishable from those of the Celtic of Gaul and Britain—is accompanied by so little La Tène art that we must count the Dying Gaul's torc.

In chronological stratification, La Tène A is the latest phenomenon. *Κελτοί* goes back at least into the Hallstatt Iron Age. But as the most extensive phenomenon, Celtic speech would accordingly be older still, and our attention is directed to the Bronze Age.

'THE PEOPLE FORMERLY KNOWN AS CELTS' (FIGURE 15.4/FIGURE 15.2 UPDATED)

Rejecting—or at least applying scepticism to—invasionist models and scrupulously narrowing the definition of Celticity should result in a complete change in any map used to illustrate—and in some sense account for—the appearance of Celtic speech in Ireland and Britain (and likewise Armorica and extensive parts of the Iberian Peninsula). However, one still frequently finds—either as actual maps or implied by verbal generalizations—the long shadow of the iconic 'Coming of the Celts' map. Some of the obsolete features may be carefully amended or replaced, but less offensive old features have been retained even though they now explain little. In other words, the revised map tends to show static Celticity in the Atlantic Zone with dynamic Celticization at the Mediterranean interface. The dateline is often still the Iron Age, even though a number of writers are now looking to the Bronze Age—or earlier—as the horizon of the Celticization of the Atlantic Zone (e.g. Koch 1986; 1995; Waddell 1995; Waddell and Conroy 1998; Cunliffe 2001) . We are thus seemingly still enthralled by the idea of Celtic emanating westward from Iron Age central Europe, whether our attitude to this old model is to preserve it (thesis), to debunk it zealously (antithesis), or salvage what we can and modify what we cannot (synthesis).

To repair figure 15.2, we may give the westbound and northbound arrows dates pre-dating La Tène A, leave the dates off, or, as in figure 15.4, leave the arrows off altogether. Keeping the arrows would still tend to imply Celticization by the same process as in the historical south-central and south-eastern areas—i.e. Paradigm I—even if we are now thinking of a Hallstatt C–D or Bronze Age date for the mass migrations/invasions. With the time-line now shifted back and the synthetic Celts exploded, should we really expect that Celtic speakers of this early period—not called *Κελτοί* and not using La Tène—must have interacted with the small-scale societies of the Atlantic Zone as did Celtic speakers—who did use La Tène material and were called *Κελτοι*—interacted with Mediterranean civilization in the fourth and third centuries BC? Thus, by leaving the arrows off, we are now non-committal as to which paradigm of Celticization pertains in the Atlantic Zone.

On the east of figure 15.4 (retained from figure 15.2), we have a largely uncontroversial historical arrow or series of arrows for the years following 290 BC, during which the Gaulish horde led by Brennos II made their ultimately unsuccessful attack on Delphi. Some of them regrouped under Kommontorios to found the short-lived kingdom of Tylis in southeast Thrace

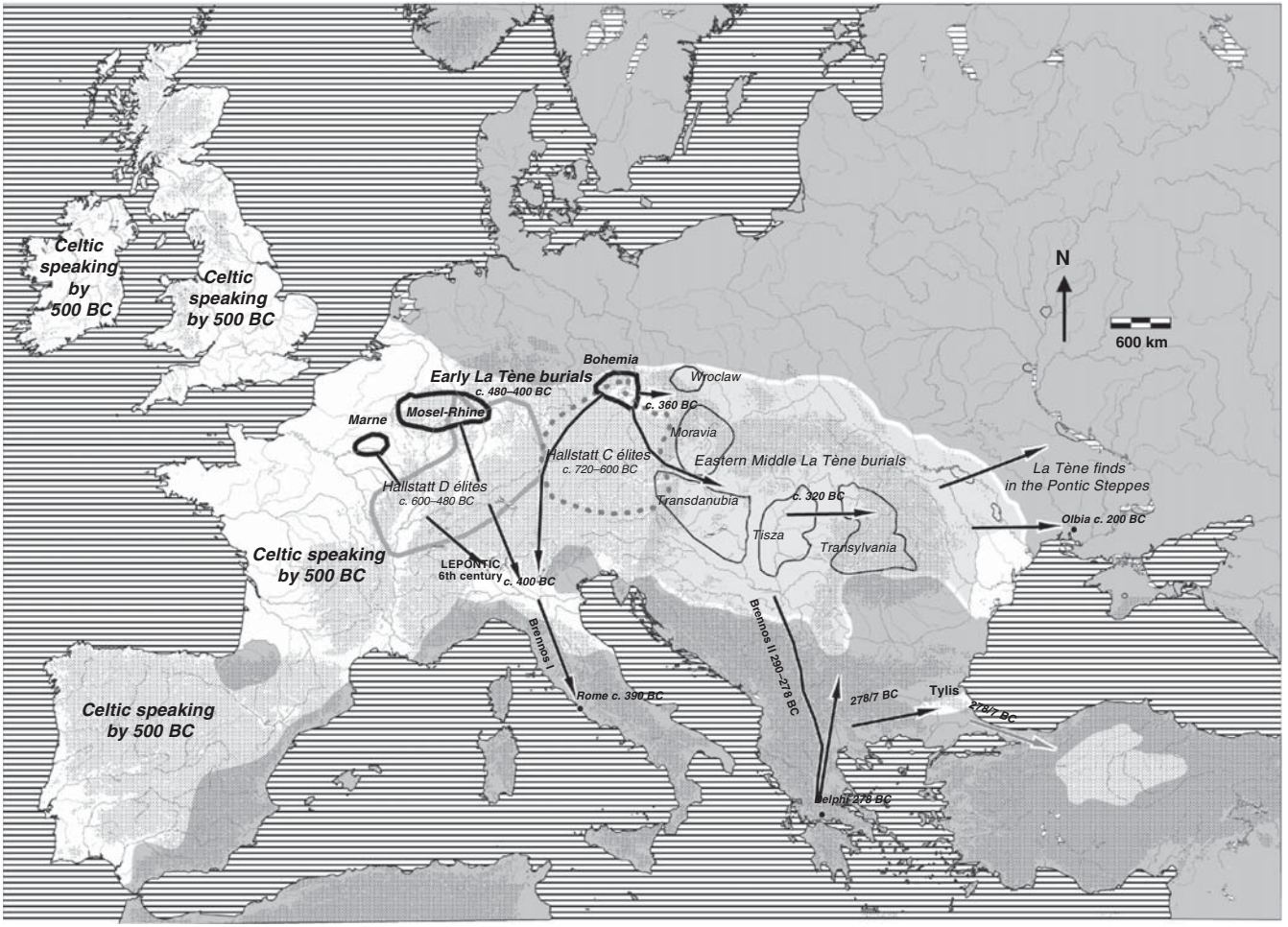

Fig. 15.4 Map 15.2 updated: 'The People Formerly Known as Celts'

north of Byzantium. Others, reinforced from central Europe, crossed over into Asia Minor and eventually consolidated their grip on Galatia in what had been Phrygia. Behind these historically documented arrows, even those recent maps that have eschewed the arrows for the Atlantic Zone tend to retain them leading east from La Tène A Bohemia. Going down the Danube with rounded-off Middle La Tène dates in the fourth century BC, these explain Celtic name evidence and burials in Moravia, Pannonia, the Great Hungarian Plain, and about the Sava and Drava. Another ahistorical arrow points due east to Middle La Tène cemeteries in Transylvania and the Carpathians. Let us just consider in passing the possibility that we might be making the same mistake here that used be made with Ireland, Britain, and the Lepontic area, that is, we have drawn the map so as to imply that the arrival of La Tène culture in an area means the arrival of the 'Celts', which, if we look back to the components of the old synthetic concept, means also the first speakers of Celtic languages. But there is substantial Hallstatt C background in the culture of these lands about the bend of the Danube and Carpathian Basin, and behind that, this region is the homeland of earliest Urnfield culture of the fourteenth and thirteenth centuries BC. Both are excellent candidates as largely Celtic-speaking prehistoric cultures and have been repeatedly claimed as the Celtic epicentre. Though there is evidence also for probably non-Celtic-speaking Cimmerians and Iranian-speaking Scythians and other groups in these areas in the intervening period, are we sure, and is it even likely, that Celtic speech had been completely swept out of these areas or lost contact with them in the period *c.* 800–*c.* 400 BC? In other words, arrows into east-central Europe dated *c.* 360–*c.* 300 BC may have nothing to tell us about the expansion of the Celtic languages; though they might, as La Tène arrows in Britain or northern Italy, indicate influence of Gaulish/Belgic dialects on areas in which Celtic had already been spoken for centuries. With the likely exception of the lower Po region, the expansion of La Tène may in all areas be a process occurring in, and possibly reinforcing, lands in which Celtic speech was already established. In other words, are we mapping Celticity, not Celticization?

THE ANCIENT CELTIC LANGUAGES AND LATE BRONZE AGE EXCHANGE NETWORKS (FIGURE 15.5)

The evidence summarized in figure 15.3 shows that the expansion of La Tène A (*c.* 480–400 BC), and *a fortiori* any subsequent stage, is simply too late to account for Celticization in western and central areas. Only if we reinterpret

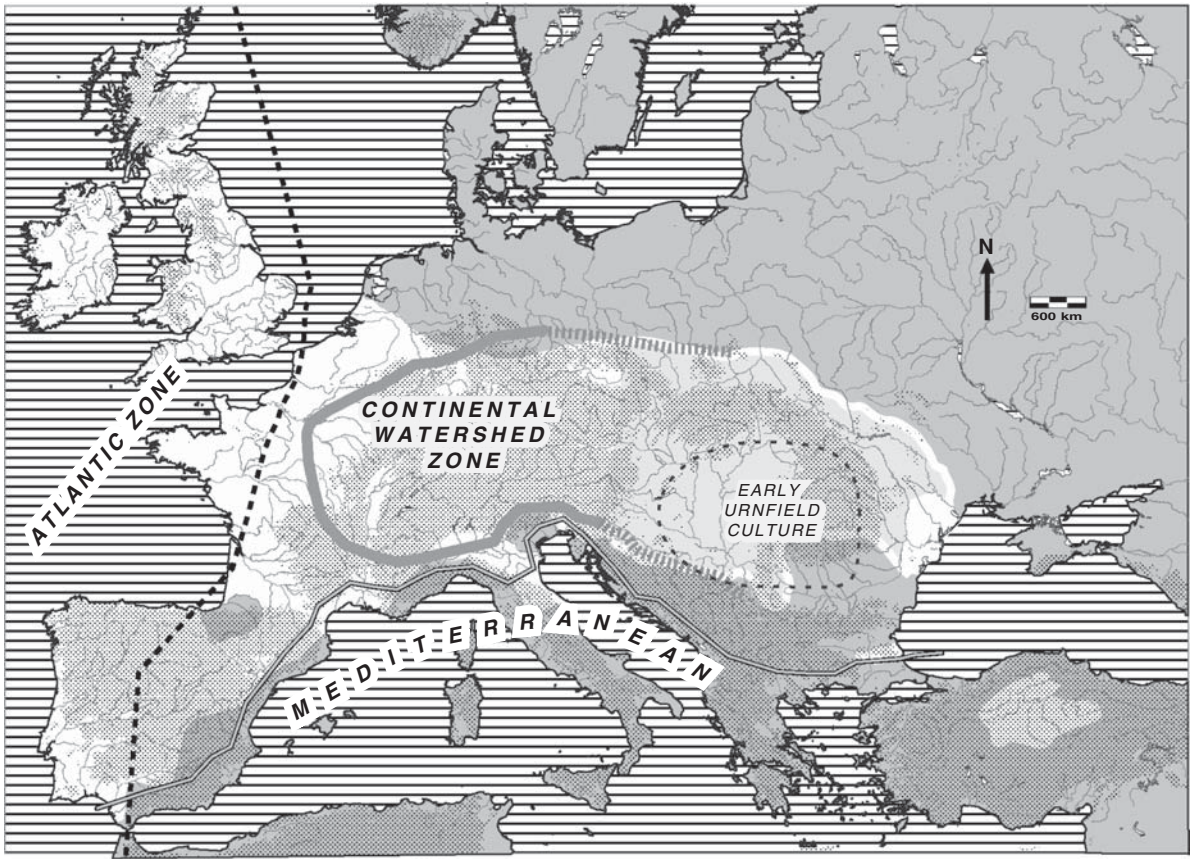

Fig. 15.5 The ancient Celtic languages and Late Bronze Age exchange networks

the archaeology to reinstate Celticization of the Atlantic Zone by Paradigm I as a likelihood can Hallstatt D (*c.* 600–480 BC) be relevant. If any appreciable scope is permitted Celticization by Paradigm II or III—as the archaeological record seems to demand—Hallstatt C (*c.* 720–600 BC) is too late as well. It is worth noting that the intensity of interaction between Ireland and the rest of western Europe does not look great enough at any Iron Age horizon to account for the foundations of a shared language by either Paradigm I or II.

So we look back to the Late Bronze Age (*c.* 1300–700 BC), as a period of intense contact—exchange of prestige goods, values, ideas (including ritual practices)—linking the Atlantic Zone and the area characterized by Cunliffe (2001; 2003) as where the great rivers rise (the Loire, Seine–Marne, Rhine, Mosel, Elbe, Danube, Rhône, Saône), called here accordingly 'The Continental Watershed Zone'. In view of the possibilities expressed in the preceding section about the east Hallstatt and Urnfield background of the middle Danube lands and Transylvania, I have left this zone's eastern limit indefinite.

To focus on the Bronze Age as the formative era for the Celtic languages is not a new idea. Regarding the Celticization of Ireland—with implications for the rest of the Celtic world—my own published ideas (1986; 1991) are broadly consistent with those of John Waddell (1995), though coming at the problem from different perspectives and bodies of evidence. The ideas of Cunliffe (2001; 2003) offer a new perspective, emphasizing a longstanding and coherent Atlantic Zone and stable exchange networks linking major regions. Figure 15.5 is primarily indebted to this approach, giving the immediately obvious advantage of representing archaeological phenomena that are both sufficiently early and on a sufficient scale to explain Celticization. The Atlantic and Watershed Zones are striking in being nearly coterminous with the linguistic distribution of figure 15.1.

Using the terminology of the present paper, my thinking remains that Celtic most probably came to the Atlantic Zone from the Watershed Zone, primarily by Paradigm II, and that the key period for the shift is the late Bronze Age. In favour of a westbound Paradigm II, both Indo-European and metal working came to the Atlantic Zone from the east. During both the late Bronze Age and the historical Celtic-speaking world that followed it, some key items of aristocratic status display, featuring also in the widespread deposition ritual, such as the sword, had come also from central Europe to the west. As I wrote in 1995, the peculiarities of the medieval and modern Celtic languages are more intelligible if we suppose that a non-Indo-European Language had been spoken in the Atlantic Zone before Celtic was introduced by élite exchange and only later imperfectly acquired by the masses not involved in élite exchange. The longer such a substratum was submerged under Celtic—if, say, since the Beaker Copper Age—the less it could explain (cf. Gensler 2006). Though

I still see my theory as the most likely scenario—call it Possibility (2a)—for the foregoing reasons, I realize now in the light of *Facing the Ocean* that there are possibilities I had not considered. Perhaps I had been too conditioned by recurrent black arrows leading from west central Europe to Britain and Ireland to imagine removing or reversing them. Was I alone? The point I wish to make now is that there are two alternatives that I did not discuss before, but that most of the argument in Koch 1986 and 1991 suits these possibilities as well: (2b) Indo-European arrives in the Atlantic Zone by the Early Bronze Age, evolves into Proto-Celtic there first, and then spreads primarily by Paradigm II, in the context of intensifying late Bronze Age exchange networks, to the Watershed Zone; (3) a very large Indo-European dialect area embracing both the Watershed and Atlantic Zones, closely bound together by stable and intensifying long-distance exchange networks, co-evolves by Paradigm III to Proto-Celtic over the course of the Bronze Age (say *c.* 2700–700 BC). In connection with Possibility (2b) and as an illustration of how scholars may have been conditioned to overlook certain pieces of evidence and possible interpretations, there is Caesar's well-known statements that druidism originated in Britain and that Gaulish druids travelled to Britain for advanced training (*De bello Gallico* VI.13). Now, if we thought that Celtic language and its culture had come to the Watershed Zone from the Atlantic, this would seem as it should be, but there had been such certainty over the general direction of Celticization that some obvious implications could not be seriously considered.

Cunliffe has written of Celtic probably developing as the *lingua franca* of the bronze exchange networks of the Atlantic Zone and Watershed Zone, and I have written of Proto-Celtic *koine* in a similar sense (1991; 1995). Whether it is Possibility 2a, 2b, or 3, it is important that we not think in terms of the 'trade languages' and pidjins associated with the exploration and colonialism of modern European Empires. The Celtic society that emerges in the earliest Irish and Welsh literature has no trade in the sense of impersonal exchange. It is, rather, a gift economy. Every exchange continues or creates a personal relationship and mutual obligation: the receiver was obligated and subordinated to the giver within the hierarchical social structure. In reciprocation, the whole process was mutually ennobling. Even when Celtic coins appear in the last centuries BC, their limited distributions and frequent appearance in established ritual contexts suggest that it does not signify the advent of a true cash economy like that of their Mediterranean prototypes. Rather, Celtic coins functioned as tokens of status bestowed by leaders, binding their followers to them by honour and obligation. Within such a gift economy, it is right to stress—as does Cunliffe—that there was exchange of values, ideas, and beliefs, as well as the prestige goods that represented these and that from a

purely practical point of view such exchanges would require a commonly understood language. From a sociolinguistic point of view, it is important also that this language—as part of a mutually ennobling system of prestige exchange—must have been itself ennobling and prestigious, fulfilling the functions of a modern language of diplomacy, ritual, and court life, as well as trade.

What we can observe through archaeological remains is of course only the most tangible and durable tip of the iceberg of the exchange networks. From the literate Celtic world of the early Middle Ages, we can see the close relationship in the social rôle and status of artisans making tangible prestige items and other peripatetic skilled professionals, such as musicians and poets. This functional unity is observable both in the social system as described in the laws and tales and also in the vocabulary. For example, Old Irish *cerd* means a craftsman or artisan, or specifically a gold, silver, or bronze smith, also a craft itself. In Early Welsh *cer*^{d}(also from Proto-Celtic **kerdā*) more usually means a song or poem and *cer*^{d}*awr* is a musician or poet. Old Irish *cruth*, Welsh *pryd* (< Proto-Celtic **k*^{w}*ritu-*) means a tangible form, usually with a favourable sense. In Early Welsh, the *prydy*^{d} is one of the highest grades of professional poets, etymologically the maker of forms. The ogam Irish QRITTI also derives from Proto-Celtic **k*^{w}*ritios* and could mean either a professional poet or skilled maker of fine objects, perhaps both. We find the same root in *Πρεταν*ί*α* (< Celtic group name **Pritanī*), the post-*Albion* name for Britain encountered by Pytheas of Massalia *c.* 325 BC, also Early Welsh *Prydein* 'Britain', and Old Irish *Cruithin* and *Cruithne*, used for both the Picts of north Britain and a group probably of British origin in north and east Ulster. The group name, therefore, seems to identify the people as associated with forms produced by high-status professional artisans, including the high-register linguistic creations of the Celtic poets.

When we see the Celtic-speaking groups emerge into the historical record and with their own fragmentary inscriptional evidence in the mid-first millennium BC, and then later in the full light of their own early literatures, we find them amidst the leading themes for which there had already been overwhelming material evidence from the Late Bronze Age of the Atlantic and Continental Watershed Zones. But now their praiseworthy values are fully confirmed as the stock attributes of gods, heroes, and kings. And now the attested Celtic languages often give us reconstructable Proto-Celtic words for the culturally charged accoutrements of the élite: hill-fort *brigā*, *dūnom*, and *rētis*; spear *gaisom*; shield **skētom* (Old Irish *scíath*, Old Welsh *scuit*), sword **kalgā* and **kladios*; gold neck ornaments (probably) **mind-*; cauldron **k*^{w}*ariom* (Old Irish *coire*, Early Welsh *peir*) as the central attribute of the noble or otherworldly feast **wlidā* (Old Irish *fled*, Old Welsh *guled*);

and aristocratic exchange with the immortal hierarchy of an otherworld of subterranean and submarine situation, for which inherited words are the Goidelic *síd* 'fairy mound' (Ó Cathasaigh 1976/8) and the Early Welsh *Annwfn* 'Un-world', a word probably also attested in Gaulish (De Bernardo Stempel 1989). The text-free archaeology of the relevant parts of Europe in late Bronze Age forms—in such key respects—a continuum with the known Celtic-speaking world of classical antiquity and the early insular Middle Ages.

In some instances, the regalia of the warrior aristocrat survives only as words in the literature of the early Middle Ages: thus, the post-Roman heroes of the *Gododdin* are described as wearing the gold torcs of their pre-Roman forebears, and elaborate descriptions of the chariot (Old Irish *carpat* < Proto-Celtic **karbantom*) are stock attributes of the heroes of Old and Middle Irish sagas of the Ulster Cycle (Karl and Stifter 2002).

As Cunliffe (2001) has shown, we can continue back through text-free archaeology seeing the prior existence of the Atlantic and Continental Watershed exchange networks and their contacts with one another, tracing unbroken chains of local developments, back at least to the Early Bronze Age of the third millennium BC. But Celtic philology cannot follow. With the Beaker package, for example, drink is important in the Celtic value system, and we have Proto-Celtic words for mead (*medu-*) and beer (*kurmi-*), but pottery is not important, and it is scarce in Ireland in the first millennium BC. Nor is archery highly valued in early Celtic tradition; Hochdorf is thus surprising. For all their prominence in the landscape, henge monuments and stone circles have few clear resonances before the inventive Geoffrey of Monmouth, and shared vocabulary is limited to the generic *karn-* 'stone monument'. This discontinuity of cultural themes is no proof that the Atlantic Zone could not have been Celtic-speaking already in the Early Bronze Age (Possibility 2b or 3) or even the Neolithic, but merely that the study of the Celtic languages and literatures finds less that it can make sense of in terms of its usual materials as it goes back behind the Late Bronze Age.

If we suppose that the primary vector of Celticization at the Late Bronze Age (perhaps beginning even earlier) had been Paradigm II (Possibility 2a–b), how then do we see a fairly uniform language established, and for some time maintained, across vast distances over the small-scale societies (of a few thousand or tens of thousands of souls each) as indicated for the pre-Roman Atlantic and Watershed Zones? Down the line exchange between adjacent **toutās* (to use the Proto-Celtic word) is one possibility. A diplomatic gift is made by a Celtic *rix* to his pre-Celtic neighbour of a fine sword, cauldron, or gold neck-ring. The word and significance of the gift is also

exchanged as part of the package: the sword and its bearer are praised by the Proto-Celtic poet. Or the druid says the appropriate Proto-Celtic words as the gift sword is sent down in exchange with the gods in the competitive potlach of the deposition ritual. Thus the pre-Celtic chieftain invests in the package, aspiring to become a Celticized *rix* himself. Any model limited to down the line exchange between adjacent small societies—even allowing many centuries—brings to mind a game of Chinese whispers in which the resulting similarity of languages spoken in Celtiberia, Kerry, and on the Danube becomes incongruous.

Texts suggest an answer in revealing a Celtic world in which trained professionals (druids, poets, and artisans) regularly moved over, around, and through the territories of feuding tribes. As seen especially in the Old Irish laws, but confirmed also for other Celtic lands, the tribal king and his royal heirs—Old Irish *rígdomnae*, literally 'stuff of kings' (Binchy 1970: 25–30)—were also of a status enabling them to travel distances around other tribes. This is why Caesar used King Commios of the Atrebates as his emissary/interpreter to Cassiuellaunos in Britain (*De Bello Gallico* IV.21) and why St Patrick paid the sons of Irish kings to accompany him to far parts on his mission (*Confessio* §52). Caesar also tells us that the druids from all parts of Gaul met at the central location—reckoned to be Gaul's centre—in the territory of the Carnutes each year (*BG* VI.13), that their training could take up to twenty years, and the famous statement that the druids—though literate—did not entrust their teachings to writing (*BG* VI.14). In the Old Irish laws, the people of professional skill (*aes dáno*) had the prerogative of retaining their earned status when travelling between tribes. Together this evidence shows a system in which long-distance exchange was possible by being integrally connected with communication in an educated standard language arching over a political patchwork.

A passage from *Culhwch ac Olwen*—which is both the oldest Arthurian tale and oldest Welsh prose tale—illustrates these points. The resplendently accoutred Culhwch rides unrecognized to the convened court of his cousin King Arthur. The court is already assembled and the feast has begun, so Culhwch is barred by the gatekeeper who says that only 'the son of rightful territorial king or the artisan/musician who brings his art (*ker*^{d}*awr a* ^{d}*ycco y ger*^{d}) might be let in' (Bromwich and Evans 1992, lines 90–2). After prolonged wrangling, Arthur hears the description of the noble stranger and overrules the laws of his own court: 'We are noblemen so long as we may be approached. The greater the favour we give, ever greater will be our own nobility, our [?]fame, and our esteem' (lines 136–8). A similar story of a noble stranger's struggle to gain an admission to an assembled *túath* within its stronghold is that in the Old Irish mythological tale *Cath Maige Tuired*

(ed. Gray 1982), where the traveller is Lug, the Irish manifestation of the pan-Celtic Lugus, god of all crafts and exchange. In these tales we see the essence of paradoxical social convention in which the assembled tribe is complete within itself and fortified against the world, but simultaneously open to art and any member of the royal class (*cerd* and *rígdomnae* in Old Irish), and it was the defining wisdom of the great king to see that maintaining the correct balance between the insiders and worthy outsiders was the key to his own status. If we take this code seriously, it requires long distance exchange, shared élite values, and a common high-register language. Identities are also being exchanged and reconfirmed here—not group identities as Celts or Dumnonii, but class identities as royalty or a skilled professional. Looking at figure 15.5 in this light, it is possible to envision Celticity spreading by Paradigm II in long-distance exchange into a pre-Celtic contact area as élite goods and values, accompanied by the praise poems and hero tales that explained the meaning of the cultural package.

With figure 15.4, we noted the asymmetry of La Tène period Celtic invasions into northern Italy and the Aegean, but apparently not into the Atlantic Zone. Looking at figure 15.5, the La Tène/Hallstatt 'core area' is disposed of and with it the apparent asymmetry of Celticization. The noteworthy pattern is instead the Mediterranean barrier to Celticization, even though the Celtic world met the Mediterranean exchange systems at Gibraltar and again in the Po and Rhône–Saône routes. Celtic speech breaks through into the Mediterranean Zone with well documented mass invasions (Paradigm I). Why? Possibly a pre-Celtic, pre-Indo-European megalithic Atlantic Zone had been open to the Celticizing gift-economy exchanges as in my Possibility (2a), but the Mediterranean world somehow was not, owing to its urban social structure, nature of the status and identity of its citizens, and/or different and impersonal conventions of exchange. It is perhaps significant in this connection that collapses of Mediterranean civilization coincided with Ireland's two great 'Golden Ages'—the Late Bronze Age, culminating in the Dowris Phase of *c.* 900–*c.* 650 BC, and the pre-Viking Early Christian period of *c.* AD 600–800.

With Possibility (3), both the Atlantic Zone and Watershed Zone had simply been Celtic, or were becoming Celtic, for a very long time, had co-evolved within this vast double zone into one exchange-linked linguistic and cultural system from Indo-European over, say, the whole Bronze Age. Perhaps the Celtic world could maintain its own unity and communicate new trends through peculiar social conventions within its long-established geographic limits, but lacked any special genius for expanding those frontiers except by mass migration and violence.

Fig. 15.6 Timagenes and the Druids

TIMAGENES AND THE DRUIDS (FIGURE 15.6)

The following passage from Ammianus Marcellinus (*c.* AD 330–95) attributed to the lost work of Timagenes of Alexandria (*fl. c.* 55–30 BC) could suggest Possibility 2a, 2b, or 3.

> The Druids recount that part of the population of Gaul was indigenous, but that some of the people immigrated there from outlying islands and the lands beyond the Rhine, driven out by frequent wars and violent floods from the sea. (15.9.4)

Here, the core area is west of the Rhine and one arrow comes in from central or eastern Europe, others—if we provide the most obvious interpretation for 'outlying islands'—swoop southeast from the Atlantic Archipelago. Is this a map of Celticization? If so, which of the three groups were the first to speak Celtic in Gaul? Or is it a map of Celticity—a complex web of long-distance movements and local developments within vast regions that were all already Celtic speaking, or incipiently Celtic speaking, before the horizon of memory?

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16

Druids: Towards an Archaeology

Andrew P. Fitzpatrick

> This is, of course, pure speculation but it is not too much too expect that the graves of the religious leaders of the community may have been distinguished in some way, as were those of the aristocratic class
>
> (Cunliffe 2005: 559)

A comparison of the first and fourth editions of the magisterial survey and synthesis of *Iron Age Communities in Britain* shows how much our understanding changed, and improved, between 1974 and 2005. Many of the changes are directly due to Barry Cunliffe's own work, published promptly and accessibly. Woven through many of those works have been the strands of the interplay between history and archaeology, and between civilization and barbarism. One area in which there has been little change, however, is in the study of religious authority, where our understanding is restricted almost entirely to literary evidence about Druids in Gaul (Cunliffe 2004: 109–11; 2005: 572–4). There are the merest of hints from the funerary data, from a consideration of which the quotation above is taken.

It will be argued here that there is rather more evidence for people with religious knowledge and skills in Iron Age Britain than has been thought

This chapter owes much the published work and the assistance of another distinguished student of the Iron Age; Ian Stead. I am also grateful to Jean-Jacques Charpy (Epernay Museum) for information on the find from Pogny/La Chausée-sur-Marne and to Adam Gwilt (National Museums and Galleries of Wales), Andy Halpin (National Museum of Ireland), Fraser Hunter (National Museums of Scotland), Val Rigby, R. Uprichard and J. D. Hill (British Museum), and Alison Roberts and the late Andrew Sheratt (Ashmolean Museum) for their help with objects in their collections. J. D. Hill also provided information about the Kinton find. The metallurgical analysis was kindly undertaken by Peter Northover (Oxford University). Philip de Jersey (Oxford University) and Bob van Arsdell (New York), discussed the veracity of the Petersfield coin with me and its links with unpublished finds recorded in the Celtic Coin Index. Mansel Spratling and the late Graham Ritchie (Royal Commission on the Ancient and Historical Monuments of Scotland) kindly allowed me to refer to their unpublished doctoral theses. A version of this chapter was presented to the Iron Age Research Seminar meeting at the National Museum of Wales and I am grateful to the participants for their suggestions and to Colin Haselgrove and Fraser Hunter for their comments on a draft manuscript.

previously, but that there is little evidence for a specialist priesthood and these roles were combined with others. The evidence is often elusive, but the history of the study of Iron Age religious authority has also militated against its recognition. In order to appreciate this, it is necessary to review briefly the sources of the modern caricature that is the white-robed Druid at Stonehenge.

DRUIDS AS IMAGINED

During the Renaissance it was gradually realized that some monuments in the landscape had been made by the ancient inhabitants of the British Isles. With the 'discovery' of what were thought to be 'primitive' peoples or 'savages' in the Americas, Renaissance thinkers were provided with the physical and intellectual materials to create an image of a barbarian antiquity. This antiquity was one where little changed; the past was essentially a time either before or after the biblical Deluge. It was related to the present by origin myths that related modern nations and their mythical founders to Noah and the Garden of Eden.

Within this intellectual milieu, the words of one of the most eminent British antiquarians, John Aubrey (1626–97), are exactly what might be anticipated:

> Let us imagine what kind of countrie this was in the time of the most ancient Britons . . . a shady dismal wood: and the inhabitants almost as savage as the beasts whose skins were their only raiment. Their language British . . . Their religion is at large described by Caesar. Their priests were Druids. Some of their temples I pretend to have restor'd as Avebury, Stonehenge &c . . . They were two or three degrees, I suppose, less savage than the Americans.

This association of savages, stone circles, and druids altered little until William Stukeley (1687–1765) elaborated upon the association of Druids and stone circles. He viewed the Druids in the context of current theological debate, seeing them as purveyors of natural religion, a form of pre-Christian Christianity. Stukeley, about whom it has been argued Stuart Piggott's studies (Piggott 1985; 1989) were not entirely fair (Haycock 2002), set the scene for the fantasies of eighteenth- to nineteenth-century Romantic imagination (Cunliffe 2003: 117). Here Druids were transformed from savages into philosophers and priests, they came to symbolize mysticism, and they were often shrouded in nationalism (Smiles 1994). Aubrey had attempted to understand the past as it might have been. Stukeley and others conjured up the origins of many of the modern images of Druids; as Stuart Piggott put it: 'Druids as imagined' (1968: 189).

This combination of romanticism and religion ensured that, despite the quality of many earlier contributions (e.g. Kendrick 1927; Piggott 1968), the study of Druids has often lacked credibility. It could also be thought that there was little evidence to study. The enduring romantic association of Druids and stone circles when combined with Pliny's account of the sacred grove, were interpreted as showing that Iron Age religion was practised in the open air, in natural places, allowing it to be famously dismissed as 'essentially aniconic and atectonic' as recently as 1966 (Lewis 1966: 4).

An Empirical Archaeology?

Yet some of the most outstanding recent work on the European Iron Age has been on religious sites in France, where a series of brilliant excavations such as at Gournay-sur-Aronde, revolutionized our understanding of ritual and religion (Brunaux 1988). Those discoveries have in turn led to a better understanding of the complexity and diversity of the evidence (e.g. Arcelin and Brunaux 2003). In Britain it was suggested that the distinction in contemporary western thought between ritual and daily practice may have little relevance for much of the Iron Age (e.g. Bradley 2005). A series of seminal studies (e.g. Cunliffe 1992) showed that many settlements in Britain have evidence for cosmology embedded in the architecture and practices of daily life. These studies have changed the study of the Iron Age;

> Perhaps the most dramatic development in approaches to the Iron Age over the last thirty years has been the increasing willingness of some scholars to speculate about belief and behaviour. Much that is new and interesting has been revealed but there is always a danger that, in building on compossibilities, enthusiasm for the novel will run ahead of the supporting evidence.
>
> (Cunliffe 2005: 21–2)

We also now recognize that the writings of the Greeks and Romans which the British antiquarians drew on in their attempts to understand the Druids and the Celtic world did not represent the views of the Druids or the societies to which they belonged, but the views of foreigners. As the classical world did not have a priesthood comparable to the Druids, they were often mentioned simply because they were different.

Although a small number of first-century AD writers, such as Pliny, describe the Druids as healers who worshipped in sacred groves and recount their suppression by the Roman emperors, a consistent picture is painted by the earlier second- to first-century BC writers. They portray the Druids as religious

specialists, effectively a priesthood. Julius Caesar described three main roles for the Druids as (i) being in charge of religion, (ii) as judges and arbitrators in disputes, and (iii) as teachers and keepers of knowledge. He also said that it was thought that the doctrine of the Druids was invented in Britain and was brought from there into Gaul (*BG* VI: 13).

Curiously, despite the emphasis on belief and behaviour in recent Iron Age studies, little attention has been paid to the archaeology of religious authorities and specialists. So little indeed, that it might be thought that an archaeology of Druids had been banished to the history of thought.

IRON AGE PRIESTS?

In Britain, though, there is arguably evidence for religious specialists from burials, from shrines; and from some objects (figure 16.1). Among the most enigmatic of these objects are pairs of bronze 'spoons' or scoops which have puzzled archaeologists since the nineteenth century. A short section in *Iron Age Communities* considered burials with which these spoons had been placed. These, it was cautiously suggested, 'might be considered sufficiently distinctive to be regarded as a separate ritual practice' (Cunliffe 2005: 557).

Spoons

These enigmatic objects occur as pairs and are found mainly in Britain and Ireland, with only one pair from continental Europe. As we will see, the interpretation of these scoop-like objects is far from clear but they have been called spoons since their first publication by the Reverend Barnwell (Barnwell 1862). Shortly afterwards the first comprehensive study of them was introduced with the thought that 'Amongst the perplexing anomalies of bronze . . . there are perhaps none that present so interesting and mysterious a subject of speculation as the little group of spoon-like objects' (Way 1869: 52).

The spoons are shallow, oval-shaped, bowls that are the size of an adult's hand, sitting comfortably in the palm, with one end being rather pointed and the other a short, horizontal, handle (figure 16.2). There is considerable variety from pair to pair; each pair always comprises two slightly different spoons (Way 1869; Craw 1923–4; MacGregor 1976: 14–6, 163–6, map 18).

Fig. 16.1 Location of selected sites and finds

In the insular pairs the bowl of one is always decorated with an incised cross that spans the entire bowl. The bowl of the matching spoon is not decorated but there is always a small hole in it, half way down the bowl and to the left of the handle. Only a pair from France differs. One of the spoons found at Pogny/La Chausée-sur-Marne, Marne, is completely plain, while the other is decorated with an incised cross and has a hole at the intersection (Déchelette 1914: 783).

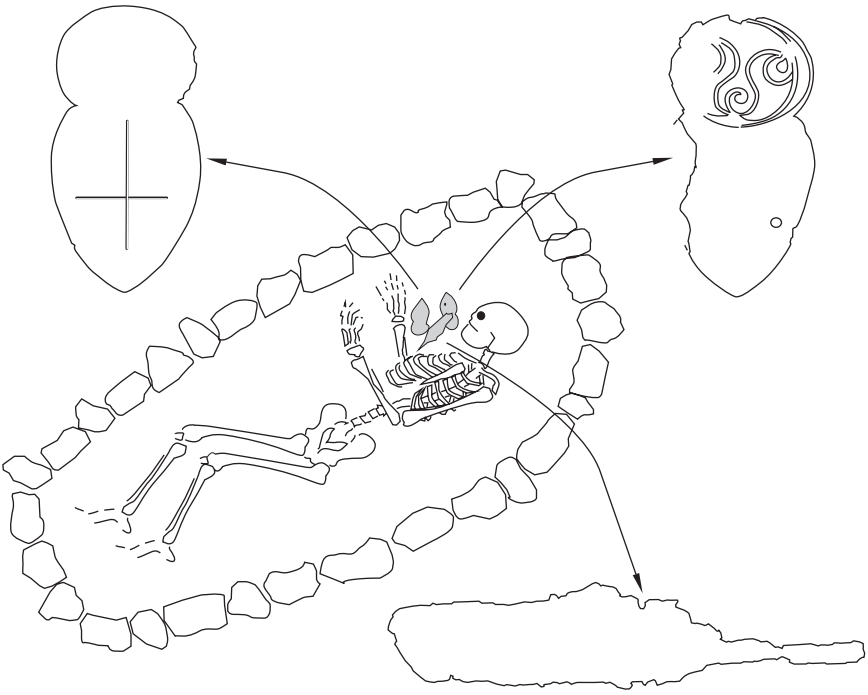

Fig. 16.2 Burial with spoons from Burnmouth, Borders
Source: burial after Craw 1923–4, spoons after MacGregor 1976

Context

Only fifteen certain finds of spoons are known, with a further possible example from the Stanwick, North Yorkshire hoard (Fitts *et al.* 1999: 44). Two of the British pairs come from inhumation burials, at Burnmouth, Borders, and Deal, Kent, and are described below. The pair from Crosby Ravensworth, Cumbria, was found in boggy ground close to a spring (Way 1869: 62–3), and one spoon comes from the River Thames (*op. cit.* 54). The contexts of many of the other finds, often old discoveries, are less clear. Two of the finds from England were recorded as singletons but another two finds, and also the two finds from Wales, have been found as pairs. However, the most recent find, from Kinton, Shropshire, appears to have been placed in a small pit (J. D. Hill pers. comm.). The differential corrosion on the spoons shows that they had been placed one inside the other, suggesting that at least some of the other finds could also be from small hoards. This pattern of deposition; in burials, watery places, and in small hoards is distinctive within

the wider pattern in Britain (Fitzpatrick 1992: 396). The Irish finds would appear to all come, characteristically, from watery contexts (Raftery 1984: 267). The find from France was placed in the grave of a woman (Stead 1995: 107) and as this pair is the only one of the fifteen finds to come from continental Europe, it is arguable that it is British.

As with much British Iron Age metalwork, these spoons are not particularly well dated. There are, however, enough indications from the decoration on the spoons which encompass most of the major British styles, to suggest that they were made over several centuries.

Dating

For present purposes, a few examples of the spoons may serve to illustrate their potential date range. The openwork and apparently compass-based decoration on the find from Andover, Hampshire (Anon 1933) may be compared with that on an openwork fitting, possibly from a piece of horse harness from nearby Danebury. The Danebury fitting may date to the fifth or early fourth century BC (Cunliffe and Poole 1991: 331–2, fig. 7.5.1.94; 7.8; Jope 2000: 16, 234, 31g; Megaw and Megaw 1991: 288, fig. 4a). The decoration on the Weston, North Somerset, pair has elements that derive from the Waldalgesheim style and so is likely to date to the late fourth or third centuries BC (Atkinson and Piggott 1955: 235; Fox 1958: 36–7; though see MacGregor 1976: 45). The handles on these two finds are circular.

The decoration on the Crosby Ravensworth spoons is typologically later and here the handle has become a large flange that is almost the same size as the bowl. The decoration is contained within circular fields that echo the shape of the earlier circular handles. A difference in handle shape, or more precisely size, was the basis of Raftery's distinction between a Type 1, with smaller circular handles, and Type 2 with larger disc-like handles and with larger and more shallow bowls. As most of the Type 2 finds come from Ireland, with one from Scotland, these characteristics may be geographical as much as chronological (Raftery 1984: 264–5).

The burials provide further information. At Mill Hill, Deal, the two spoons were placed either side of the head of an extended inhumation that was destroyed in quarrying early in the 1900s (Woodruff 1904; Parfitt 1995: 29–34). Excavations adjacent to the site of it in 1984–9 showed that the grave, grave x2, must have lain in a cemetery; Parfitt's 'southwest cemetery', one of three discrete groups of burials (Parfitt 1995). Most of the burials excavated between 1984 and 1989 were inhumations dating to the second and first centuries BC. Cremation burials dating from the later first century BC onwards were found in the earlier quarrying, suggesting that

there was a change in burial rite around this time (Stead 1995: 104). On this basis grave x2 should be dated to the second century or the first half of the first century BC.

The Burnmouth burial was a flexed inhumation (figure 16.2). Placed close to the face of the man were 'within a small area, an iron knife, two bronze spoons, the jaws and other bones of a young pig, several fragments of coal, and a small piece of wood, probably part of the handle of a knife' (Craw 1923–4: 143). A radiocarbon date of 200–1 cal. BC was obtained recently (GrA-27301, 2095±35 BP; Sheridan 2004: 175) and this is consistent with the metallurgical analysis of the spoons where the absence of zinc suggests a pre-Roman date (F. Hunter pers. comm.; cf Dungworth 1996). The Pogny/La Chausée-sur-Marne spoons were found with an extended inhumation though the location of the cemetery itself is not clear (Baray 2003: no. 420; J.-J. Charpy pers. comm.). The spoons were placed on the right forearm of a forty to fifty-year-old woman with a bronze bowl inverted over them, and with a bronze ring nearby. The spoons would fit within the bowl. Although there are some fifth-century graves from the cemetery, most date to the third century BC, *c.* 280–220 BC, and this date seems likely for the burial of the woman.

Although this evidence should not be pressed, the spoons may be seen to appear in the Middle Iron Age, perhaps in the fourth or third century BC or slightly earlier, and continued into the Late Iron Age. Although it has been suggested that the decoration on the Burnmouth and Irish finds date them to the second half of the first century AD (MacGregor 1976: 145–6; Raftery 1984: 267), the Burnmouth radiocarbon date shows that there is no reason why they should not be earlier. There are no Romano-British associations.

Functions

Early interpretations as to the purpose of the spoons revolved around the thought that the incised cross on the bowls indicated that they were Christian, used perhaps in administrating the Eucharist or in Baptism (e.g. Barnwell 1864). This idea was discounted when Way's systematic study was able to endorse Kemble's 'Late Celtic' dating (Way 1869: 78–80; Kemble 1863: 184). Way did not advance any alternative interpretations as to function but was most reluctant to accept a 'purpose associated with sacred rites or religious observances' through argument based on *ignotum pro sacro* (Way 1869: 52).

Subsequent discoveries prompted new suggestions. In publishing the Deal find, Woodruff (1904: 12) observed that the bowls of the spoons were too shallow to have held much liquid and wondered whether they were intended for some powdered or finely granulated substance that was poured through

the hole in the plain spoon. Following this, Craw noted that while water would not flow through such a small hole, oil would (1924: 146). In his unpublished doctoral thesis, Spratling made explicit what Woodruff had implied, that something was poured from the perforated spoon into the one incised with a cross (1972: 247). By 1976 MacGregor could state 'There have been many wild guesses as to purpose—ranging from castanets to christening. Certainly, some ritual function seems indicated . . .' (1976: 145).

The Penbryn Spoons

As is often the way, it is the oldest find that sheds new light on the use of the spoons. The pair from Penbryn was found 'under a heap of stones' within the multivallate hillfort at Castell Nadolig (or Castle Christmas), Dyfed, in about 1829. It has been suggested that the objects were from a grave (Murphy 1992: 32, no. 5; Lynch *et al.* 2000: 213) but there is no evidence for this. The spoons were first published in 1862 where it was recorded that Augustus Wollaston Franks had 'accidentally discovered another pair of these spoon-shaped articles in the Ashmolean Museum, where they had been lying unnoticed since the year 1836.' (Barnwell 1862: 214). Barnwell and subsequent writers described the spoon with a cross having two small 'perforations'; one each in the two quadrants nearest to the handle. The top left-hand hole was filled with what was described as a 'plug' of another metal. Thought by Barnwell to be of brass, the plug was identified by Way as being of gold (Way 1869: 53, 59) and this was repeated by Craw (1923–4: 148, no. 1). Since then the circular inlay has either been thought to be a modern repair (Spratling 1972) or gone unmentioned (e.g. MacGregor 1976) or unnoticed (Jope 2000: 288, no. 232, b, c, see pl. 232, b). The illustration in the *Guide Catalogue of the Early Iron Age Collections* of the National Museums and Galleries of Wales (Savory 1976: 61, fig. 36, 4) does not show the inlay, perhaps due to the pieces in the museum being electrotype copies made in 1922 of the originals, which are in the Ashmolean Museum, Oxford.

Few types of gold objects are known from Iron Age Britain, mainly torques and coins (Jope 1995: 115–16; Fitzpatrick 1997: 97–8; 2005: 167–8), to which may be added the exceptional Winchester chain torques and brooches, whose inspiration lies in the Mediterranean world (Hill *et al.* 2004).

Gold inlay is, however, very rare in Britain; if not unparalleled. It is reported to have occurred on a short sword, now lost, from the River Witham at Barlings Eau, Lincolnshire (Stead 2006: 48–9, 199, no. 232). What had been thought to be gold inlay in the armourer's stamps on a third- or second-century BC sword from the River Thames at Isleworth is now known to be the

earliest brass north of the Alps, presumably having been used in imitation of gold (Craddock *et al.* 2004; Stead 2006: 48–9, 123–5, 168, no. 76, pl. 25, fig. 11, 76; 62, 76).

A re-examination of the Penbryn spoons shows that the two circular perforations in the upper quadrants were not the only ones (figure 16.3). Rather than being perforations, they represent the sites of inlays, one in each of the four quadrants; at some point that in the top right hand corner (no. 2) has fallen out. Although the site of the lower right inlay (no. 3) was not immediately obvious due to corrosion, the inlay in the lower left quadrant (no. 4) is clearly of a different, lighter, colour. Perhaps due to earlier conservation and lacquering, this latter inlay is today seen more clearly on the base of the spoon. Analysis by Dr Peter Northover using particle-induced X-ray emission was hampered by the conservation history but confirmed that inlay no. 1 is of gold. The composition of inlay no. 2 could not be analysed, while the site of inlay no. 3 is filled with corrosion products that could have come from the bronze of the spoons. Inlay no. 4 was shown to be bronze but with a different composition from that of the spoons, 'having higher lead and arsenic contents, an identifiable antimony impurity and, more importantly, a much higher tin content.'(Northover, in Fitzpatrick in preparation). The composition of the gold; 61.67 per cent pure gold, 26.22 per cent silver and 12.02 per cent copper is comparable of that used for early British gold coinage, notably Gallo-Belgic A which are primarily of second century BC date (Northover 1992; Haselgrove 1993: Sills 2003). If a coin was the source of the gold, this would suggest a *terminus ante quem* no later than the early first

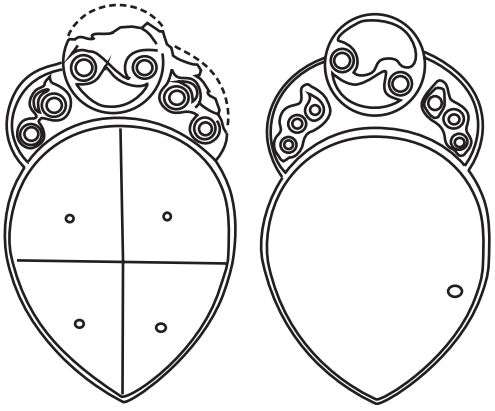

Fig. 16.3 Spoons from Penbryn, Dyfed
Source: author

century BC, but the find, close to the west coast of Wales, is far from the recorded distribution of Iron Age coinage.

It seems probable, therefore, that the Penbryn spoon had different coloured inlays in each quadrant. Only the pairs of spoons from Burnmouth and Weston, both in the National Museums of Scotland, have been X-rayed and analysed by energy-dispersive surface X-ray fluorescence; neither yielded any evidence for inlays (F. Hunter pers.comm.)

Lunar Symbolism

The patterning on the Penbryn spoons recalls the symbols found on some anthropomorphic hilted short swords in continental Europe. These swords are so small that they are really symbolic swords, and the blades of some of them carried symbols that were inlaid with a variety of metals; gold, silver or a base metal. The symbols occur in two main varieties, the first being where a vertical line separates a circle to the left and a crescent to the right. These were thought to represent the sun and moon until further inlays were recognized on the reverse of one of the swords, from Munich, Untermenzing, Bavaria figure 16.4 (Dannheimer 1975). The additional inlays, which represent the second variety, suggested that the symbols should be interpreted instead as representing the moon, an interpretation borne out by the subsequent discovery of four symbols on the short sword from Saint-André-de-Lidon (Duval *et al.* 1986). On both these swords some of the inlays were of gold, others of base metal. The most recently recognized example, from Prosnes, Marne, has in addition to astral symbols, representations of animals, perhaps of sheep (Rapin 2002).

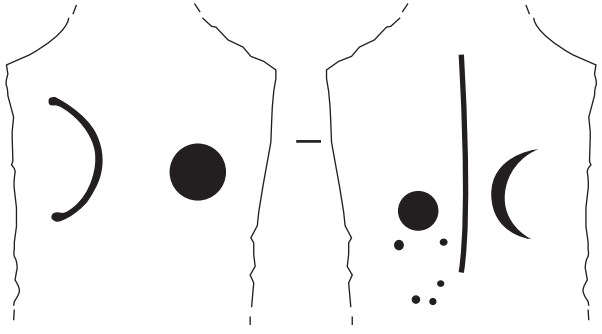

Fig. 16.4 Astral symbols on the blade of the anthropomorphic hilted short sword from Muninch-Untermenzing

Source: after Dannheimer 1975

These observations were elaborated on (Fitzpatrick 1996) with the suggestion that the vertical line symbolised the division of the lunar month in two halves, lucky and unlucky, as seen in the third-century AD Coligny calendar. This calendar was written in Gaulish, which was by then an ancient language, and not Latin, and probably came from a temple. It shows that time was counted in months which were regarded as lucky or unlucky and that each month was divided in two by the word '*Atenovx*'; when the waxing moon wanes.

The counting of time in nights is also evidenced by the earlier commentaries of Pliny and Julius Caesar. About the Gauls Caesar said 'they reckon periods of time not in days but in nights; in celebrating birthdays, the first of the month, and the beginning of a year, they go on the principle that night comes first and is followed by day' (*BG* 6: 18).

Other literary evidence points to the association of this type of temporal knowledge with a specialist religious class; the Druids. It was suggested that the short swords were used in practices or ceremonies associated with making and keeping the time by counting nights, and determining what was a propitious day (Fitzpatrick 1996; see Green 1998a: 194–5; Stead 2006: 49).

The dozen or so short swords with these inlays are scattered across continental Europe, from Moravia to the Atlantic coast (Fitzpatrick 1996; Rapin 2002). None are certainly known from Britain. There is just the tantalizing record of the dagger or short sword from the River Witham at Barlings Eau with what was described as a crescentic stamp inlaid with gold (Banks 1893). The piece cannot now be traced and despite the richness of the Iron Age finds from the Witham (Fitzpatrick 1984: 179–81; Field and Parker Pearson 2003: 162–4), it has to be remembered that there are also medieval finds from the river, and medieval weapons also had inlaid stamps (Stead 2006: 49).

Even though there are no certain finds of inlaid anthropomorphic hilted short swords from Britain, the four-fold division and the use of different coloured inlays on the Penbryn spoon strongly recalls the astral symbols on the short swords. On this basis it may be suggested that the inlays on the spoon also signified quarters of the lunar month or year. If Spratling's suggestion that a substance was poured through the hole in one spoon into the one incised with a cross (1972: 247) is followed, the quadrant in which the substance landed might indicate which quarter of the lunar month or year was auspicious. In this interpretation it is possible that the Penbryn spoons, and perhaps all the others, were used in divination, the act or practice of divining which seeks to know the future or hidden things by magical means (Green 1998a: 200). The ability to predict events is a powerful knowledge.

The possible sacrificial role of some knives in Late Iron Age Europe has been touched on by Metzler Zens (Metzler *et al.* 1991: 147), and the presence

of one in the Burnmouth burial is rare among Iron Age burials in Britain. The Mill Hill, Deal cemetery provides further evidence for religious equipment, this time from the burial of a warrior, who was buried wearing a headdress.

Headdresses

Mill Hill, Deal

The prone burial of a small, gracile, male who died between the ages of thirty and thirty-five, lay apart from the other cemeteries at Mill Hill, Deal, Kent, figure 16.5 (Parfitt 1995). Excavated in 1988, burial 112 was sited near the highest point of the site and close to a Bronze Age barrow. By the man's right side and buried face down was a sword in its scabbard, its handle by his shoulder, and a hide-shaped shield had been placed on its side on his left-hand side. A brooch was found, also face down, by his left shin, suggesting that the either the item of clothing that it pinned was not worn and had been placed in the grave, perhaps folded; or that the clothing was quite different from those placed in other Iron Age burials. On the man's head was a headdress. The decoration on the weaponry, costume fittings and headdress form one of the earliest well-dated groups of Celtic art in Britain, from the later third or early second century BC. The scabbard and costume fittings were adorned with red coral from the Mediterranean.

The headdress was a thin headband with a cross band that went over the top of the head. Traces of human hair inside the headband show that it rested directly on the head suggesting that it did not decorate the exterior of a leather or wooden helmet. The headdress finds no parallels among the many types of Iron Age helmet currently known from continental Europe (e.g. Schaff 1988; Cunliffe 1997 *passim*) but in a typically thorough review of the evidence, Ian Stead showed its close similarities to the headdresses of Romano-British priests found at temple sites such as Hockwold, Norfolk, and Wanborough, Surrey, and in hoards of religious materials such as at Stony Stratford, Buckinghamshire (Stead 1995: 72–86, fig. 31). In doing so he maintained a distinction between the sacred and the profane; between military and religious leaders, suggesting that if the headdress was a symbol of religious office, it would not have been consigned to the grave but kept among the living for the next incumbent. He concluded that the headdresses were 'symbols of status worn by military or religious leaders in the Iron Age, while in Roman times their significance became wholly religious' (Stead 1995: 86).

The other headdresses of Iron Age date identified by Stead are no less unusual. Three come from burials; Newnham Croft, Cambridgeshire, Old

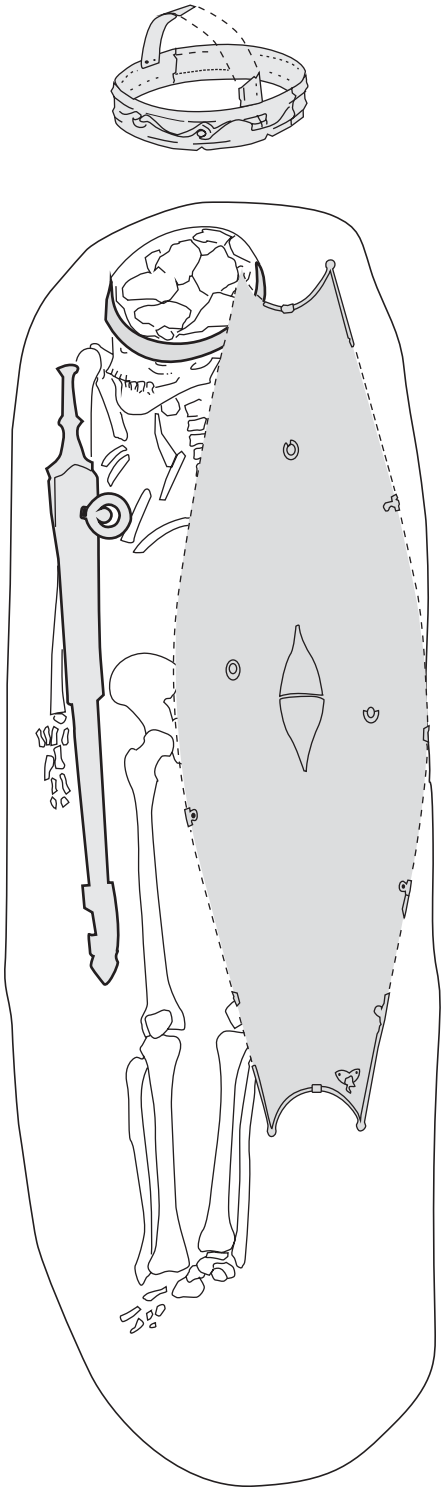

Fig. 16.5 Burial with headdress from Mill Hill Deal, Kent
Source: after Parfitt 1995

Castle Down (Ogmore Down), Glamorganshire, and Cerrig-y-Drudion, Clwyd, while the fourth forms part of a hoard from Hounslow, Middlesex.

Newnham Croft

The burial at Newnham Croft, Cambridgeshire, was found in 1903 and the records are poor (Fox 1923: 81, pl. xv, 5; xviii, 2x; Clark 1938: 293, fig. 26; Cra'ster 1973; Stead 1995: 82–3). On the chest of a crouched burial of a middle-aged person, whose sex is unknown, were two pennanular brooches and a bow brooch, on their lower right arm was an armring, and near the feet was what was initially thought to be a lamp. Three small copper alloy rings had been removed from the grave before the burial was recorded. The 'lamp' was considered to be a harness mounting by Fox (1923: 81), and reinterpreted again as the top of a priest's headdress analogous to the Romano-British example from Felmingham Hall, Norfolk, from which chains were suspended by Gilbert (1978: 172–4; Stead 1995: 81–3).

The dating of the Newnham Croft burial is not precise, but the brooch (Hull and Hawkes 1987: 147–8, no. 4283) can be compared with that from Burial 112 at Deal (Stead 1995: 86). The bracelet is decorated with Waldalgesheim style decoration which is typologically earlier than that in the Deal burial, but which is very worn (Stead 1995: 90, fig. 33–5). The burial dates to the third or early second century BC and, as with the Mill Deal burial, the grave goods comprise one of the earliest well-dated groups of Celtic art in Britain.

Old Castle Down (Ogmore Down)

The history of between two and four helmets or headdresses from Old Castle Down, vale of Glamorgan is less clear. The provenance of the find has recently been corrected from Ogmore Down to Old Castle Down (Toft 1998; 1999). Found in 1818 with skeletons and iron spear heads, the pieces were lost shortly after. Described as bronze helmets, at least one of the headdresses had cheek pieces apparently decorated with gold, red glass or enamel, and silver wire. It is less certain whether the bottom of one helmet was decorated with blue glass or enamel. Most recent commentators have favoured an Iron Age date for the 'helmets' (Stead 1995: 83–4; Macdonald and Davis 2002).

Cerrig-y-Drudion

On the basis of the above finds, the famous Cerrig-y-Drudion, Clwyd, 'hanging bowl' (Stead 1982) was reinterpreted by Stead as a headdress with a decorated rim, from which chains were suspended (Stead 1995: 84).

The object was found in 1924 in a cist and so presumably had been placed with a burial. Once again, the art is among the earliest from Britain, in this case the style of the decoration, the 'Early style', pre-dates the Waldalgesheim style on the Deal and Newnham Croft headdresses.

Hounslow Hoard

The last of the certainly or probably Iron Age finds comes from Hounslow, Middlesex. This hoard was found in 1864 and was initially described as a single collection of Bronze and Iron Age objects although this account was later altered, suggesting that the Bronze and Iron Age objects came from different parts of the field and these groups were later identified as hoards A and B (Stead 1995: 80; 1998, 119). As recorded, what is now known as hoard B, includes fragments of a headdress whose shape is very similar to that from Deal but which has suspension loops for chains of the sort envisaged at Newnham Croft and Cerrig-y-Drudion. The band had previously been thought to be metal binding for a wooden bucket (Spratling 1972).

The other finds are five miniature animals and a miniature wheel (Stead 1995: 80–2, fig. 29–30; 1998: 119, pl. 18). The animals comprise three boars (Foster 1977: 1–13, 29–30), and what may be a dog and a deer (Jope 2000: 264, pl. 160–1, a–h, m, n; 164, i–j, k). One of the boars (Foster's A) seems to have had a stand but the other two (B and C) may have had suspension loops in the perforated representation of the boar's spine. The miniature spoked wheel is of a type well known from temple sites in Iron Age France (Piette 1987), and from Romano-British religious contexts where it is usually thought to symbolise the sun and the god Jupiter (Green 1984). Some Romano-British priestly headdresses are surmounted by such wheels (Stead 1995: 81; O'Connell and Bird 1996: 93–4).

Other headdresses such as that from Leckhampton, Gloucestershire, might also be Iron Age in date, but what Stead's research clearly showed was that a number of Iron Age finds whose interpretation was previously uncertain, variously seen as chariot fittings, bowls and bucket binding, could certainly or very probably be interpreted as religious headdresses. A number of them, Cerrig-y-Drudion, Deal and Newnham Croft also carry some of the earliest relatively well-dated Celtic art in Britain (Fitzpatrick 2007). It may also be noted that, as yet, the few burials across Britain with headdresses do not contain spoons.

Other Finds

The recognition of these religious headdresses draws attention to other items of headdress or representations of them from Britain and Ireland; the helmet

from the River Thames at Waterloo and the bucket escutcheons from Aylesford and Alkham, Kent, and Baldock, Hertfordshire. These too are remarkable finds.

The horned Waterloo helmet is such an icon of the British Iron Age that it is necessary to remember that its shape and horns have no parallels in Iron Age defensive weaponry (Brailsford 1956; 1975: 32–9; Schaff 1988). Made from wafer-thin bronze, the helmet could not have seen practical combat. It was either a parade item, or perhaps adorned a representation of a deity (Ritchie 1968: 146). Two finds from Ireland can be seen in this light. The Cork Horns are three joining pointed metal horns that recall those on the Waterloo helmet which may well have been attached to a leather cap or lining. The circular discs attached to the head band of the Petrie Crown are variations, albeit not necessarily contemporaneous, on this theme (Raftery 1984: 268–75, fig. 132–3).

In Britain, the first-century BC handle escutcheons of the wooden buckets in the well-furnished burials at Alkham, Aylesford, and Baldock (figure 16.6), (Stead 1971; Philp 1991: Stead 1996: 67, fig. 75; Stead and Rigby 1986: 51–61), take the form of human heads which are wearing horned helmets or headdresses. As with the full size headdresses, these representations have no resemblance to Iron Age helmets save than the one from the River Thames at Waterloo. On the escutcheons from burial 'Y' at Aylesford a milled band represents either the border of the headdress cap or human hair (Stead 1971:

Fig. 16.6 Bucket escutcheons from burials at Aylesford, Kent and Baldock, Hertfordshire

Source: after Stead 1971

261, fig. 4). Stead thought that this might be a fringe of hair escaping from the cap, but it is quite possible that it represents a particular hair style or coiffure, a band of hair on an otherwise shaven head. This form of tonsure has been identified on a small number of earlier statues from continental Europe where it has been suggested to signify that the individual was a religious specialist or Druid (Venclová 2002; Aldhouse Green 2004). The shape of the Aylesford headdress clearly recalls that of early La Tène headdresses in continental Europe; the so-called *Blattkrone* or 'leaf crown', and which are associated with religious authority (e.g. Frey 2002).

The uppermost bronze band that encircles the Aylesford bucket is decorated with fantastic animals. At first sight they appear to be horses (e.g. Brailsford 1975: 84), but closer examination shows that they have what may be antlers, curling lips, and two tails: and the legs of humans. These could be men dressed as horses engaged in mummery as Jope suggested (1983: 156), or more speculatively they might be seen as men in an altered state of consciousness or in an ecstatic trance taking on the shape of an animal in order to make contact with the spirits (Fitzpatrick 2000: Creighton 1995; 2000: 43–53; Carr 2002). The contents of the buckets are unknown.

To these finds might be added the horned helmet represented on a coin of Tasciovanus (Henig 1974) and a unique silver coin said to be from near Petersfield, Hampshire that shows a face with a headdress that has antlers and is surmounted by a spoked wheel (Boon 1982; van Arsdell 1989: 128).

The *Blattkrone* is sometimes suggested, perhaps fancifully, to resemble mistletoe leaves and is frequently shown in miniature in many pieces of Celtic art in continental Europe. Sometimes the small images are difficult to discern, though sometimes and especially on statuary, they are quite clear (Polenz 1974: 396, Abb. 4). This type of headdress is shown on sculptures in western Germany from Pfazlfeld (Rhein-Hunsrück-Kreis) and Heidelberg, and on the Janus-like two faced sculpture from Holzgerlingen (Kr. Böblingen) (Cunliffe 1997: 125–8, fig. 97–9; Kimmig 1987: 274–81, Abb. 23–7). These have been thought to be representations of deities but it now seems likely that at least some of them represent mortals. The statue that surmounted the Glauberg, Hessen, tumulus is adorned by a *Blattkrone* (Frey and Hermann 1997; Frey 2002). Many of the objects shown on that statue are matched precisely by the metal grave goods that survive in the burial, leaving little doubt about either the accuracy of the portrayal of the headdress, which must have been made from cloth or leather, or the mortality of its wearer.

The Glauberg is one of the most well-furnished Early La Tène burials yet found. It suggests that the deceased had the status of a warrior, but maybe also some religious authority, perhaps even being thought of as a hero (Frey 2002; cf. Venclová 1998). Many of these parallels are far removed from Aylesford,

both in time and place, and a direct link between them is problematic. What can be suggested though, is that the intertwining of the sacred and the secular that they demonstrate is also seen in burial 112 at Deal.

Other types of religious object might tentatively be added to the spoons and headdresses. The possible sacrificial role of some knives in Late Iron Age Europe has been mentioned earlier (p. 298), and the presence of one in the Burnmouth burial is rare in Iron Age Britain.

Pieces of binding from the votive deposit of Lynn Cerrig Bach, Anglesey (Fox 1947: 45–6, 86, 90, pl. xvi, 67, 91; see also Macdonald and Young 1995; *pace* Roberts 2002) have, as Fox noted, similarities with objects from Roman religious contexts that are now thought to be sceptre binding, such as those from Wanborough, Surrey (O'Connell and Bird 1994: 107–21, fig. 26–32, pl. 20–8). It should be noted that other, more mundane interpretations of the Llyn Cerrig Bach bindings, such as animal goads, have also been suggested recently (Schönfelder 2002: 271–3, Abb. 171).

SPECIALISM

Druids were described by Julius Caesar as being in charge of religion, judges, and arbitrators in disputes, and teachers and keepers of knowledge. What that knowledge was is not stated, but the widespread association of priests and healers suggest it is possible that medicine was one form of knowledge.

A small number of burials with surgical instruments is known from continental Europe (de Navarro 1955; Künzl 1991) and they, along with skeletal evidence, suggest an emphasis on trephination. However, medicine covers a much wider range of practices than just surgery. The early Romano-British burial from Stanway, Colchester, Essex has a set of surgical instruments similar to Greco-Roman ones and as this 'doctors grave' lies in a cemetery that contained the graves of people who either had been the client kings of Rome or were related to them, Roman knowledge and skills might be expected. However, there is also a set of what might be divination rods that suggest the role of magic as well as medicine (Crummy 1996–7; 1998; 2002). There is also a board game in the grave which is similar to that from the Welwyn Garden City, Hertfordshire, burial (Stead 1967), recalling the dice found at some sites in south-western England (Clarke 1970: 217) which may have been used, among other things, for throwing lots.

There is less evidence for other skills that might be associated with a priesthood. The Druids famously did not commit their knowledge to writing and it may be no coincidence that in the Late Iron Age the specialist skill of

literacy had strong associations with the Roman world. Apart from occasional earlier graffiti (Krämer 1982) and inscriptions (Wyss 1954), most evidence from continental Europe comes from *oppida* (Woolf 1994). The same pattern is true in Iron Age Britain with graffiti from Braughing and Colchester, *styli* from Silchester, and an inkpot from another early Romano-British burial in the Stanway cemetery (Crummy 1993; 2003; Williams 2001: 5; 2002: 148). These British sites all have strong associations with the elite who used their inscribed coinages to proclaim their connections with the Roman world as they consciously created a new social order (Creighton 2000). The cemetery at Stanway was set apart as a royal cemetery and the mortuary rituals, which often involved deliberate breakage, are also distinct to the burials of that elite (Fitzpatrick in press). In Britain, at least, the knowledge of writing appeared as the character of kingship changed.

DISCUSSION

It is possible to recognize some objects that were used for ritual purposes and the burials of some people who wore a costume that identified them as having some religious status (Cunliffe 2004: 111). The links between the Druids of Britain and Gaul mentioned by Caesar might be mused upon in relation to the spoons from Pogny/La Chausée-sur-Marne (Smith 1925: 149). The idea of specialists and of a specialist priesthood may, however, be as much a hindrance as a help and, as with the study of Iron Age settlements, supports a modern distinction between the secular and sacred that should not be pressed.

The evidence from shrines and temples in Britain suggest that it was only in the Late Iron Age that temples inscribed special sacred spaces in the landscape. Before then shrines, which would seem on the evidence currently available to appear in the Middle Iron Age, stood within settlements, such as the earlier shrines at Danebury (Cunliffe 1984: 8–7, fig. 4.31–5, pl. 53–6), and at Heathrow, Middlesex (Grimes and Close-Brookes 1993). This continued into the Late Iron Age, for example at Stansted, Essex (Havis and Brooks 2004: 104–8, 533, figs. 74–5, 346, pl. vi). The square shape and trench built method of construction of these buildings contrasted with the circular dwelling houses (though see Smith 2001: 63). The Late Iron Age temples at Hayling Island, Hampshire, and Harlow, Essex, are round, suggesting that they were houses for the gods that were eventually superseded by Roman temples. At Hayling Island the temple might even be associated with the establishment of a new political dynasty (Creighton 2000: 192–6). Here the

repeated deposition of votive offerings (Haselgrove 2005; Bartlett 1988; King and Soffe 2001) might suggest that specialist priests could have overseen ceremonies. The idea that specialists undertook blood sacrifice in the Iron Age, whether of animals or humans, is however, hard to demonstrate archaeologically (cf. Green 1998b; Aldhouse Green 2001).

There is, however, little evidence to suggest that the few burials that contain spoons and headdresses were very different from those of the others. The cist burial at Burnmouth, for example, belongs to an increasingly well understood pattern in lowland Scotland, one in which more cist burials, some of which contained weapons, and also chariot burials, are now being recognized (e.g. Crone 1992; Mills 2004; Roy 2006; Carter and Hunter 2003).

Although Burial 112 at Deal with its headdress and weapons was set apart from the smaller groups of burials, it is typical of them, and it is increasingly clear that inhumation burial was practiced regularly in some parts of Iron Age Britain. Burials with weapons are found in all the regional burial traditions of Iron Age Britain (Collis 1973: Hunter 2005: 50–6, fig. 4) but the presence of a full panoply of arms, i.e. spear, shield and sword, is still rare.

Weapons were placed in some Welwyn-type cremation burials, of which the Baldock grave (Stead and Rigby 1986: 51–61) is an example, but they were always almost defensive weapons in the form of shields. In these burials there is instead an emphasis on feasting and perhaps of sacrifice. Key elements of the feast that are present in the Baldock burial are the iron firedogs, a cauldron and a side of pork, pottery vessels for feasting and drinking, and a Roman wine amphora. The overall impression of Iron Age mortuary rituals is of a myriad of local variation on common themes.

CONCLUSION

There is little evidence that hints at the existence of specialist priests in Britain until late in the Iron Age. Instead the burials with spoons at Burnmouth and Mill Hill, Deal might be those of people with skills in divination. Those skills, if that is what they were, were not restricted to one gender; the Burnmouth burial was of a male, but that from Pogny/La Chausée-sur-Marne was of a female. The contexts of, and the finds associated with, Romano-British chain headdresses also suggest that these items were not exclusive to any one deity (Bird 1996: 87).

In view of the evidence from Iron Age Britain for ritual and religion forming part of daily life in which ritual was an aspect of custom (Cunliffe 1992; 1993), the presence of people with skills such as divination and an elite

who provided sacred leadership or kingship before the appearance of specialist priests or Druids, might indeed, as Barry Cunliffe wondered (2005: 559), not be too much to expect.

In this most ritual of academic contexts, the *Festschrift*, the high priest of Iron Age studies can divine whether, here, enthusiasm for the novel has run ahead of the supporting evidence, and become pure speculation.

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Part IV

Landscapes and Society in Iron Age and Roman Britain

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17

Sculpture as Landscape: Archaeology and the Englishness of Henry Moore

Colin Renfrew

> It is this mixture of figure and landscape. It's what I try in my sculpture. It's a metaphor of the human relationship with the earth, with mountains and landscape. Like in poetry you can say that the mountains skipped like rams.
>
> (Henry Moore, in Weldon 1962, quoted James 1966: 274)

The interplay in English thought between archaeology and landscape has been a long-standing one. Even before the notion of 'landscape' was well defined as an artistic genre, antiquaries like John Leland became topographers, and topographers such as William Camden became antiquaries. Stuart Piggott was one of the twentieth century archaeologists acutely aware of these links, well analysed in his *Ruins in a Landscape* (1976), and Barry Cunliffe has certainly been another. Like Piggott, he is a graphic artist of distinction himself, often preferring to draw his own plans and sections for his final excavation reports. As an able illustrator he has taken special pleasure in the work of another notable Wessex countryman, topographer and archaeologist, Heywood Sumner. Born in Hampshire, Sumner (1853–1940) became first an artist and then, on his retirement, a field archaeologist. The publication by Cunliffe (1985) of *Heywood Sumner's Wessex* reflects again this enduring sympathy between the field archaeologist and the artist sensitive to the earthworks and the rolling contours of the English countryside. Sumner was not a great artist, nor did his work add significantly to the development of British archaeology, yet he captured a quality in his archaeological illustrations and in his vision of the earthworks of Wessex which looks back to those earlier antiquaries, Stukeley and Colt Hoare, and forward to such consummate artists of the English landscape as Paul Nash and Henry Moore. He was also a close friend of another significant field archaeologist, noted lover of the landscape and pioneer of landscape archaeology, O. G. S. Crawford.

Barry Cunliffe, an internationally celebrated figure who has initiated several significant field projects overseas, has likewise undertaken some of his most

distinguished work in Wessex, from Fishbourne to Hengistbury Head, and in the landscape of Wessex, most notably at Danebury. His treatment of Sumner's work, for instance in his chapter 'Landscape with people', shows great sympathy with the human scale of the English landscape, a quality which is also an important feature in the work of Henry Moore. To regard a sculptor as a landscape artist as I have done in this paper, would, until recently, have seemed rather paradoxical. For it is true that the ostensible subject of most of Moore's sculptures was the human figure. But, as I have sought to bring out in the following discussion, first presented at the Sainsbury Centre for the Visual Arts at the University of East Anglia in 1999, Moore's figures relate to the English landscape in a number of ways. Like his rather older contemporary Paul Nash (Evans 2004), also a distinguished war artist, Moore was sensitive to the qualities of prehistoric monuments such as Stonehenge and to their place in the landscape. With the developing interest today in the relationships between artists and field archaeology (e.g. Lippard 1983; Renfrew 2003; Renfrew *et al.* 2004), it is perhaps appropriate to set the work of Henry Moore firmly in this discussion. It is a pleasure to do so as a tribute to Barry Cunliffe, in view both of his own contributions to this theme, and in gratitude for a friendship which has continued to prosper since our time together as undergraduates at St John's College in Cambridge, and those 'golden, rewarding, exciting days'—to quote our Director of Studies, Glyn Daniel (1986, 201 and 428)—which culminated in what, in his memoirs, our mentor termed the *annus mirabilis* of 1962.

Henry Moore's work may have begun with a wonderful feeling for powerful and compact forms, some of them inspired by his early acquaintance with the sculpture of pre-Hispanic Mexico, and of other lands beyond Europe. Increasingly however he was attracted to, and used, the forms of nature—the bones, the shells, the stones which he sought and found—and the forms above all of the landscape. The remarkable and imposing quality of many of his later figures involves a deep sense of the vitality and sometimes the monumentality of the recumbent human figure, in which resides at the same time a view of the rolling landscape of moors and downs. In this paper I would like to suggest that this 'metaphor of the human relationship with the earth' became for him an important, indeed central component of his 'individual form vision'. The modesty, the consistency and the humanity of Moore were of course innate, encouraged by his family background and his upbringing: their formal expression was increasingly influenced by the visual experience of his native Yorkshire.

'Englishness' is perhaps a diffuse concept, although one profitably explored by Pevsner in *The Englishness of English Art* (Pevsner 1956). It implies a certain reticence, an absence of expressionist vehemence, a sense of order and a

sensitivity of feeling for the countryside. It does not, in this context, imply any specific national awareness: there is no self-consciousness about being English, no Victorian chauvinism or grandiloquence. There are, however, qualities of reserve, of strength expressed with quite limited means, without fuss or ostentation, without excessive show of emotion: temperate in climate and in mood. These are among the qualities which one may find in the work of Moore, from the early Mother and Child figures through to the later Reclining Figures.

The term 'Englishness' can give rise to misunderstanding and I have doubted the wisdom of offering it as the subtitle of this paper since reading in Peter Fuller's in many ways illuminating *Henry Moore* (Fuller 1993: 87) the statement that: 'The neo-Romantic roots of Moore's vision lie deep in our national cultural life'. For, as I shall try to clarify below I do not regard Moore as a neo-Romantic, although many of his friends and contemporaries in the 1920s and 1930s may have been. My reference to 'Englishness' was not intended to carry neo-Romantic overtones, but rather is used here in order to draw attention to an enduring landscape tradition in English thought and art, which is less concerned with the visual representation of the English landscape in all its rural variety than with the enduring forms and structures of that landscape and its long history, stretching back beyond the pages of written narrative to the prehistoric period, and beyond human prehistory to the depths of geological time, when its structures were formed and its physical materials constituted. This is the landscape of Hutton and Lyell, of Stukeley and Colt Hoare, of Pitt Rivers and Heywood Sumner. This is not necessarily the landscape of John Constable with its woods and hedgerows, its labourers in the fields and its distant spires, but one where the enduring forms of nature are more evident.

When looking at the works of Henry Moore, and in particular at some of the great reclining figures (such as the Draped Reclining Figure of 1952/3 (figure 17.1; Shakerley and Spender 1978 pl. 8); or the Two Piece Reclining Figure no. 1 of 1959 (*ibid.* pl. 27)) one is impressed by their monumentality, by their calm vitality. And although it is obvious that most of the work of Henry Moore is in some sense about the human figure, so it is true that this figure in many of the later works has a great stability, a material presence that carries with it more substance than one usually associates with human frailty, and a timeless quality going beyond the normal human life span.

In seeking to define the 'essential' Henry Moore, or at least some key elements of what he himself called his 'individual form vision' (Moore in Pritchett *et al.* 1941), I would like to suggest that, when we assimilate those elements which once seemed 'modern', and when we separate his 'Englishness' from the neo-Romanticism of the twenties and thirties, we are left with this monumentality, this sense of form and of material, which is underlain by a

Fig. 17.1 Henry Moore. Draped Reclining Figure, 1952/3 (from Moore 1955, pl. 62)

feeling that the sculpture itself and the material of which it is made belongs with the land, a land where geological time and the forms of prehistory are inseparable from the living landscape of today. As Moore said of Stonehenge (Moore and Hedgecoe 1986: 44): 'For me it was a bleak, single, isolated monumentality with nothing to do with human beings but to do with nature, to do with landscape, it was almost as though those stones were pieces of the landscape but moveable.'

The images from his *Stonehenge* portfolio of 1974 (Moore 1974), such as figure 17.2: pl. 8, 'Sentinel' and pl. 6, 'Fallen giant') might at first seem to belie that statement (or figure 17.3 : pl. 13, 'Arm and body'), but instead they reinforce the point which I shall emphasize below that for Moore figure and landscape did in a sense become one. But this did not happen until the figures achieved a monumentality which, as Moore observed (James 1966: 127) we see with Masaccio's *Tribute Money* or Cézanne's *Bathers*, and which indeed takes them beyond the ephemeral existence of the human.

This point has been admirably made by John Russell (Russell 1973: 94) with reference to the 'Recumbent figure' of 1938, in Horton stone (figure 17.4: Sylvester 1957: pl. 191), purchased for the Tate Galley in 1939 by Sir John Rothenstein:

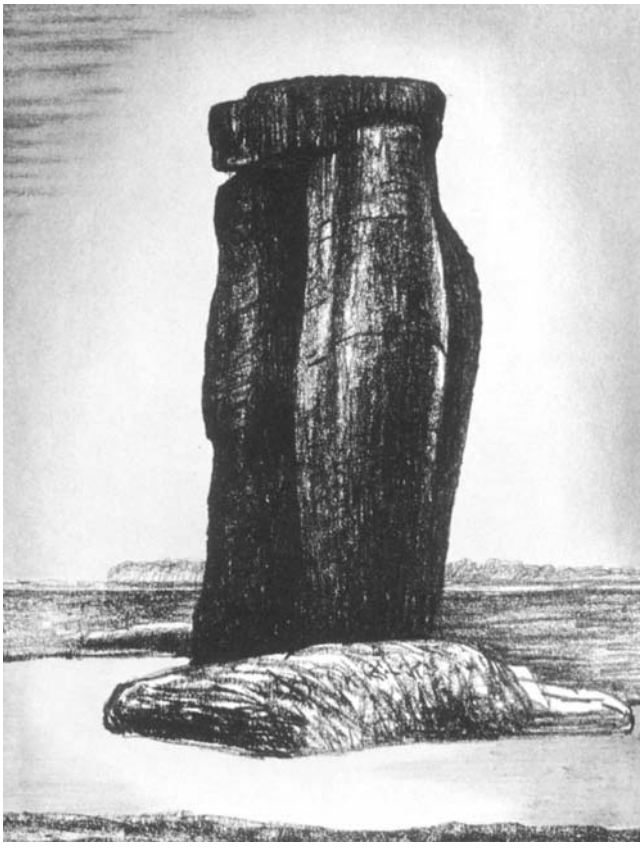

Fig. 17.2 Sentinel, from the *Stonehenge* portfolio

This differs from his earlier reclining figures in that the inspiration of primitive art has given place to the inspiration of landscape, and in particular of the rolling, undulating and predominantly pacific landscape of England.

And further:

the downland . . . the moors . . . define within the limits of language the tone of Moore's human landscape. . . . the broody, unemphatic, heavy-shouldered near mountains of England.

(Russell 1973: 98)

This work may be seen to mark a turning point in Moore's work. Until then the majority of his sculptures had a principal axis which was vertical—although his first reclining woman can be set as early as 1927, and the first

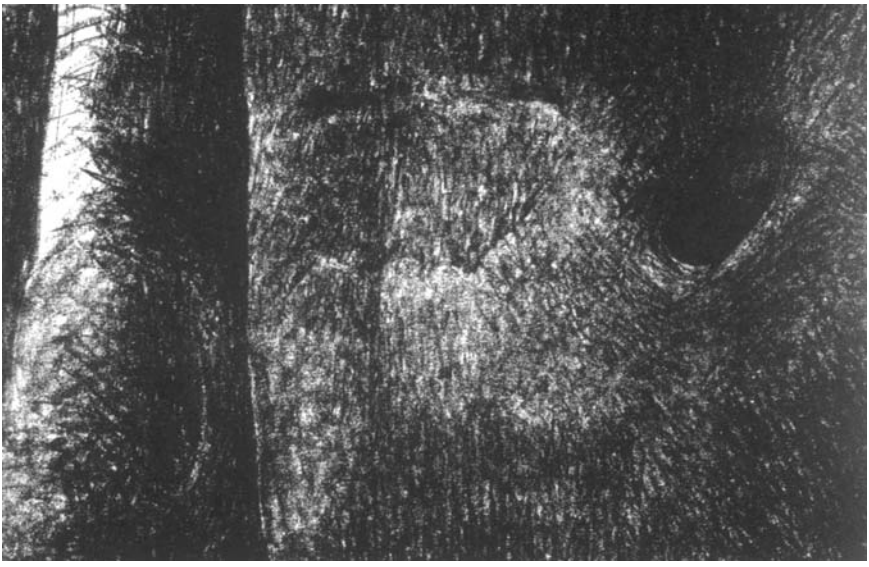

Fig. 17.3 Arm and body, from the *Stonehenge* portfolio

Fig. 17.4 Recumbent Figure, 1983 (Horton Stone)

Mexican-influenced Reclining Woman of 1929, taking as a starting point the Chac Mool figure which he first saw in a photograph in 1927. From 1938 onwards the balance shifted, the principal axis was more often horizontal, and the work took on a less taut, less experimental and more monumental quality, where the forms of nature (including the contours of the landscape) increasingly replaced the earlier Mesoamerican and ethnographic sources. Many of these might seem to us rounded feminine forms, although the rounded, rolling quality first perhaps clearly seen in the 'Shelter' drawings of 1941 does not imply that the subjects were female. In this connection it is interesting to note that the Toltec Chac Mool figure represents a male personage, although this is not obvious to the casual viewer, and one may doubt whether Moore viewed it as such in the photographic image he saw in 1927.

NOT A NEO-ROMANTIC?

As noted above, I am uneasy with the widely held perception, asserted again by Fuller, that Moore should be regarded as a 'neo-Romantic'. Certainly no one could deny that his innovative transformations of form involved the free and fertile use of artistic imagination. One of the *Shorter Oxford Dictionary* definitions of 'Romantic' is 'Tending towards or characterized by romance as a basis or principle of literature or art. Opposite of classical.' But I would argue that, at least in his sculpture, Moore's imagination was a controlled one, inspired by a deep feeling for organic forms, rarely 'fantastic, extravagant or quixotic' (to quote the *Dictionary* again). Indeed it could be argued that his earlier compact forms and his later figures were closer in spirit to the classical—not because of any Greek overtones, but because of their qualities of restraint. One might hesitate however before applying the term 'classical' to them since Moore's forms certainly do not follow any evident rules. There is no 'classical order' here, but nor is there romantic disorder. Moore had a wonderful and internalized consistency which in some senses underlies his greatness, but his controlled imagination cannot easily be forced into a dichotomy of romantic versus classical.

To be more specific, there are several English approaches to the landscape, each of which might be described as 'neo-Romantic', which Moore did not share.

(1) His was not the world of the peopled landscape, the world of mythology and legend, of druids and heroes from the legend of Ossian, or historic figures from the imagination of Sir Walter Scott. Sam Smiles (1994) in *The Image of Antiquity: Ancient Britain and the Romantic Imagination* has given a splendid compendium of such fancies (e.g. 'The Bard' by Thomas

Jones of 1774 (*ibid.* pl. 17) or 'The Bard' by Benjamin West of 1778 (*ibid.* pl. 23). Such fantasy was not Moore's style. To say so is in effect superfluous, but one does not wish to be misunderstood.

(2) Secondly, Moore's landscapes are not (in my view) generally those of the 'sublime', beloved of the Lake poets and by some of the admirable landscape artists of their day. The 'awesome majesty' of mountain crags, whether in the Lakes or the Alps, was not the Englishness of Moore. Even in his drawing 'Rock, sea and sky' of 1982 (Garrould 1988 no. 305), which for a moment is reminiscent of Turner, there is nothing either awesome or nebulous about the rock, whatever may be said of the sky. With few exceptions, one of which is his 'Shipwreck' drawing very appositely quoted by Anita Feldman-Bennet, his work did not show the wildness of high drama or the 'sublime' of the Romantics. There are of course other uses of the term, which was employed by Barnett Newman, for instance, in a different sense. But when we speak of Romantics or neo-Romantics, its meaning seems reasonably clear.

(3) Thirdly, Moore's landscape could not be considered picturesque. When works were situated in the landscape, with his warm approval, as at Shawhead, in the case of 'King and Queen', (Shakerley and Spender 1978, pl. 1) or 'Glenkiln Cross' (*ibid.* pl. 12), the solid form predominates. One could not compare his work, in my view, with the Romanticism of the 1920s and 1930s—his is not the Englishness of John Piper, with its tendency towards the picturesque.

(4) There may have been a moment when the surrealism of the 1930s had some influence upon Moore; indeed he contributed in 1936 to a Surrealist exhibition held in London. He was, with Paul Nash, a member of the *Unit One* group and they certainly had points in common in the 1930s (Evans 2004). Both were fascinated by found objects, but these were for Moore primarily exemplars of form. For Nash they could take up a presence so that he could refer to them as 'object personages'. This we see in Nash's 'Nocturnal landscape' of 1938 (Cardinal 1989, pl. 66), and the almost surrealist quality which often heightened his work takes on a symbolist, or at least symbolic, overtone in 'Equivalents for the megaliths' of 1935 (*ibid.* pl. 43). The community of interest between Moore and Nash at this point is illustrated by Moore's letter to Nash of 1933, quoted by Andrew Causey (1980, 253):

> I've read somewhere that certain primitive peoples coming across a large block of stone in their wanderings would worship it as a god—which is easy to understand, for there's a sense of immense power about a large rough-shaped lump of rock or stone . . . if the carving is any good as sculpture something of the first power comes back too.

Andrew Causey (2003) has persuasively argued that the paper works of Moore sometimes possess affective qualities (of dread, of the *Ungeheim*) which are not in general seen in his sculptures, and they do indeed share features and feelings with the Surrealism of the day.[1] But this was not the wild Surrealism of Dali. As Fuller (1003: 31) remarked: 'In retrospect we can see that his imagination possessed a poise, balance, and in the best sense, an *ordinariness* which the Surrealists lacked.'

It would be possible to situate Moore's drawing of 1935 'Stone figures in a landscape setting' (Garrould 1988: fig. 40) within the general ambience of the English neo-Romantics, and the argument by association is a valid one. But Moore's sculptural works generally have a determined sense of form which predominates, and which somehow relegates to second place the more fanciful qualities seen in some of the paper works. In some of them the intensity with which the form is experienced by the viewer seems almost paradoxical in the light of the restraint through which it is expressed.

Robert Burstow (2003) has situated Moore's use of the naked human figure within the interests of the leisure movement of the 1920s and 1930s where exercise and a desire for the open air were the aspirations of many city dwellers, and where hiking was a popular and, he argues, often working class pursuit, while naturism was favoured by many left-wing intellectuals. This helps to place these works in an intelligible social environment, far removed from the courtesans and naked court beauties of Titian, Velasquez, or Goya, where again their presence is not fanciful nor evocative of a different social world, but unsurprising or even ordinary.

LANDSCAPE AND PREHISTORY

Here I would like to turn again to that very English discipline, field archaeology, which has notably early beginnings. Already at the time of the dissolution of the monasteries, John Leland was travelling the country on horseback and taking note of what we would today call field monuments. These include the earthen burial mounds termed 'barrows', as well as the stone circles and

[1] Among Moore's sculptures there are some transformations which do have Surrealist overtones. Prominent among them are the heads of 'King and Queen' of 1952/3 (Moore 1955: no. 80). But the series of Helmet Heads' (e.g. Helmet Head no. 2 of 1950 (Moore 1955: no. 11) belong primarily with his exploration of the Inside/Outside approach. Despite the shock at first occasioned by the devices used for the eyes (which would well allow one to compare them with Ernst or Mirò in surrealist mode) they can equally be placed among his transformations of the human form: they are much later than his pre-war works on paper which stand closer to the British Surrealists of the time.

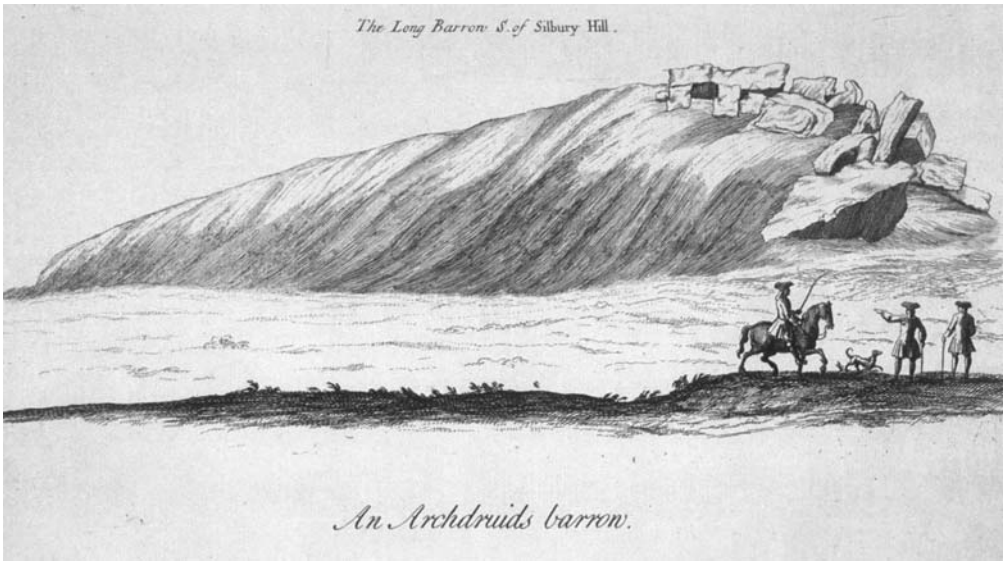

Fig. 17.5 'An archdruids barrow', from William Stukeley, *Abury.* 1743

other prehistoric monuments of which the most famous examples in the south are Avebury, Stonehenge, and Silbury Hill. Many of these are recorded in the first systematic description and cartographic study of England given by William Camden in his *Britannia* of 1586. They occur again in the publications of William Stukeley, who was a keen observer of ancient monuments in their landscape settings. He was indeed a romantic himself, with druidical theories which at times seem far-fetched today. But these did not in general obtrude in his drawings, which observed barrows and stone circles and other monuments in the rolling downlands of Wessex (figure 17.5) with a sharp and even unsentimental eye, among them (Stukeley 1743, pl. A, B, C, D)

Sir Richard Colt Hoare's *Ancient Wiltshire* of 1812 gives further scholarly plans and diagrams, which maintain a cartographic precision. But later in the nineteenth century we see monuments such as round barrows placed by illustrators in animated rolling landscapes. Indeed it sometimes seems that the intention of recording the monument tempered and reduced in careful scholars such as Colt Hoare some of the 'romanticizing' tendencies which the artist or illustrator might in other circumstances have applied to the landscape.

At the turn of the century the artist antiquary Heywood Sumner produced a series of well-observed and keenly felt drawings, whose subject matter was the monuments and hill forts of the south downs (Sumner 1913; Coatts and

Lewis 1986; Cunliffe 1985)). These were the sites which even more systematic field archaeologists, such as O. G. S. Crawford, were studying in the years before the Second World War. It is worth mentioning also that in his early years, before his 'surrealist' days, Paul Nash did a series of drawings keenly sensitive of similar qualities of the landscape, such as 'The wood on the hill' of 1912 (Cardinal 1989: pl. 32)—a landscape not yet peopled by 'object personages'. It bears a certain superficial resemblance to Stukeley's view of Bush Barrow of 150 years earlier and indeed to Sumner's 'St. Catherine's Hill' of 1881 (figure 17.6: Coatts and Lewis 1986: 9). Nash's 'Maiden Castle' of 1943 (Cardinal 1989: pl. 72) shows some of the same feeling, but it has lost the calm and understated quality which I think of as typical of the landscape tradition of English field archaeology, and has become more emphatic, more mysterious, indeed more romantic, somehow more charged with sentiment than the concept of 'Englishness' as evoked here might allow.

That Moore's approach to landscape as such is in harmony with the calm and unsentimental approach emerges most clearly from the drawing and lithographs, many of which place sculptures within a landscape setting, for instance 'Figures in a hollow' of 1942 (Sylvester 1957: 249), or in the for him unusual studies of 'Sheep grazing in long grass' of 1981 (Garrould 1988: no. 290)—unusual in featuring an animal rather than a human form. But there are landscape drawings which evoke the same calm response, for instance 'Landscape with clouds' of 1977 (figure 17.7; Garrould 1988: fig. 242).

It is above all in the Shelter drawings of 1941 that one sees most clearly that the recumbent, rolling forms of sleepers have monumentality and a calm which recalls some of the landscapes of the downs and the moors (e.g. 'Pink and green sleepers' (*ibid.* fig. 92) and 'Four grey sleepers' (figure 17.8: *ibid.* fig. 93). This is a quality quintessentially possessed by the great 'Draped reclining woman' and 'Draped seated woman' of 1957–8, anticipated already in the 'Draped reclining figure' of 1952–3 made for the Time Life Building (figure 17.9; Moore 1955: pl. 62). A number of commentators have noted how the folds in the draperies are evocative of undulations in the landscape (ibid. pl. 62c), and Moore himself, in his 'Notes on the Draped Reclining Figure' (Moore 1955: xvi) states:

> Also in my mind was to connect the contrast of the sizes of folds, here small, fine and delicate, in other places big and heavy, with the form of mountains which are the crinkled skin of the earth.

The harmony between draped figure and landscape ground is particularly evident in the charcoal, pastel and watercolour 'Draped reclining figure' of 1981 (figure 17.10; Garrould 1988: fig. 302).

Moore's landscape was not, of course, always one of rolling downlands.

Fig. 17.6 St Catherine's hill, drawing by Heywood Sumner, 1881

Fig. 17.7 Henry Moore, Landscape with clouds, 1977

Fig. 17.8 'Four grey sleepers', 1941

> Perhaps what influenced me most over wanting to do sculpture in the open air, and to relate my sculpture to landscape comes from my youth in Yorkshire, seeing the Yorkshire moors, seeing, I remember a huge natural outcrop of stone at a place near Leeds which as a young boy impressed me tremendously—it had a powerful stone, something like Stonehenge has—and also the slag heaps of the Yorkshire mining villages, the slag heaps which for me as a boy, as a young child, were like mountains'
>
> (Moore in Forma 1964, quoted James 1966, 51)

This rock, Adel Rock (figure 17.11; is illustrated by Moore and Hedgecoe (1986, 35)) and Moore states (*ibid.* 113) that his *Two Piece Reclining Figure* of 1959–60 (Bowness 1955: pl. 141) was influenced by it (see also figure 17.12) and by Seurat's painting *Le Bec du Hoc* (James 1966: no. 120): 'This particular sculpture is a mixture of the human figure and landscape, a metaphor of the relationship of humanity with the earth, just as a poem can be'. The relationship between sculpture and rock is made visually explicit in Moore's drawing of 1942 'Reclining figure with red rocks' (Garrould 1988: fig. 103).

Although the sculpture of Barbara Hepworth is in some ways different in character from that of Moore, it is interesting to note that she too had early experience of the Yorkshire landscape which served to influence the character of her sculpture:

> All my early memories are of forms and shapes and textures. Moving through and over the West Riding landscape with my father in his car, the hills were sculptures, the roads defined the form. Above all, there was the sensation of moving physically over the contours of fullness and concavities, through hollows and over peaks—feeling, touching, seeing, through mind and hand and eye. The sensation has never left me. I, the sculptor, *am* the landscape.
>
> (Hepworth 1970)

LIVING LANDSCAPE AND ACTIVE FORM

There is another feature of the landscape which is particularly pertinent to the work of Moore. The landscapes of which I have been writing, and certainly the stone which Moore carved, are in the main sedimentary rocks, formed millions of years ago, at the bottom of some ancient sea. They are formed of the calcareous bodies of numerous marine micro-organisms. In this sense the mineral, the rock, is organic, it has been formed from life. This observation is of course geological rather than archaeological. But just as field archaeology has a long tradition in England, so does field geology, where the stratigraphic succession of the earth's ages and rocks was to a large extent established by such scholars as Hutton and Lyell.

Fig. 17.9 Detail from figure 17.1: Draped reclining figure, 1952/3

Fig. 17.10 Draped reclining figure, 1981

Fig. 17.11 Adel Rock, near Leeds, an influence upon Moore

This is relevant in view of Moore's keen sense of the material, of stone. His human figures are often like eroded rocks (James 1966: no. 124). His observation about Adel Rock, above, is matched by the eroded form of Monet's *Cliff at Etretat* to which, as James (1966: 273 and pl. 125) suggests, he may have been referring in the passage quoted above. The materiality of the stone is never avoided, but is rather stressed. So the Glenkiln Cross is clearly a human torso, but it is an eroded human torso. At a certain point the circumstance that it is in bronze rather than stone (since bronze does not erode in such a way) seems irrelevant. For Moore the found object, often of weathered flint, could readily suggest the appropriate form for a sculpture based upon the human body.

Fig. 17.12 Two Piece Reclining Form no. 3, 1961

It is pertinent to note, however, that very often for Moore the human body was not primarily conceived as the articulation of two legs and two arms upon a torso surmounted by a head. In his earlier sculptures, some of them influenced by the Aztec art of Mexico, the body is compact with the stone. In his later works the body is a unity, and the limbs need not be made explicit, unless, as in the case of the Arnhem 'Warrior' (Moore and Hedgecoe 1986: p. 163) there is an expressive or formal reason for this. Indeed this piece is rare among Moore's works in its almost expressionist pathos.

The equivalence between the materiality of stone and of the human body might well have been matched by an interest in plant and animal forms. Gaudier had shown the way decades earlier with the vitality of his animal sculptures. Interestingly there is one series of small Leaf figures in bronze of 1952 (Moore 1955: pl. 50) which show how readily Moore could have utilized metamorphoses between the plant and human worlds. But in general he did not.

Jacquetta Hawkes, who was herself an archaeologist and one well familiar with the long English tradition of field archaeology discussed earlier, in her

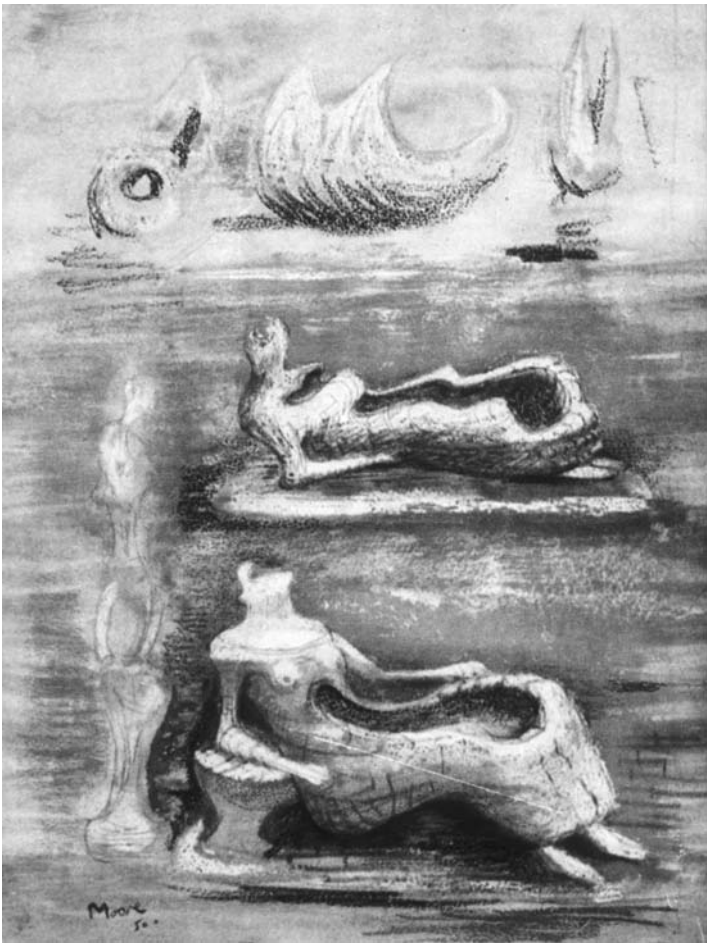

Fig. 17.13 'His curves follow life back into the stone'. Frontispiece to Jacquetta Hawkes' *A Land* (1951)

remarkable book *A Land*, for which Henry Moore contributed a drawing (figure 17.13; Hawkes 1951: frontispiece: 'His lines follow life back into the stone') has expressed some of these ideas well:

It is hardly possible to express in prose the extraordinary awareness of the unity of past and present, of mind, of matter, of man and man's origin which these thoughts bring to me. Once when I was in Moore's studio and saw one of his reclining figures with the shaft of a belemnite exposed in the thigh, my sense of this unity was overwhelming. . . . Moore's creations float in those depths, where images melt into one another, the direct source of poetry and the distant source of nourishment for the conscious

intellect with its clear and fixed forms. I can see his rounded shapes like whales, his angular shapes like ichthyosaurs, surfacing for a moment into that world of intellectual clarity, but plunging down again to the sea bottom, the sea bottom where the rocks are silently forming.

(Hawkes 1951, 104)

That passage catches an important point about the materiality of Moore's work in relation to the landscape (although as noted above, the absence of animal forms from his work makes the observation about whales and ichthyosaurs somehow less appropriate).[2]

If that outlook reflects a form of romanticism, and perhaps it does, it is a very different romanticism from those discussed earlier, and a different fancy from the psychological analysis offered by Neumann (1959) and embraced by Herbert Read (1965: 7) in terms of the 'feminine earth archetype, the mother of life itself'.

Jacquetta Hawkes, despite the acuteness of her analysis, was not quite immune from that trend of fashionable mid-century thought, as the following passage, otherwise entirely apposite, reflects:

The most sensitive and the simplest of men have never forgotten their origins, their relationship with the land. Now Henry Moore can be used to symbolise a reaction towards it. His curves follow life back into the stone, grope round the contours of the woman he feels there, pull her out with the accumulating layers of time the impressions of detailed life, marking the flesh of her universal existence.

(Hawkes 1951: 142)

Moore, however, did not think in terms of Jungian theory, nor follow the anthropology of Bachofen. He did not require theories of the 'collective unconscious' to bring a strong feeling for the significance of the female human form, or sensitively to express the relationship between mother and child. His analogies and his enthusiasms were in terms of form, which can be directly appreciated, and which brings with it aesthetic feelings and human sentiments. That is why one does not need any very elaborate or theoretical critical apparatus to approach his work. He saw very clearly the difference

[2] The recent exhibition *Henry Moore—Animals* (Rudloff 1997) might give the impression that animal forms played an important role in the work of Moore. But the early 'Dog' of 1922 and the 'Snake' of 1924 (Sylvester 1957: nos. 2 and 20), both showing Aztec influence, plus the small 'Horse of 1923 and the 'Duck' of 1927 (Sylvester 1957: nos. 20 and 44) plus the 'Bird' of 1927 (Rudloff 1997: 166) represent almost the totality of his sculptured animals until Moore was in his fifties, when there is a series of small animal sculptures. There are, so far as I know, only two major animal pieces, both rather late: the large 'Divided Oval: Butterfly' of 1985/6 and the 'Sheep Piece' of 1971/2 (Rudloff 1997: 128 and 151) which might not be considered among his strongest works. There are also several drawings, but many of the bones, shells and skulls should be situated among his organic studies: they are not drawn from life, but rank as found objects.

between his sculpture and the operation within Romanticism of the pathetic fallacy. Very lucidly, in conversation with Kenneth Clark, he countered the suggestion of a 'Wordsworthian relationship with nature' in his own work:

> Wordsworth often personified objects in nature and gave them the human aspect, and personally I have done rather the reverse process in sculptures. I've often found that by taking formal ideas from landscape, and putting them into my sculpture, I have, as it were, related a human figure to a mountain, and so got the same effect as a metaphor in painting.
>
> (Moore, in Pritchett 1941; quoted by James 1966: 79)

To analyse this metaphorical approach, of sculpture as landscape, does not, however, in itself go very far towards explaining the extraordinary effectiveness of the work. To do so, it might be helpful to investigate further the quality of 'monumentality' upon which Moore laid such stress. But even if one could indicate more clearly precisely what qualities Moore shares, for instance, with Masaccio, why is it that this quality of monumentality is so satisfying? That is a more difficult question.

In conclusion it is worth remarking that while Moore's work was very much that of a carver, in his interests he anticipates in some ways the concerns of a later generation of British sculptors who have chosen to operate in the landscape, and who use its forms and its resources directly. Richard Long is in some ways the closest to Moore among such artists, working directly in the British landscape and beyond. David Nash might in a certain sense be compared to Moore, and his concern for wood and trees might be contrasted with Moore's feeling for stone. More remotely, Andy Goldsworthy has focused also upon the natural world, yet some of the strongest of his works are of their nature ephemeral: Moore's taste was for the enduring and the perennial. Those are interests underlying the work of many field archaeologists from Stukeley to Sumner, and with them we come close both to the 'Englishness' of English art and to some of the enduring preoccupations of British landscape archaeology.

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18

Wessex Hillforts after Danebury: Exploring Boundaries

Gary Lock

Hillforts have acted as a catalyst for thinking about Iron Age society in its widest sense since the earliest interests in the period. That these are the most visible and numerous reminders of that distant past across much of Europe has been a magnet and focus for fieldwork that has served as a balance to the artefact-based typological studies and occasional rich burials that dominated early and much of more recent continental European Iron Age studies. Hillforts are significant and impressive places within landscapes; they were in the Iron Age and still are now, and as such they provoke questions at the most basic level of archaeological reasoning. Avoiding the 'why' question as being an inevitable dead end, it can be reformulated to assess the evidence that we have for how Iron Age people used, understood, and interacted with these massive structures with which they obviously invested so much time and effort in building and maintaining. Reviewing this evidence, which is partly what I intend doing in this chapter, requires a parallel discussion of how that evidence has been brought to life through its changing interpretations over the years.

European hillforts are the subject of a recent account by Ian Ralston (2006) in which he focuses on them as 'fortifications'. The reason for this, he claims, is that although there are probably between 20,000 and 30,000 hillforts in Europe, 'only a tiny number of sites have been the subject of extensive excavation—and this fundamentally conditions what can be said about them' (*ibid.*: 20). Given that it is 'extensive excavation' which is likely to cover hillfort interiors, as opposed to the numerous small-scale diggings into ramparts, Ralston's evidence-based account is understandably biased towards ramparts and, hence, 'fortifications'. This immediately positions Barry Cunliffe's work at Danebury as important not just within a Wessex and British context but also on the European stage. It is not just the proportion of the interior excavated and the wealth of material found but also, of course, Barry Cunliffe's interpretation of the evidence that has enabled not only him, but

Iron Age studies generally to move beyond the constraints of hillforts as defensive places. By introducing social and economic interpretations based on ideas such as elite residence and the social stratification that implies, redistribution centres and the economic relationships that implies, the so-called 'Danebury-model' provided a focus for the re-alignment of Iron Age studies from the 1980s onwards.

To a large extent this is still the case. With the addition of Palmer's aerial photographic work (Palmer 1984) and the subsequent Danebury Environs Project (Cunliffe 2000 and on-going) providing a whole new landscape dimension, it is difficult to envisage any future hillfort work within Wessex, and probably further afield, that will not use Danebury as a starting point for comparison, or at least, as Barry Cunliffe invites (2000: 207), as an interpretative windmill at which to tilt. Indeed, this position of importance within Wessex hillfort studies has not been matched since and is unlikely to be matched within the near, or probably distant, future due to the current circumstances of excavation within Britain. This is despite the need for similar large-scale projects being recognized (Haselgrove *et al.* 2001). Most, if not all, hillforts within England are Scheduled Ancient Monuments, which offers them some protection, including from excavation, and many of them are in locations which are unlikely to be threatened by development other than occasional and small-scale. With most excavation in Britain now being of the commercial development control variety, and large-scale academic fieldwork research projects being subjected to the vagaries of funding, it is unlikely that another hillfort excavation anywhere near the scale of Danebury will happen again. The 'Danebury-model' filled a vacuum within Iron Age studies when first published and rapidly became a 'grand narrative' of the Wessex Iron Age. In this chapter I will concentrate on certain aspects of the Danebury interpretation and its wider implications, subsequent responses and critiques and to what extent recent work has offered alternative understandings of how hillforts could be understood. Like Ralston, my emphasis is on the ramparts for as our changing understanding of hillforts is showing they are not a single class of monument in terms of function and use, it is the sheer size and monumentality of their ramparts that unites them as a group.

While it is not necessary to detail a history of Iron Age studies here, it is important to realize that the Danebury Project came into being at a time of profound change within archaeology generally and specifically within evolving approaches to understanding the Iron Age. The 1960s were a time of optimism and excitement as new approaches and techniques often based on modelling and 'systems' were being explored as explanatory devices for cultural, social, political, and economic relationships and change. These new techniques and approaches posed very different questions from those

of the empirically focused preceding decades and consequently needed new and different forms of data. For the British Iron Age this saw the emergence from the Hawkesian ABC Scheme with its main interest in pottery, chronology and invasionist continental contacts and the resulting campaigns of excavations comprising small trenches across ramparts primarily to provide a date. This shift, influenced by Hodson's (1964) emphasis on indigenous development and the importance of a broad range of settlement evidence other than just pottery, resulted in a perceived lack of data from the interiors of hillforts. Although there were other large-scale hillfort projects that began at about the same time, such as those in the Welsh Marches, and at Crickley Hill and South Cadbury, it is Danebury that really engaged with the theoretical and interpretative changes of the 1970s and beyond.

I use the term 'Danebury-model' here to represent the detailed arguments developed through the Danebury publications but perhaps most succinctly presented in the final volume (Cunliffe 1995). The model is temporal and accounts for social change in the region so that Danebury subsumes the earlier activity at surrounding sites such as Woolbury and Bury Hill to become a 'developed' hillfort in the middle Iron Age. The evidence for internal structures and a range of activities represented by all categories of material culture increase through time from the early period. In essence Danebury is then seen as a 'central place' and, more specifically, as a redistribution centre working at a series of integrated scales including local, regional and long distance exotic materials and products. Surrounding farmsteads are incorporated into this economic model as providers of raw materials and agricultural produce. Different possibilities for the social correlates to the economic central place are discussed focusing on the idea of Danebury being an elite residence. This framework attempts to match the settlement hierarchy of farmsteads and hillforts with the social hierarchy described by the classical authors, i.e. a social elite within a farming population. Articulated within this interpretation is an argument for the hillfort being permanently occupied at times by a population possibly numbering in the low hundreds, and for the ramparts and complex south-eastern entrance with outworks being primarily for defence although also of symbolic importance.

Overall, this is presented as 'an agenda against which to study other territories' particularly in terms of population, authority, economy and exchange (*ibid.*: 102). Perhaps not surprisingly, there hasn't been another large-scale fieldwork-based project in Britain that has taken up this challenge although the Hillforts of the Ridgeway Project based on the North Wessex Downs, directed by Chris Gosden and myself, does include three hillfort excavations and is well placed as a comparison for certain aspects of the Danebury model. Details from this project are presented below where appropriate, centring on the sites

of Uffington Castle (Miles *et al.* 2003), Segsbury Camp (Lock *et al.* 2005) and Alfred's Castle.[1] Otherwise, the publication of several single site excavations has produced interpretations which differ in various ways from Danebury, particularly South Cadbury (Barrett *et al.* 2000) and Maiden Castle (Sharples 1991), and there has been a multi-pronged critique of the Danebury-model based on different interpretative outlooks and the reworking of existing data. In essence these focus on two different although related aspects of hillforts, firstly the interpretation of the excavated evidence and, secondly, understandings of their physical location and setting.

Early challenges to the Danebury model, in the later 1980s and responding to the first report (Cunliffe 1984), claimed that the excavated evidence didn't support the hillfort being an economic 'central place' based on redistribution and incorporating elite residence. The arguments of Haselgrove (1986) and Stopford (1987) were both influential in suggesting that the structural and artefactual records from the hillfort were not significantly different from those of many enclosed farmsteads in the surrounding area. This was reinforced by a detailed study of the evidence for textile production (Marchant 1989) which showed that despite initial suggestions in the Danebury report, the evidence from both the hillfort and farmsteads was quantitatively similar. According to Barrett (1989) the emerging rift created by the Danebury model was based on the tendency for Iron Age studies to uncritically separate the economic, social and religious domains with too much emphasis given to the economic. Hill (1989) reasoned that this privileging of the economic was mainly due to the Iron Age being seen as 'familiar' through its agricultural landscapes and family-based farms, as opposed to the Neolithic and earlier Bronze Age periods which were obviously 'other' with the evidence being mainly ceremonial and burial. This, he argued, made the Iron Age too comfortable and straightforward to understand, especially when selected support from the Classical writings was used.

A second strand to this argument was initiated by Bowden and McOmish (1987; 1989) who questioned the defensive qualities and the assumed economic/defensive function of hillforts. Through case-studies such as Scratchbury Camp, Wiltshire, they suggested that the landscape settings of some hillforts were not only indefensible but were chosen to integrate with topography and earlier cultural landscapes to provide visible arenas for a range of activities including ceremonial and religious. Subsequent analyses using GIS-based modelling of location, topography and visibility have supported these arguments against hillforts as defensive places (Earl 1999; Mitcham 2002). Shifting the regional focus from Wessex to south-eastern England, Hamilton

[1] See http://www.arch.ox.ac.uk/research/research_projects/ridgeway

and Manley (2001) have sustained a similar argument suggesting a chronological framework for hillforts in that area based on their visual and locational characteristics.

Bowden and McOmish also suggested that hillforts are probably not a single category of monument, but rather could display a whole range of functions and purposes that would have integrated economic, social, and religious interests. These themes were later elaborated on by Hill (1995; 1996) who offers the most detailed alternative to the Danebury model in which hillforts are united simply by 'not being farmsteads'. Rather than being at the top of an economic and social hierarchy, these large enclosures are centres of communal activity, or even a range of activities, which are built, maintained and used by the surrounding social group. The reinforcing and continuance of social relationships is acted out through a range of meetings, transactions and events within the communal place, or hillfort although this is now a complete misnomer even though 'large enclosure' is a syntactically awkward alternative.

An aspect of some interest to Hill, and indeed since the first recognition of hillforts, is the ramparts, or rather the notion of enclosure that is implied by them. That ramparts represent some kind of boundary and, by implication that boundedness was important to Iron Age people manifested through the building of enclosures, is a well explored theme. In the Danebury model ramparts are seen as being primarily defensive although a symbolic element is acknowledged, equally with the structural complexity and enhancement of entrances, while Bowden and McOmish (1987; 1989), as mentioned above, have argued for the non-defensive interpretation of hillfort ramparts. Enclosure as a unifying Iron Age interest is central to Hill's non-hierarchical social order and at the farmstead level the phenomenon has received considerable attention. Hingley (1984; 1990) has offered a social/economic analysis of settlements suggesting boundaries of social exclusion and status and prestige explored through the relationships between enclosed and unenclosed settlements. Thomas (1997) has also focused on farmsteads and the possible origins of their enclosure through changes in land ownership and the social relations of kinship groups. Another aspect of interest in enclosures is their entrances as significant points, thresholds or passages from one condition to another. The symbolic and cosmological importance of entrances has been argued based on directional preferences and orientation (Oswald 1997). The deposition of material culture in boundary ditches, often with concentrations around entrances, has reinforced the arguments for their symbolic importance (Hill 1994; Parker Pearson 1996).

It seems to me that the meta-narrative of the Danebury model has now been questioned sufficiently, including by Barry Cunliffe himself (2000: ch. 6),

for anyone interested in the Iron Age to accept the possibility of alternative and multiple understandings for hillforts. Even so, central to these understandings are the ramparts which stand proud as massive undertakings of labour, time and resources and as symbols of inclusion and exclusion. It is this inter-relationship between the pragmatic physicality of ramparts and their meta-physical meanings as boundaries which I will explore further below, partly in the light of our recent excavations of hillforts on the Ridgeway.

There has been recent archaeological interest in boundaries and the range of understandings and interpretations that have been applied to them is considerable. In the collection of papers edited by Stark (1998) the emphasis is mainly on trying to relate ethnicity, and the boundaries between ethnic groups, to material culture patterning through a series of ethno-archaeological examples. This is attempted at a variety of scales from the networks of relationships established through gift exchange over large areas, where the main focus is on ceramics. An important conclusion from this collection is that cultural boundaries tend to be inherently unstable and dynamic and, therefore, trying to identify them through material culture differences is extremely difficult. Another collection (Griffiths *et al.* 2003), focusing on the early medieval period, reinforces the idea that boundaries can be both physical and metaphysical and cover a diverse range of understandings. Of interest here is Reynolds (2003) whose survey of Anglo-Saxon settlements uses physical boundaries as a basis for categorising settlement forms, based on them being a reflection of social ordering, a precise indication of where legal and other responsibilities begin and end. In complete contrast to this is the paper by Thompson (2003), who discusses the written evidence for life, dying and death being stages within a continuous process, stages in the journey to the final judgement. The boundaries between these stages are often subtle and blurred so that, for example, the grave can be seen as an extension of the death bed.

Anthropologists have also had a long-standing interest in boundaries with Barth (1969, reprinted 1998) being the early 'classic' with the focus on the social rather than the physical. The social boundaries between ethnic groups are explored and the differentiation of ethnic groups and their interaction and relationships at boundaries. However, social boundaries work at a range of interlocking scales and I don't want to pursue ramparts as boundaries at the level of ethnic groups. Of more interest, I think, are hillforts within smaller social groupings such as Uffington Castle, Segsbury Camp and Alfred's Castle within 20km of each other (Gosden and Lock 2007), an area that also includes two others, Rams Hill and Hardwell Camp, although they were not included in our fieldwork. The collection of papers by Pellow (1996) shows the complexity and importance of 'boundaries' and 'boundedness' as physical

and metaphysical lines of demarcation at more intimate and everyday levels of social categorisation and ordering; notions of being in or out, of being us or them, the boundaries between categories of status, gender and rank. The initial definition of boundaries as 'limits of anything whether material or immaterial, and also the limit itself' suggests that these social boundaries can and do have physical correlates and that a boundary may be:

- physical, social, temporal, conceptual and/or symbolic
- permeable and negotiable
- created, maintained, elaborated, and dismantled
- separating and unifying; divisive and inclusive; definitional, invisible, transforming, and transformative (*ibid.*: 1)

Which of these characteristics are in play at any particular time and how they interplay depends on the socio-cultural circumstances as does how any of these aspects are manifested materially. The social and physical resources required to build ramparts suggest they are a physical representation of a significant metaphysical categorisation. This, however, was not static as there is considerable evidence for ramparts changing over time, whether major acts of redesign (usually interpreted as 'phases'), small-scale modifications or even periods of neglect before re-use. At Uffington Castle, for example, the early box rampart was in a state of neglect and disrepair when the late dump rampart was constructed over the top of it (Miles *et al.* 2003). Entrances are also modified, changed and some even completely blocked as witnessed by the often occurring Wessex blocked entrances. These temporal existences wax and wane and the implication is that the underlying social conditions giving rise to the boundary are also not static.

Rotenberg (1996) designates social space as either the 'ordinary' place or 'other', the extraordinary place. This is a relational approach whereby meaning is in juxtaposition to something different so that boundaries are other in that they bring the ordinary into focus and view. Ramparts bring into focus what is outside of them as well as what is inside, and if the outside is the everyday of Iron Age life then it is the farmsteads and agricultural practices playing themselves out across the landscape. But boundaries are not just artefacts of differentiation they are also intimately related to action; allowing or not allowing certain actions, requiring certain responses, sanctioning certain activities for certain categories of people. I would argue that it is too simplistic to categorize the boundaries of enclosed farmsteads in the same way as those of hillforts and equally too simplistic to claim that 'enclosure' and 'boundedness' were a unifying concept at different scales of Iron Age life. As Barry Cunliffe has noted as being 'redolent of power' (2000: 206), there is a magnitude of difference between the size and complexity of hillfort ramparts

and the banks and ditches of farmsteads. Size matters not only in material terms of the boundary but also in the importance of the social relations defined by it. The massive rock-cut ditch and box rampart of Segsbury Camp produced a physical boundary of nearly 8 metres in height from top to bottom which would have demanded a very different phenomenological engagement to a metre deep ditch with a palisade around a farmstead. My argument here is that this size difference reflects the social importance of the difference between the 'ordinary' and the 'other', the importance to Iron Age people of the difference between the everyday activities within and around the farmstead and the special occasion of visiting the hillfort.

The possible importance of this for understanding hillforts is that it broadens the definition of 'defence' beyond the accepted and the militaristic and thus allows us to still use the word but in a completely different way.[2] Ramparts become a social defence against the breakdown of the accepted order and the continuing categorization between the everyday and the other. Kristeva (1982), and Douglas (1991), recognize that physical and metaphysical boundaries are synonymous and they define difference and the reinforcing of the boundary defends against the merging of those differences. Boundaries can become polluted and lose their potency through inappropriate social action. The potency of any boundary is proportional to the social differentiation that underlies it and it can be kept pure through the cleansing of ritual attention. This is the ritual management of social ambiguity at the physical point where transformation happens and contamination of the accepted social logic can happen. While boundaries define differences and contrast they are also transitional zones that can be associated with danger and ambiguity. This may be to do with upsetting or challenging the social order maintained through power and control and ritual is required to mediate the threat. This is demonstrated by Hardie (1996) and the Tswana of Botswana who conceive of spiritual boundaries around settlements which are represented physically by substantial hedges. These are given potency through regular blessing by the priest to maintain and ensure the symbolic protection of the ancestors after a series of activities including sacred fires, the deposition of medicines and charms have consecrated the barriers at new settlements. The annual protection of the boundary is tied in with concepts of social purity so that certain categories of people are seen as being 'hot' and capable of upsetting the social order, as being 'polluting'. These 'hot' people who might upset the social equilibrium, such as those in dispute, recently widowed, a boy on the threshold of becoming a man, all in a liminal zone of being, are temporarily confined outside the boundary to be 'cooled' before being

[2] I thank Tanya Krzwinska for introducing me to this idea and the work of Kristeva.

returned to the order of the interior. Through this the interior is protected and made different to the 'wild' world beyond through the adherence to rituals passed down to them ultimately from the ancestors themselves. Physical boundaries have to be treated with care and respect and are kept pure and active through strict adherence to boundary rituals which enable them to retain their 'defensive' power against threats to the social order.

These ideas are perhaps easier to relate to farmsteads through the structured deposition within ditch fills (Hill 1994), than to hillforts where detailed evidence for ritual activity associated with the ramparts is less discussed. At Maiden Castle, Sharples (1991) has suggested that the ramparts show evidence of repeated small-scale alteration and attention and may even have been more of a focus for activity than the interior. This he relates to the building and continuation of a sense of community through periodic meetings and activities at the hillfort which involve working on the ramparts. Segsbury Camp is a large hillfort on the Oxfordshire Ridgeway which shows little evidence for internal occupation other than the periodic use of dispersed roundhouses and associated pits (Lock *et al.* 2005). The ramparts, however, like those at Maiden Castle show considerable evidence for regular change both small-scale and large-scale complete remodelling. The earliest phases, from the sixth century BC, are forms of palisade with rear revetting bank but in the fourth century a major change sees the establishment of a massive box rampart with the widening and deepening of the outer ditch. With a rampart circumference of approximately 1,500m this is a massive investment of human resource which must reflect a significant social change. We estimated a ten-fold increase in labour was needed to build the box rampart compared to the earlier palisade (*ibid.*: 142) and there is some interesting evidence that gives a glimpse of the importance of this enterprise to the people concerned. Within the very centre of the rampart is an enigmatic structure that resembles two or three courses of a dry stone wall comprising two lengths at approximately ninety degrees to each other. This is built from small blocks of chalk, although not the local indigenous material, but that from elsewhere in the geological column, it has been collected elsewhere and carried to the site to be intentionally incorporated within the fabric of the rampart. This is reminiscent of Chapman's (2000) 'deliberate fragmentation' but applied to landscape locales rather than artefacts and bodies, where pieces carry the meaning of the whole. Also, in the fourth century the Segsbury pottery changes from local wares to include the introduction of vessels from further afield (Brown 2005). This all suggests that the sphere of influence of the hillfort as a place to visit is getting considerably larger and that the new people being attracted are helping with the building of the rampart and perhaps bringing material with them to establish links between their home area and the new place. In

the report we suggest that these physical alterations to the ramparts reflect changing social relationships primarily to do with the expansion of sheep farming, the exchange of rams and the status and identity of their owners as expressed through periodic communal gatherings.

One thing that is becoming increasingly accepted is that as Bowden and McOmish (1989) suggested, any single monolithic explanation of hillforts is bound to fail whether based on locational characteristics or other evidence. The extensive work of the Wessex Hillforts Geophysical Survey Project (Payne *et al.* 2006), for example, has shown the immense variability within the interiors of eighteen chalk hillforts through geophysical survey of their complete interior areas. Excavation adds little to an argument for unified purpose and serves only to reinforce the sense of internal variability. There have been few Wessex hillfort interior excavations since Danebury but compare the suggested focus on pits, middens, ritual and feasting inside Codford Circle, Wiltshire, for example (Allen and Gardiner 2006), with the emphasis on the more pragmatic nature of structures at Balksbury Camp (Wainwright and Davies 1995) even though the excavators claim that the name 'hillfort is singularly inappropriate' (*ibid.*: 111). The common denominator for hillforts is still their ramparts, as Barry Cunliffe has suggested (2000: 206), their awe-inspiring nature, the investment in labour to build them and the focus on their periodic renewal. This can be explored further through scales of social practice and the creative tension that exists between social norms transferred via tradition and small group agency that produces cultural change. While hillforts are recognizable as a European-wide phenomenon the detail of their differences, perhaps only recognizable through excavation, show the variation at play within those wider norms that represents small group identity (Gosden and Lock 2007). For example, many Wessex hillforts underwent the change from box ramparts to dump ramparts which may have included the blocking of an original entrance; these are usually described as 'phases' in a way that detaches them from any possible social context. Rebuilding ramparts were major social events that would have involved decision making at a very local level for each hillfort that gradually produced regional patterning.

A relevant example of this which shows the social importance of structures such as houses and ramparts and how material changes reflect the tension between tradition, agency and practice is Dietler and Herbich (1998) who investigate how the material and social worlds are intimately linked for the Luo people of western Kenya. As the material world changes so it is absorbed into the 'doxa', the accepted naturalness of the social and cultural world, in this case the change of house design from traditional roundhouses built of posts with wattle and daub walls and thatched roofs to the European influenced rectangular block-built houses with corrugated iron roofs. The actual physical

changes were important to the Luo being beneficial in various ways, but what had an equally great impact was the effect on various social relationships, some of which were embedded within the construction of the traditional houses. The men built and repaired the roofs while the women smeared mud on the walls and this was done at least once a year which reinforced the women's dependence on the men and also the relations of mutual support among the women. Of great importance to the Luo social order is the relative positioning of the houses which reflected the social relationships of individuals but was also tied into the generational life cycle of the settlement. Houses were repaired only after certain rituals and at certain times and were abandoned and left to decompose after the death of the owner. All of these constructional aspects were fundamentally altered by the permanency of the new houses so challenging the logic of practice that represented social order, the resulting ambiguity required mediation through discussion and negotiation by the elders. This shows that temporality is about a social understanding of temporal rhythms and how they can be incorporated into the doxa of everyday structures such as houses and ramparts rather than just identifying phases of change in the material evidence. It also shows how variation can be incorporated into what is recognized as a regional pattern, the gradual change from Luo round to rectangular houses was not coordinated at a regional level but was an individual response by different groups so that at any one time change was at different stages within different settlements across a wide region.

As suggested above, this has interesting implications for change in ramparts, for example the regional pattern across Wessex of change from box rampart to dump rampart, generally occurring in the Middle Iron Age. Details are only evident through excavation and these show that even hillforts in close enough proximity to be used by the same people can show remarkable differences within this general scheme. Uffington Castle is only 12km away from Segsbury Camp and both underwent this change, probably in the fourth century BC, although the box and dump ramparts at each are quite different in size and construction. While the actual construction of both types of rampart was probably a communal effort involving large numbers of people the design and planning would have been invested in a smaller number, perhaps even an individual. The differences between a box rampart and a dump rampart in terms of materials and skills are considerable with the former having much more focus on timber and the structural engineering of timber and timber-framing, rather than just chalk rubble. It could be argued that with a change to dump ramparts we are seeing a decrease in the skill level required and a decrease in the level of social attention and detail paid to ramparts.[3] Sharples

[3] I would like to thank Janice Kinory for raising this idea.

(2007) has argued that Late Bronze Age social networks and group identities were based on the production and exchange of artefacts and that these were replaced in the early Iron Age by a social focus on hillforts. This involved a display of power through the mobilisation of labour for the building of hillforts, labour as potlatch. From the middle Iron Age onwards, with the increase in artefacts according to Sharples, the source and display of power shifts back again and away from hillforts and their ramparts. The implications of this change in rampart design are confusing and probably multi-faceted for as well as Sharples' suggestions it may fit with Barry Cunliffe's argument for a focus on developed hillforts with others being abandoned. The availability of timber as a communal resource may also have been under pressure as large amounts were needed for box ramparts together with the associated woodland management skills, possibly as many as 700 reasonably mature oak trees were needed for the box rampart at Uffington Castle, presumably all available within a short time frame (Miles *et al.* 2003: 96).

Both the temporal waxing and waning and the spatial differences of the social significance of ramparts are demonstrated at Uffington Castle and Segsbury Camp. At Uffington the relatively small box rampart was in a state of eroded disrepair, apparently not having received much attention for a while, when the much larger dump rampart was constructed over the top of it. It appears from the evidence that the site was then abandoned and not used again until the Romano-British period although this is a simplistic interpretation as the nearby chalk-cut White Horse had to be cleaned approximately every twenty years to survive. We have argued elsewhere (Miles *et al.* 2003) that the focus of the White Horse Hill complex was religious and that the hillfort was a focal point for ceremonial community events based not only on the unique landscape and the White Horse, but also its deeply rooted historical connections (Gosden and Lock 1998). It is this religious focus and strong connections with ancestors through both genealogical and mythical ascription to landscape features that ensured its continuing significance through the middle and late Iron Age when the hillfort was of less if any interest. Alternatively, it may be that the White Horse was established in the fourth century BC and replaced the hillfort as the main focus on the hilltop, a chronology that is possible within the vagaries of the OSL dating. At nearby Segsbury, which we have interpreted as communal focus for a variety of purposes but possibly based on the economic aspects of Iron Age life, the rampart was paid continuous attention from the sixth to second centuries before being abandoned and ignored through the Romano-British period when the economics changed. In contrast to Uffington, Segsbury seems to have been built within a landscape without deep historical connections. It was a new place, perhaps responding to the increase in sheep farming in

the area and the developing sociology of sheep farming that is needed to maintain healthy flocks (Gray 2002). Here we have two hillforts, close together, both of which underwent the box to dump rampart change although the differences in the detail of those changes are considerable. In terms of understanding ramparts as social boundaries and as a defence against the polluting of accepted social practices to be carried out outside, inside and at the boundaries, Uffington and Segsbury confirm Hill's prediction that detailed contextual studies 'will remind us that Iron Age societies were far more messy than our models of them' (Hill 1996: 113). If the same people were using both Segsbury and Uffington, and that is entirely possible, then it seems that they were engaging with the two ramparts in very different ways both physically and metaphysically. This was embedded within the different activities that took place within the two enclosures, one concerned with group religion and ceremony and the other with the trading and continuance of livestock.

While I have provided some extra detail in this paper, many of the ideas explored here were first aired twenty years ago as part of the debate initiated by Barry Cunliffe and his work at Danebury. This has resulted in today's general acceptance of the diversity of hillforts as a category of site in terms of development, form and function. Danebury is now such an integral part of Wessex Iron Age studies that it will always be a starting point for hillfort research although it will continue to lead to many different end points.

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19

A New Gallo-Belgic B Coin Die from Hampshire

Jonathan Williams, Andrew Burnett, Susan La Niece, and Michael Cowell

In 2003, Christopher Stephens was metal-detecting on his parents' farm near Alton in Hampshire, where he turned up an intriguing cylindrical metal object.[1] He consulted Kay Ainsworth of Hampshire County Museums Service who immediately recognized it for what it was—a die for the type of uninscribed Iron Age gold coin commonly known in Britain as Gallo-Belgic B. This identification was confirmed at the British Museum, where non-destructive analytical work on the die was done, the main results of which are summarized here. Later in 2003, a British Museum team led by Richard Hobbs surveyed the findspot. Nothing more was found. In 2005 the die was acquired by the Museum where it will in due course go on public display in the Museum's Gallery of Celtic Europe.[2] It will accompany other objects related to metalwork, including another Iron Age coin die, thought to be a forger's die for Gallo-Belgic A, found near Basingstoke in Hampshire, and acquired in 1994.

OBJECT DESCRIPTION

The die is 18mm in diameter at the business end, and 23mm in length (figure 19.1). It weighs 46.80 grams. On the die-face there is an incuse design

[1] A brief report on the die by one of the authors has appeared in the *British Museum Magazine* (no. 52, summer 2005, p. 47). We are grateful to Christopher Stephens for promptly reporting his find, and to John Sills for offering his views and allowing us to include them here.

[2] British Museum CM 2005.4–18.1. The die was acquired with the help of a generous grant from the British Museum Friends which was made at a meeting chaired by the honorand of this volume. This brief essay is offered in particular acknowledgement of Barry's role as a British Museum Trustee in promoting archaeology and research within the Museum.

Fig. 19.1 View of the die in profile

Fig. 19.2 Design on the face of the die

of a stylized horse and rider familiar from the coins of the type known as Gallo-Belgic B (figure 19.2). About halfway down the side, it begins to taper towards the other end which is roughly oval in shape, with a longer diameter of 15mm and a shorter one of 13mm. At the base there is a vestigial spike which projects out slightly (figure 19.3). It looks as if it should be an obverse die which would have been set into an anvil or another kind of metal case for striking. However, such evidence as exists for Iron Age dies from northern Europe suggests that, as indeed was the case in the Greek and Roman worlds, reverse dies could either be in the form of a tapered barrel-shaped object set

Fig. 19.3 View of the face of the die (left) and view of the base showing the vestigial spike (right)

into a metal casing probably made of iron, or in the form of a long metal shaft with the design carved onto the end.[3] The probability, however, is that this example is in fact an obverse die, for reasons outlined below.

ANALYSIS AND MICROSCOPY

The die was analysed by Michael Cowell using non-destructive x-ray fluorescence (XRF) on areas where the immediate surface seems to have been removed, and the bulk material exposed. The results should be regarded as semi-quantitative or approximate, as the technique provides only a surface analysis.[4] The following average results were obtained:

Element	*%*
Copper	52
Tin	37

[3] For illustrations of reverse dies which would have been set into a metal case, see Castelin (1965: 89) and Allen (1980: 210, pl. 39). For examples where the reverse design is engraved directly onto the end of a metal shaft, see the recent discovery of a cache of obverse and reverse dies for *Regenbogenschüsselchen* from Niederaltheim, Bavaria (Ziegaus 2002). For Roman comparisons, see Vermeule (1957) and Amandry (1991).

[4] The reproducibility of these results is about ± 2–5% for copper and tin and about ± 10–30% for the other elements. The tin content may be over-estimated due to corrosion and metallurgical segregation effects.

Lead	4
Arsenic	3
Antimony	2
Iron	1
Nickel	0.6
Silver	0.2

The die is thus made of a high-tin bronze with small quantities of other metals. Such alloys are extremely hard and difficult to work, for instance by punching or engraving.

The die was examined using optical and scanning electron microscopy (SEM). Most of the surface has a dark grey or black-coloured patina, except in a few places around the edge of the die-face and along the side where the surface has been chipped or broken to reveal a light grey crystalline material beneath. The section of the surface patina is exposed here and can be seen to be more than superficial. There are no indications of copper corrosion products (i.e. red cuprite or green malachite). The edge of the die-face slightly overlaps the cylindrical side of the die, as if it has been deformed through use. However, considering the properties of high-tin bronze, such deformation is unlikely unless it had been hot-worked.

There are numerous small cracks, visible using optical microscopy, on the face and sides of the die (figure 19.4). Many of these are filled with a white material which energy dispersive x-ray analysis (EDX) in the SEM showed to be calcareous, with silicon, aluminium, iron, potassium, magnesium, copper and tin also detectable. This is likely to be soil with some copper and tin derived from corrosion products. A network of much smaller cracks is also

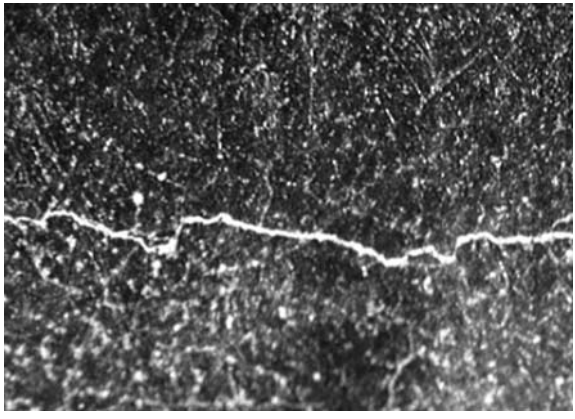

Fig. 19.4 Detail of the surface of the die, x150, showing crack filled with soil and corrosion products

visible in the SEM. Their morphology indicates that they are probably sited at the grain boundaries of the material and may be stress corrosion cracking. Surface features observed in the SEM, including the fine cracking, and the light grey crystalline features where the immediate surface has been removed, indicate a cast structure for at least the main body of the die. Apart from the vestigial spike, which seems to have taken all the pressure, the cast structure has been very well preserved on the non-business end, suggesting that it was protected inside some sort of collar. In contrast the die-face is very smooth and rounded (figure 19.5). The incuse parts of the die are mostly smooth-sided with no features such as sharp or slightly raised edges that would conclusively indicate production by engraving or punching. The absence of these features could be explained by wear or corrosion. The edges appear to have suffered some plastic flow, perhaps indicating that the die has had a lot of use, which could be masking the original engraving/punching of the surface. An alternative explanation for the rounded appearance is that the design was cast rather than engraved.

There are scratches or marks (round-bottomed) on the die-face, concentrated within the incuse parts of the design, visible under both optical microscopy and the SEM (figure 19.6). They do not generally follow the contours of the design and they cross from the incuse into the raised areas. It is unlikely that they are connected with the production of the design though it is possible that they have arisen from cleaning out the design at some time. This is likely to have taken place in antiquity rather than recently, as the patina is not broken by them and there are calcareous deposits in them.

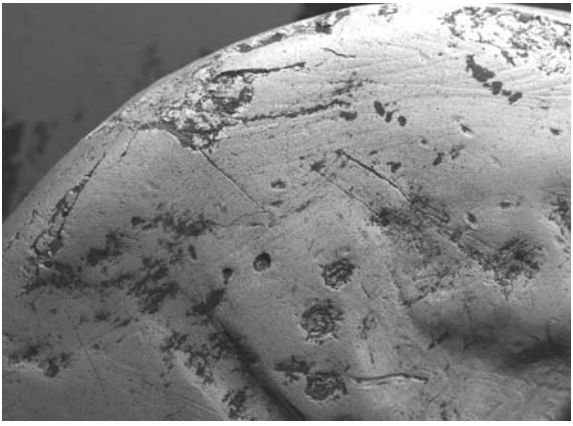

Fig. 19.5 Scanning electron microscope image of the edge of the die face (x35), showing the smooth and rounded surface

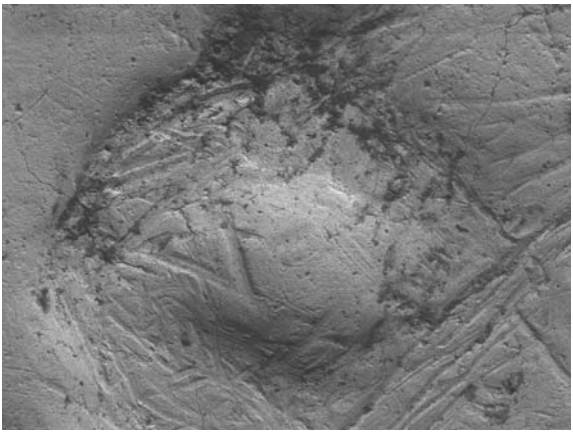

Fig. 19.6 Scanning electron microscope image (x100) showing scrape marks on the face of the die

DISCUSSION OF THE ANALYSIS

There are no signs of copper corrosion, which might be expected on an ancient object. However, high-tin bronzes can be very resistant to corrosion (Meeks 1993; Soto *et al.* 1983). Analysis of the above-mentioned Gallo-Belgic A die found near Basingstoke revealed that it too was made of a relatively high tin bronze but with somewhat less tin than this example (about 15 per cent), more lead and less antimony, arsenic and silver. Roman dies analysed at the British Museum have revealed similar compositions.

High tin bronze was also used in the pre-Roman period in Britain to make the cast coins known as potins. Published analyses of specimens excavated at Stansted Airport near Takeley, Essex, suggest a typical range of 22–35 per cent tin, 3–7 per cent lead, 0.5–3 per cent arsenic, 1–6 per cent antimony, one per cent iron, 0.5–1 per cent nickel and 0.5 per cent silver, with the balance being copper (Northover 1992: 260–3, 297–8).

In summary, the die has a composition consistent with other Iron Age metalwork. It is not possible to be certain how the design was formed but casting seems a very likely possibility considering the material used. A direct casting from a genuine coin would have been possible considering the relative solidification temperatures of the alloys involved. The solidification temperature of an alloy of the composition of the die would be about 740 °C, which compares with about 1030 °C for the gold–silver alloy of the coin type it would have produced. However, perhaps a less risky procedure would have

been to take an impression from a gold coin and to make a model for lost-wax casting, a method which was well established at this period.

THE NUMISMATICS

The series to which the design on the surface of the die belongs, Gallo-Belgic BB, has recently been examined in extraordinary detail by John Sills. According to the results of his exhaustive die-study, this group consists mostly of quarter staters, accompanied by a small number of staters, some of which were struck from the same anvil dies (Sills 2003: 170–6). The other striking feature of the series is that the ratio of 'obverse' to 'reverse' dies is the opposite of what would normally be expected. In class 1c, to which the die belongs, Sills has identified 46 'obverse' dies and 17 'reverse' dies for staters and quarter staters used at the two workshops he identifies (*ibid.*: 174, fig. 50; 178, fig. 51). Far fewer dies were used to strike the 'horse' side of the coin than were used to strike the 'defaced' design associated with Gallo-Belgic BB. This would seem to suggest that the new die is actually an anvil die, despite the fact that, unusually in the Iron Age series, the horse design was in this case struck by the obverse, rather than the reverse, die.

Having examined the piece, Sills (pers. comm.) has commented that the die is similar to, but not identical with, a known coin. He believes that the die was cast from a stater, or more probably, a quarter stater, and then touched up, rather like the Gallo-Belgic A die mentioned above.

THE FINDSPOT

The die's British findspot is of considerable interest. Allen presumed that Gallo-Belgic B was a continental product. Later commentators, noticing the lack of continental provenances, suggested that it was made for 'export only' (Kent 1981: 41) or that it was made in Britain (Haselgrove 1987: 79–80; Nash 1987: 110–11; see also Burnett 1995: 9). Sills's more detailed study has revealed that there are in fact significant numbers of findspots on the continent, as many as in Britain (Sills 2003: 185–6). He has reverted to Allen's view, namely that the coins were made on the continent. The die might be able to shed some light on this point, depending of course on who made it, and for what purpose, on which more below.

The precise location of the findspot in northeast Hampshire is also of interest. Sills's detailed map and gazetteer (2003: 182–5, map 22) reveals

that it lies outside the main concentration of British findspots of Gallo-Belgic BB, which lies further to the northeast, in Surrey, Greater London, and Essex.

CONCLUSIONS

There is evidence from both the scientific and numismatic analyses of the die that the face might have been cast from a genuine coin. The balance of opinion of those who have examined it is that this is so. But what does this conclusion entail? Does it mean that the die was an instrument for producing British forgeries of authentic continental originals? Or does it support the case that Gallo-Belgic B was made in Britain?

In the absence of any real information about the authority behind coin-production in late Iron Age Europe, or indeed whether there were authorities as such, the question of what, if anything, would have distinguished an 'authentic' or 'official' coin from an 'imitation' is a difficult one. So long as the design, metal, and weight were right, who made it, or how it was made, might well have been irrelevant considerations for the user. There are no indications that the die was used to produce plated pieces, as there are on the aforementioned Gallo-Belgic A die, which also looks cast but has minute flecks of gold on the side, suggesting that it was used in the presence of gold foil.

The likelihood that the die was cast from an original coin does not mean that it was necessarily the work of an insular counterfeiter of a continental product. Copyist, perhaps, but that is a rather different matter. On the other hand, the Hampshire findspot does not prove that Gallo-Belgic B was made in Britain whether in whole or in part. But it does suggest that attempts were made in Britain to reproduce these coins locally, even, or perhaps especially, outside its normal area of circulation.

Another possible way of accounting for the die is that it came to Britain along the same currents of cross-Channel exchange in high-status metalwork in the late Iron Age that brought the Winchester torcs and brooches to Hampshire, and much else besides (Hill *et al.*, 2004). If Gaulish gold coins and other objects are reasonably thought to have been brought to Britain by a variety of means, so might the technologies that enabled their production.

The fact that the only two Iron Age dies known from Britain both come from the same 'Gallo-Belgic' period, both seem to have been made in the same way, and were found only eleven miles apart, may be largely due to the vagaries of the evidence. But together they do imply that there was some early interest in this region in acquiring the means to make gold coins, plated as well as real ones perhaps, locally, in preference to importing them.

Can we say anything about the date of the die? Gallo-Belgic B coins are not common enough in British hoards to be able to say anything at all precise about when they came into Britain, or how long they circulated, though evidence of wear on many examples suggests they were used for a reasonable period (Sills 2003: 214). Haselgrove (1999: 127–8) puts the series in his Belgic 'stage 2', i.e. *c.* 200–125 BC. Sills (2003: 216) similarly dates Gallo-Belgic BB to the mid second century BC.

Gallo-Belgic B is absent from a number of hoards containing Gallo-Belgic A, C, and E. But it is present in the Carn Brea (Cornwall) hoard which contained Gallo-Belgic A, D, and British A. The hoard record seems then to suggest the following: that Gallo-Belgic B was an early entrant, i.e. mid to late second-century BC, into Britain and that it was less common than Gallo-Belgic A;[5] that it lingered in circulation at least until the appearance of British A which is usually put at some point in the early first century BC; and that it went out of circulation before Gallo-Belgic A did.

The date-range for the die is therefore potentially rather long, from the early days of coin circulation in Britain in the mid second century BC down to the time of the earliest British gold coinages in the early first century BC. But can we be any more specific?

The early British coinages, whose designs derived from Gallo-Belgic C, were in a very different style from that of Gallo-Belgic B, which seems to have disappeared from circulation fairly early and left no visual legacy on British coins. The manufacture of the die, therefore, as perhaps that of its companion piece for Gallo-Belgic A, seems naturally to belong to the earliest phase of coin-use in Britain, in the mid to late second century BC, when Gallo-Belgic A and B were still the only gold coin-types known in Britain.

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[5] Fitzpatrick (1992: 3 n. 10, 13, table 2. For the relative infrequency of Gallo-Belgic B compared to Gallo-Belgic A, see Sills (2003: 219, table 22): 77 examples (staters and quarters) of B recorded from British sources up to 2001, against 180 examples of A. Almost twice as many of the Gallic-Belgic A are from British sources as from continental (180 against 99), whereas the numbers for B are about the same (77 against 80), suggesting that A was a more plentiful import into Britain than B. Of the 77 Gallo-Belgic B from British sources, 63 (68%) are BB quarter-staters, the same type as the die.

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20

Evidence of Absence? The Rarity of Gold in Durotrigan Iron Age Coinage

Philip de Jersey

Generations of archaeologists have done well to remember the truism that 'absence of evidence is not evidence of absence'. About fifteen years ago I presented Barry Cunliffe with what I regarded as some rather distressingly blank distribution maps of various Iron Age artefacts in northwest France. Far from agreeing with my pessimistic view of the possibility of saying anything very meaningful about such paltry evidence, Barry reminded me of the 'absence of evidence' maxim, and encouraged me to think more deeply about the apparent gaps, and to question my assumptions about the usefulness or otherwise of the data—in short, to look more positively at the opportunities for investigating such seemingly negative evidence.

It is perhaps a little ironic, then, that in this tribute to Barry's unrivalled influence on Iron Age studies, I would like to present an example where I am nearly sure that the absence of evidence *does* indicate evidence of absence. My subject is the lack of a significant gold coinage among the Durotriges of Dorset, in contrast to every other major coin-using polity in late Iron Age Britain. My aim is to demonstrate that this lack of gold coinage is a genuine phenomenon, and not the result of partial or inadequate evidence; and to suggest some reasons why this situation may have arisen.

THE EARLIEST GOLD COINAGES IN BRITAIN

Before focusing more narrowly on Dorset in the mid-first century BC, we need to consider the background to the importation and the production of gold coinage in Britain. Although there were probably very occasional imports of coinage from the time of the earliest 'Celtic' imitations, perhaps in the mid-third century BC, the first significant inflows of gold coin did not occur until at least the mid-second century BC. These began with the 'large flan' stater and

quarter stater (Gallo-Belgic A), probably struck in central and western Belgic Gaul, in the territories later identified with the Ambiani and the Bellovaci. Their distribution in Britain is focused on the Thames estuary, with the majority of findspots in Essex and Kent (Sills 2003: 136, 153). At roughly the same time, the 'defaced die' staters and quarter staters (Gallo-Belgic B) were also imported into Britain, perhaps from the territory of the Nervii (Sills 2003: 185–6). They are concentrated rather more tightly on the Thames valley, and also occur a little further upstream than most of the large flan coins (*ibid.*: 169, 182).

There is some disagreement concerning the chronology of these imports. Haselgrove (1999: 116, 127; 2005: 131–2) suggests a broad range of *c.* 200–*c.* 125 BC for Gallo-Belgic A and B, while Sills (2003: 330) favours a slightly later start, *c.* 175 BC. This chronology is not crucial to the discussion which follows, but it is worth noting that Gallo-Belgic A, in particular, must have remained in circulation for a considerable period: it occurs in hoards which were almost certainly deposited at the time of the Gallic War or shortly afterwards, a century or more after it may have arrived in Britain.

There is a typological link from the final class of Gallo-Belgic A to the 'biface stater', Gallo-Belgic C (Sills 2003: 226, as Gallo-Belgic CA), probably produced by the Ambiani (*ibid.*: 244). Production may therefore have commenced in the last quarter of the second century BC, and indeed Sills (*ibid.*) suggests that the first three classes of Gallo-Belgic CA may have been produced to finance resistance to the incursions of the Cimbri and Teutones in the final years of the century. Purely in terms of numbers this type is less commonly found in Britain than Gallo-Belgic A and B, but it is more widely spread across the coin-using area, mostly to the east of a line from the Solent to the Wash (*ibid.*: 237–8).

The association of a part of the quarter stater series traditionally known as Gallo-Belgic D with the biface stater is rather more controversial (Sills 2003: 232; de Jersey 2004: 14). We will return to this series of coins below, but assuming that Sills is correct in making this distinction, we can usefully summarize here the quantities of these various early coinages which have been recorded from the southwest of Britain. As figure 20.1 shows, they are few and far between. Within Durotrigan territory[1] there are just two Gallo-Belgic A staters (Stoke Abbot and Portland, Dorset (figure 20.2)) and

[1] Defining the territory of the Durotriges—particularly at this early period—is not straightforward. The borders illustrated on the distribution maps are based on Cunliffe (2005: 178). To some extent these are based on coin distributions, and thus there is a clear danger of developing a circular argument. However the proposed territorial limits are also supported by the ceramic traditions of this region (*ibid.*: 107–8, 117), and so we can be reasonably confident in identifying a distinctive tribal grouping here from at least the fourth or third century BC onwards. Whether this group were *known* as the Durotriges at this early period is impossible to confirm.

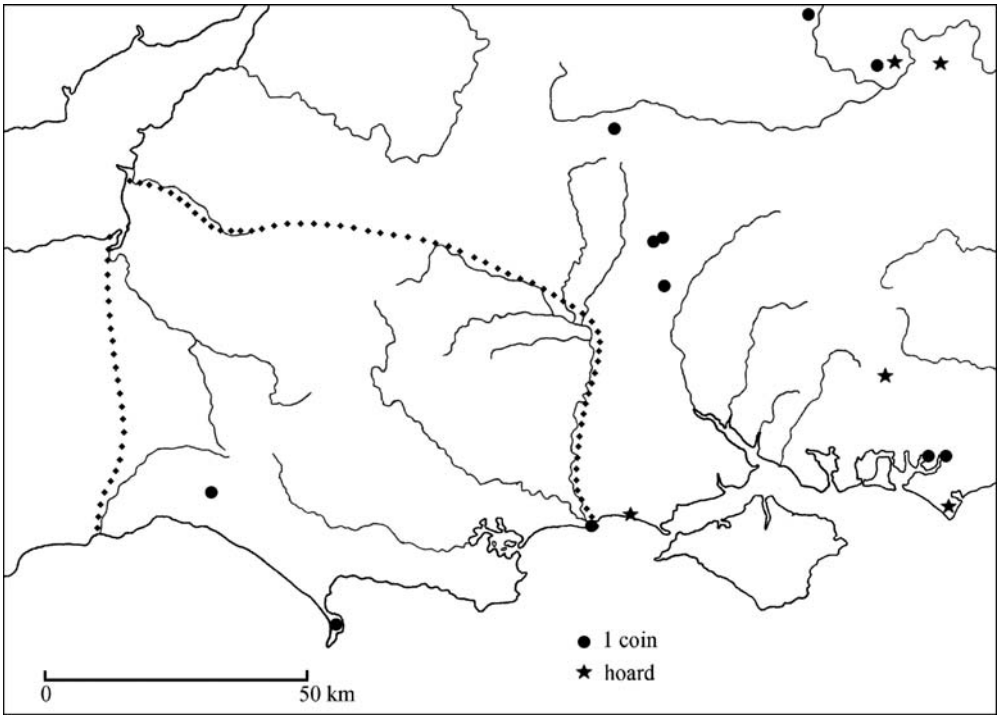

Fig. 20.1 Distribution of early Gallo-Belgic coinages in Dorset and surrounding areas. The dotted line marks the approximate territory of the Durotriges. Data from the CCI (2005)

Fig. 20.2 Gallo-Belgic A stater found at Portland, Dorset, before 1720 (CCI 68.0602). Shown at twice actual size

a quarter stater (Sills Gallo-Belgic Ca class 5) from Hengistbury Head. Of course this is a record of (relatively) modern finds, and not necessarily an accurate reflection of Iron Age imports, but it does suggest that only a little of the earliest gold coinage to be found in Britain reached the territory of the Durotriges.

The later classes of Gallo-Belgic CA seem to have been produced episodically during the first half of the first century BC (Sills 2003: 332–3), with the final coins struck as late as the eve of the Gallic War. Shortly before the Gallic War—perhaps in the 60s BC, if we accept Sills's (*ibid.*: 334) chronology—there was a limited issue of staters and quarter staters (Gallo-Belgic CF), derived from the regular CA type. This seems to have originated in Hampshire or West Sussex, and thus was probably the earliest regular gold coinage produced in Britain (*ibid.*: 261–7). A single quarter stater of this series is recorded within Durotrigan territory, at Hengistbury Head.

GALLO-BELGIC E

There is a crucial typological link from the final class of Gallo-Belgic CA to the succeeding coinage, known as the uniface stater, or Gallo-Belgic E (figure 20.3; Scheers 1977: 341; Sills 2003: 227–32), which implies that there was little if any break between production of the two series. At the same time there is a phenomenal rise in output, and Scheers's suggestion (1972) that this should be linked to the start of the Gallic War—and specifically to the payment of warriors and mercenaries—has become almost universally accepted (though see Burnett (1995: 6) for some words of caution).

Estimates of the volume of production of the uniface stater are difficult to assess. The main problem is that there has been only a very limited amount of experimental work on Iron Age coin production, and despite comparisons with other coinages, we still have little idea of how many coins were struck per die (de Jersey forthcoming). Thus although Sills (2005: 4–5) has identified some 1500 reverse dies for Gallo-Belgic E, we remain ignorant of how many coins could have been produced from these dies. Since the fundamental experimental work by Sellwood (1963), a figure of ten thousand coins per reverse die has routinely been quoted by numismatists working on Iron Age coinage (e.g. Allen 1975: 4–5). However, if applied without qualification to the uniface stater, this would imply the use of some 52,000kg of gold and the production of fifteen million staters, which must surely be an exaggeration. In his consideration of Gallo-Belgic E production, Haselgrove (1984: 90) based

Fig. 20.3 Gallo-Belgic E stater (CCI 04.0394). Shown at twice actual size

his figures on an output of one thousand coins per die, which gives us rather more credible estimates of about 5200kg of gold in the form of 1.5 million staters (the coins typically have an alloy content of approximately 60 per cent gold, 30 per cent silver and 10 per cent copper).

In the most recent work on the subject, Sills (2005) has proposed that the seven main classes of the uniface stater might correspond to 'annual production cycles' through the Gallic War. Thus class 1 was perhaps produced in the winter of 58/57 BC, to pay for the following summer's campaigns; class 2 in the winter of 57/56 BC, and so on (table 20.1). There is no way at present to prove that this is correct, but it is a thought-provoking interpretation of the evidence.

The uniface staters were imported into Britain in some quantity. There are now at least 700 recorded from Britain, from more than 170 findspots (including at least 24 hoards composed either solely of Gallo-Belgic E or in association with other coinages). The real total is likely to be considerably higher, to judge from the number of unprovenanced specimens in British auction catalogues, which are usually from British rather than continental sources. The majority of the British finds are from classes 1 to 4 (heavy), and

Table 20.1 Suggested production dates for Gallo-Belgic E (adapted from Sills 2005: 5)

class	date	events
1	58/57	57: Caesar attacks the Belgae
2	57/56	56: defeat of the Veneti
3	56/55	55: first invasion of Britain
4 heavy	55/54	54: second invasion of Britain
4 light	54/53	53: first wave of British coinage
5	53/52	52: rebellion of Vercingetorix
6	52/51	51: end of Belgic resistance

Sills suggests (2005: 5) that the reduction in imports of the later classes ties in well with Caesar's second invasion in 54 BC, in itself designed at least in part to stop the Britons sending reinforcements to their continental allies (*De Bello Gallico* IV, 20).

Gallo-Belgic E staters in Britain are distributed widely across the whole of the coin-using area (Cunliffe 2005: 131), with a single, prominent exception: the territory of the Durotriges (figure 20.4). Despite hundreds of years of chance finds, more than a century of archaeological excavation, and three decades of intensive metal-detecting, not a single Gallo-Belgic E stater has been recovered from this region. My argument here is that this is not chance, or an accident of recording, but a genuine phenomenon which reflects something noticeably different about the Durotriges in the late Iron Age, something which marked them out from every other coin-using tribe in southeast Britain. We have to accept, of course, that this absence might be illusory. It is quite possible that Gallo-Belgic E staters will still be found in Durotrigan soil. But the fact that none have been found so far, despite all the

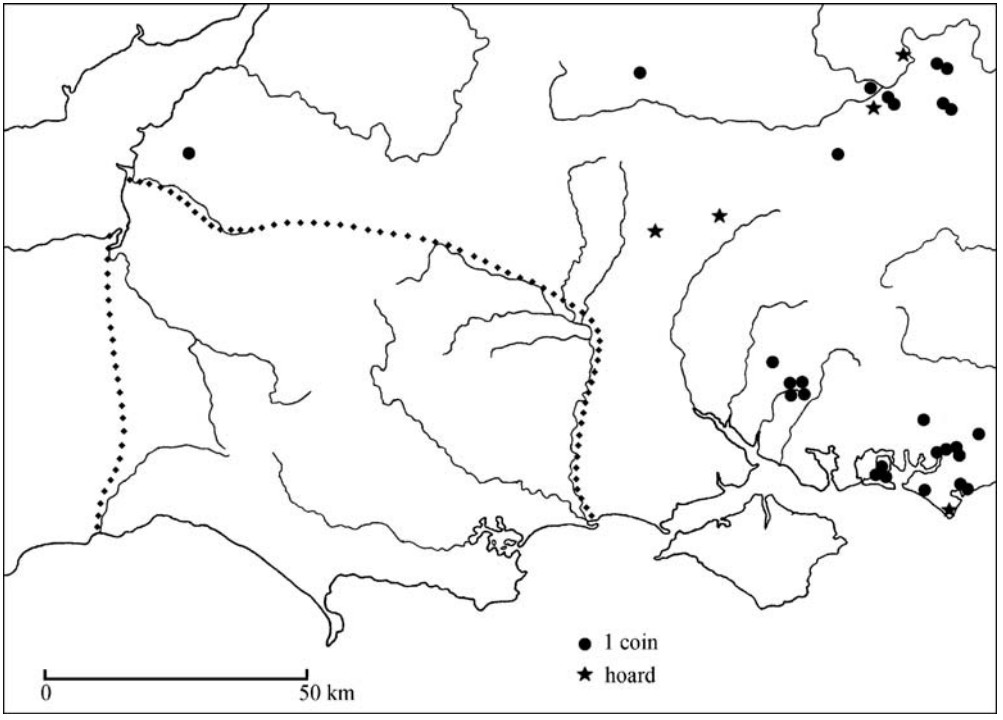

Fig. 20.4 Distribution of Gallo-Belgic E in Dorset and surrounding areas. Data from the CCI (2005)

various possibilities for their recovery, suggests that they are unlikely to be discovered in great numbers, if at all.

Elsewhere in the country, the arrival of large numbers of Gallo-Belgic E had several very important consequences. Chief among these was the sheer potential for indigenous coin production created by the arrival of previously unknown quantities of gold. The production of any significant amount of indigenous precious metal coinage required imported metal, since the 'pool' of gold available (and indeed of silver, for which see Dennis 2005) was almost certainly insufficient to meet the demand created by the desire to produce coinage. The arrival of Gallo-Belgic E thus provided the wherewithal for the series of distinctive, uninscribed gold coinages found across most of southeast Britain. There is some stylistic influence from the uniface stater too: notably in the use of crescents in the exergual decoration, on (for example) the Norfolk Wolf staters of the Iceni and on some of the early uninscribed issues attributed to the Corieltauvi. The dominant stylistic influence was however the preceding Gallo-Belgic C type.

GOLD COINAGES ATTRIBUTED TO THE DUROTRIGES

One of the British derivatives of this coinage is the type popularly known as the Chute stater, or British B (figure 20.5; Allen 1960: 132). Allen (1968: 46) suggested that this was probably a coinage of the Durotriges, a position which has been more or less uncritically accepted ever since (Van Arsdell 1989a: 289–90). In fact as Allen (1968: 46) acknowledged, the evidence is not wholly convincing. There are no finds at all west of the river Stour (figure 20.6), and more single finds and hoards to the east, in Hampshire, southeast Wiltshire and the western fringes of Sussex. On the basis of the distribution map it

Fig. 20.5 British B (Chute) stater (CCI 03.0259). Shown at twice actual size

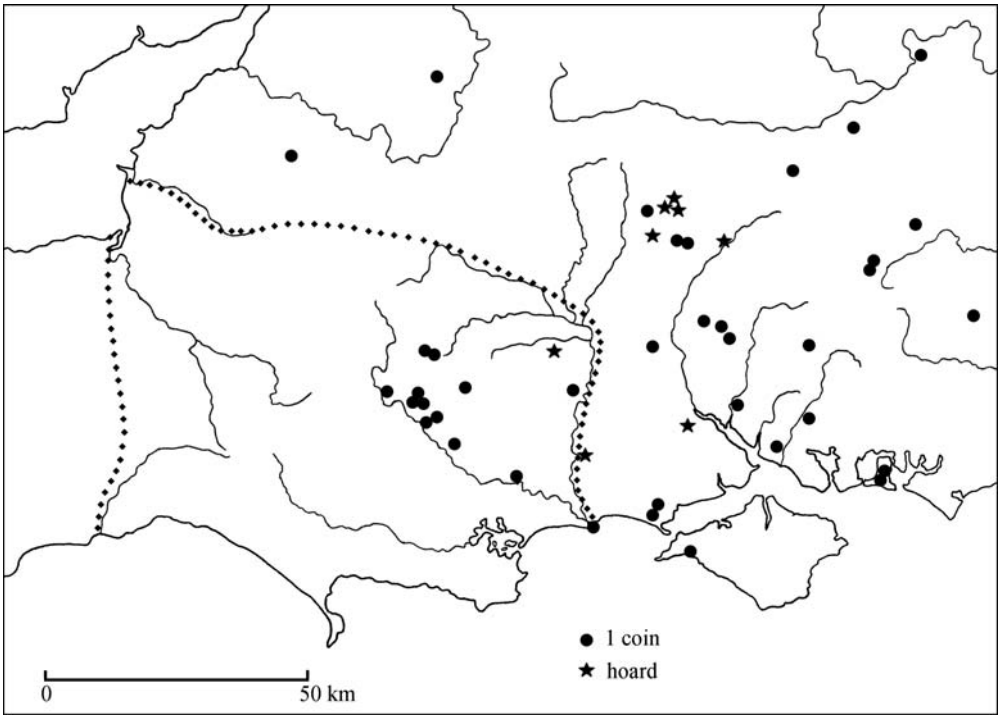

Fig. 20.6 Distribution of British B in Dorset and surrounding areas. Data from the CCI (2005)

would make more sense to attribute this coinage to the Atrebates, but it may be misleading to search for a tribal origin. The Chute stater, although common (more than 730 are recorded), may have been struck in a single burst of activity, indicated by the unbroken die-chain of nine obverse and 74 reverse dies (Sills, pers. comm.). I would prefer to see the Chute stater as the product of a single powerful individual with control over some part of this region, rather than describing it as 'Atrebatic', or even less likely 'Durotrigan'; we do not know precisely where it was produced and we cannot possibly judge with any authority the tribal affiliations of its producer.

A similar situation probably existed for the Yarmouth (British C) and Cheriton (British D) staters, which Van Arsdell (1989a: 291–2) has also attributed to the Durotriges. The former is an extremely rare type known chiefly from a hoard of eight staters found on the Isle of Wight in 1867 (Haselgrove 1987: 277 no. 20); only two or three additional provenanced coins are recorded, from Weston under Penyard (Herefordshire), Wisborough Green (West Sussex) and possibly Blandford (Dorset). The Cheriton stater is

rather more common, but restricted to a relatively small region of the Solent hinterland. Neither of these types is a good candidate for a 'tribal' coinage, whether of the Durotriges or another group, and again it would be preferable to regard these coinages as the output of some form of more local authority.

These three types of early uninscribed gold coinage—British B, C and D—also had little if any stylistic impact on the mainstream Durotrigan coinage, produced predominantly in silver and then bronze through the later first century BC and early first century AD. It has been recognized at least since the time of Evans (1864: 103) that the earliest Durotrigan silver coinage is stylistically almost identical to British A, the Westerham stater. Our understanding of this very early indigenous production has developed considerably over recent years (Bean 1993; Sills 1997a; 1997b). There appear to be two distinct streams of this coinage, one (VA 200) found principally to the north of the Thames, and the other (VA 202) mostly found to the south; it is this latter

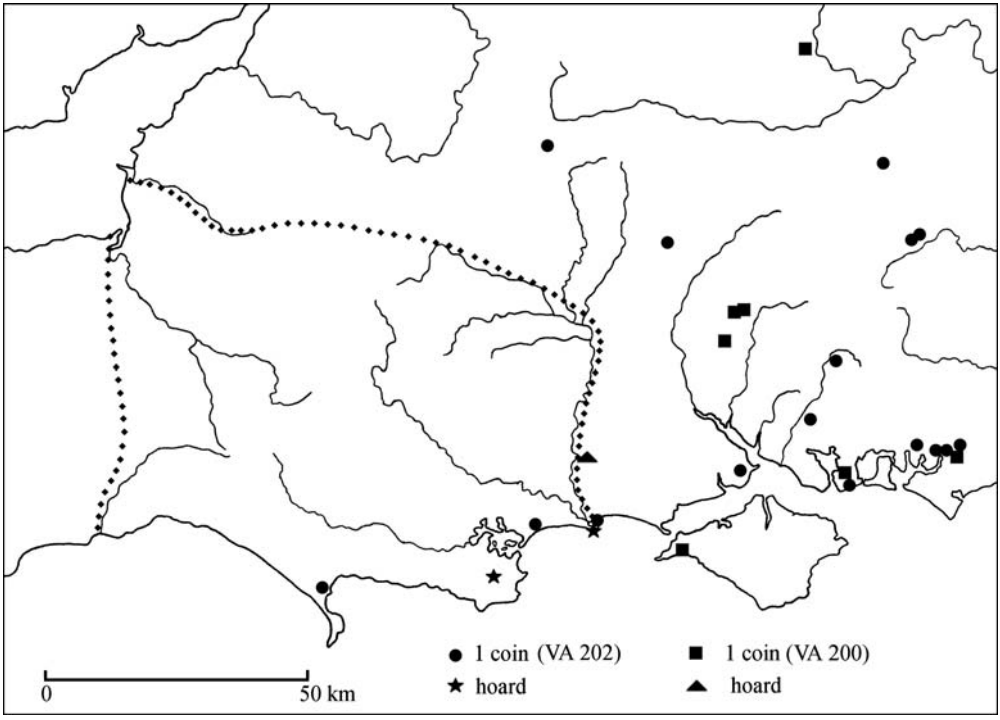

Fig. 20.7 Distribution of British A in Dorset and surrounding areas. Data from the CCI (2005). The hoards in the southeast of the Durotrigan territory—at Corfe Common, Hengistbury and Ringwood—each contained a single example of the British A stater

variety which is copied on the Durotrigan silver. There are a few provenanced examples of the gold prototype within Durotrigan territory (figure 20.7), with a predominantly coastal distribution, but not perhaps the quantity one would expect given the influence which the type exercised on subsequent developments in the region. Rather more coins are recorded from Hampshire and West Sussex, however, and the southern British A type perhaps originated somewhere in this region.

THE DEVELOPMENT OF DUROTRIGAN SILVER

The earliest Durotrigan staters struck in 'silver'—we will discuss their exact alloy below—are so close in style to British A that it is difficult to identify a dividing line between the two types on the basis of style alone (figure 20.8). The weights of the two types overlap: the lower end of British A includes staters typically between 6.0–6.2g, while the heaviest Durotrigan staters are

Fig. 20.8 Examples of the British A gold stater (above, CCI 98. 2253) and the Durotrigan silver stater (below, CCI 03.0411). Shown at twice actual size

Table 20.2 Alloy contents of British A (VA 202) and early Durotrigan silver

		% gold	% silver	% copper
British A (VA 202)	range	43–55	34–41	10–16
$\Sigma = 4$	average	49.2	36.2	14.2
Early Durotrigan silver (VA 1235)	range	10–21	53–78	15–31
$\Sigma = 14$	average	14.6	64.3	20.8

predominantly in the range of 6.0–6.1g. There is however a clear difference in colour, and if metallurgical analyses are available it becomes plain that there is a substantial difference in the alloy of these types. Table 20.2 shows the analyses of four examples of British A (VA 202) in the British Museum collection (Hobbs 1996: 48), contrasted with fourteen specimens of the heaviest Durotrigan silver (*ibid.*: 153). It is worth noting that one of the British A staters was found in association with the fourteen heavy silver coins, in the Corfe Common (Dorset) hoard (Cowell *et al.* 1987: 8–9), thus adding further weight to the stylistic association between these types.

It is evident that despite the stylistic uniformity between the two types, there is a marked discontinuity in their composition: gold is reduced to less than a third of its previous level, while silver nearly doubles. The silver content of the later Durotrigan stater coinage does not exceed the level reached in these first, heaviest coins, of a maximum of *c.* 80 per cent: in other words, as the gold decreases still further and very quickly disappears altogether, it is replaced by copper rather than by silver (Northover 1992: 258). In fact the silver component of the alloy also diminishes very rapidly. This process probably took place in steps rather than as a gradual decline (Cowell *et al.* 1987: 12), and one of these steps is represented by coins from the Donhead St Mary (Wiltshire) hoard, now in the British Museum (Hobbs 1996: 153–4). Nine examples, all weighing between 4.17 and 4.46g, contained between 23 and 35 per cent silver (average 28.1 per cent) and between 63–74 per cent copper (average 68.9 per cent). The silver content then follows the same path as the gold, disappearing entirely and leaving the Durotriges with a struck bronze coinage (VA 1290) composed of *c.* 97 per cent copper, a small amount of tin, and zinc and antimony impurities (Northover 1992: 258, 295).

Placing any sort of reliable chronology on these developments in the Durotrigan stater coinage is extremely difficult. We simply do not have enough detailed contextual evidence to date particular episodes of debasement, and are left with little option but to suggest rather vague ranges of dates based largely on guesswork. My instinct is that gold disappeared from the stater coinage very soon after the Gallic War—perhaps not later than

c. 40 BC—and that silver lasted perhaps not more than another fifteen or twenty years, down to *c.* 20 BC at the latest. Exactly what happened at the start of the series—when gold and silver were still available, even if in relatively small quantities—will be examined below.

QUARTER STATERS

Our discussion so far has concentrated almost exclusively on stater coinages, but we need to backtrack slightly to consider the development of the quarter stater in Durotrigan territory. As indicated above, Sills (2003: 232) has subdivided the type traditionally identified as Gallo-Belgic D into an earlier type associated with Gallo-Belgic CA, and a later series (equivalent to Scheers series 13, classes III–VI), 'struck in parallel with Gallo-Belgic E' (Sills 2003:

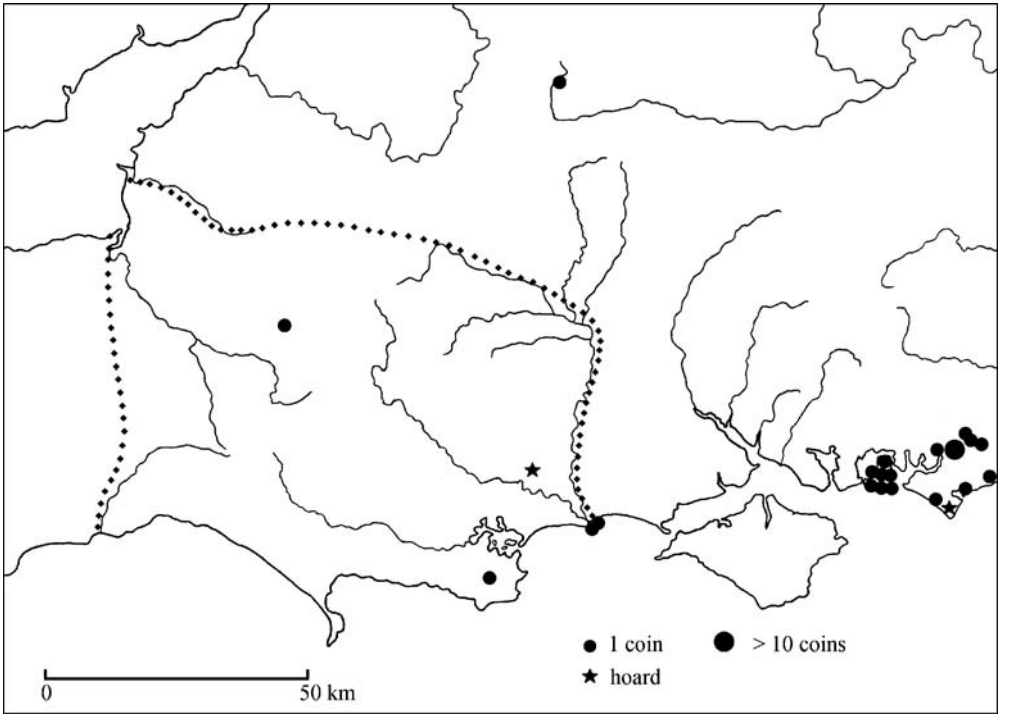

Fig. 20.9 Distribution of Gallo-Belgic D in Dorset and surrounding areas. Data from the CCI (2005). The Badbury Rings hoard, in Durotrigan territory, contained a single example of this coinage

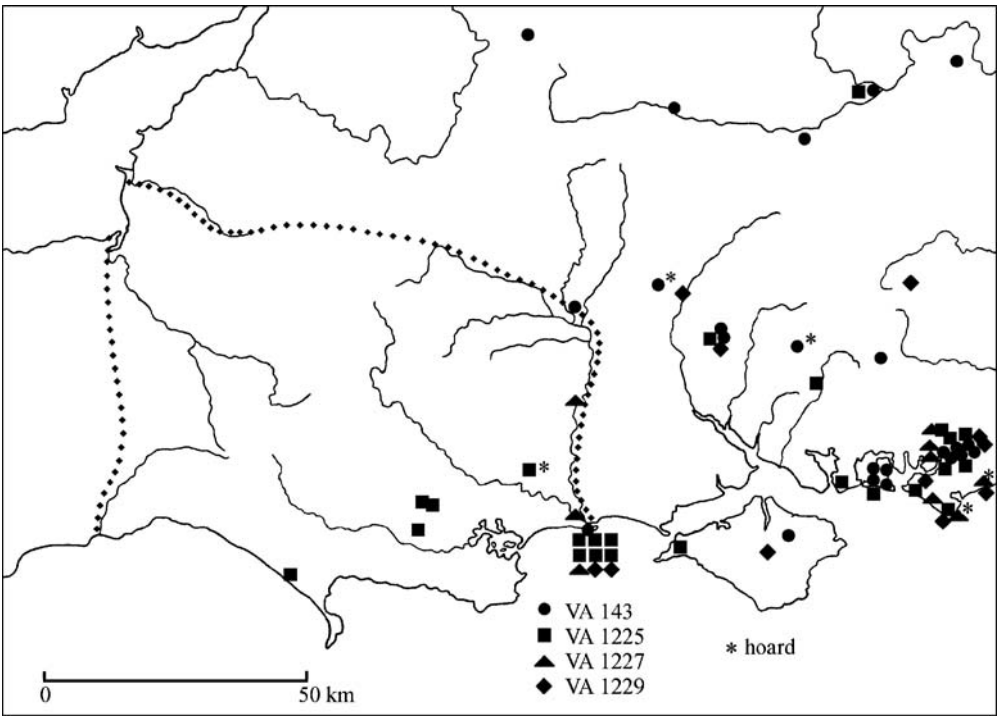

Fig. 20.10 Distribution of British O in Dorset and surrounding areas. Data from the CCI (2005)

225). These quarters are not common in Durotrigan territory (figure 20.9), but the presence of a few examples does suggest that some Gallo-Belgic gold may have reached the Durotriges at this period. Far more are recorded to the east, from the area around Chichester and along the south coast into Kent (Cunliffe 2005: 132).

The Gallo-Belgic D quarter stater had a significant impact on British coinage in terms of its stylistic influence. Derek Allen (1960: 112) collected the types then known to him as British O, and a number of them (VA 1225, 1227, 1229) are attributed to the Durotriges by Van Arsdell (1989a: 292–3).[2] As figure 20.10 indicates, only VA 1225—which provides a clear typological link between the Gallo-Belgic import and Durotrigan silver quarter staters—has any real claim to have originated somewhere in Durotrigan territory, and even in this case examples are confined to the southeast of the area. Only one

[2] One type (VA 143) is incorrectly attributed by Van Arsdell (1989a: 91) to the Cantii, but almost certainly originated in Hampshire or West Sussex.

Table 20.3 Alloy contents of early Durotrigan silver quarter staters

		% gold	% silver	% copper
Early Durotrigan silver (VA 1242)	range	13–20	56–65	16–31
$\Sigma = 4$	average	16.0	58.5	24.5

analysis is available, which intriguingly is almost identical to the typical alloy of Gallo-Belgic E: 59 per cent gold, 30 per cent silver, and 11 per cent copper (Hobbs 1996: 68). This is perhaps rather finer gold than we might expect, but in fact two of the other British O quarter types, localized to Hampshire and West Sussex, are even finer.[3] There seems then to have been a marked difference in the alloy between the stater (British A) and quarter stater (British O) coinages, even though they were presumably more or less contemporary.

The situation changes during the next phase, with the production of the earliest 'silver' quarter staters (VA 1242). The examples from the Corfe Common hoard (Hobbs 1996: 157) are very similar in alloy to the silver staters from the same deposit (table 20.3).

As with the staters, this is probably followed by a stepped decline in the precious metal content of the alloy, although there are very few analyses available to confirm this: one quarter stater from the Donhead St Mary hoard is composed of 33 per cent silver and 64 per cent copper (Hobbs 1996: 157).[4] In contrast to the staters, however, there appear to be very few quarters struck in bronze, other than as cores of plated coins, and so it would seem that there was no requirement for struck bronze quarters. In terms of style there appears to be a long decline from VA 1242 through VA 1249 and VA 1260, but as ever it is very difficult to judge how this stylistic chronology might equate to actual chronology: as with the staters, it is possible that the silver supply was being eked out well before the end of the first century BC.

One other distinctive quarter stater type seems to have a rather different metallurgy. The 'starfish' type (VA 1270) usually occurs in what appears to be a much finer silver. The only published analysis (Northover 1992: 293) apparently confirms this perception, containing 80.1 per cent silver, 15.2

[3] The British Museum figures for VA 1227 average 71% gold, 18% silver and 11% copper; and for VA 1229, 68% gold, 22% silver and 10% copper (Hobbs 1996: 68–9). VA 143, in contrast, is much more base, averaging 38% gold, 46% silver and 15% copper (*ibid.*: 68), and thus almost certainly originated from a different source.

[4] Several analyses of this series of quarter staters are recorded by Northover (1992), but I have not compared them with the BM analyses presented here because of differences in the analytical method, and also because a number of the type identifications of the coins tested by Northover are open to doubt.

per cent copper, and 3.4 per cent tin. Very few provenances are recorded for the type, and possibly sixty or more of the seventy-five examples in the Celtic Coin Index were found in the poorly recorded Badbury/Shapwick hoard(s) of the early 1980s (Van Arsdell 1989b). But there is no particular reason to doubt their origin somewhere in Dorset, and they might best be interpreted as a localized issue produced within the period *c.* 50–30 BC.

A couple of other silver types which have been attributed to the Durotriges should almost certainly be excised from the Durotrigan corpus: VA 1280, the Hampshire 'thin silver' type, now appears to have a much more easterly distribution, focused on Chichester, and the two CRAB types (VA 1285, 1286), while still very scarce, are perhaps associated specifically with the Isle of Wight.

DISCUSSION

While the precise chronology of many of the developments outlined above must remain in doubt, it is by no means unreasonable to argue that the Durotriges—or at least the coin-issuing authorities in Dorset—ran out of gold very soon after the Gallic War, perhaps in the 40s BC, and that they ran out of any significant quantity of silver perhaps twenty or at most thirty years later. This is in marked contrast to the other coin-using polities of late Iron Age Britain, even most of the other so-called 'peripheral' tribes. The Dobunni and the Corieltauvi both maintained a significant element of gold in their coinage through to the conquest, although in both cases it was much debased over time. In the East Anglian coinage, gold seems to have been relatively plentiful for a decade or two after the Gallic War, but from approximately the last quarter of the first century BC it was admittedly almost as rare as in Dorset. Small amounts were however rustled up from somewhere to form the rare stater coinages inscribed ANTED, ECEN and ECE in the first half of the first century AD. Silver, of course, was present in huge quantities in that region before the conquest (Dennis 2005). In the south-eastern 'core', the powerful kingdoms north and south of the Thames maintained a significant gold coinage until the very eve of the conquest. Why were the Durotriges so different?

I believe that we need to look to the Gallic War, and in particular Gallo-Belgic E, the uniface stater, to begin to answer this question. If the absence of the uniface stater from Dorset is genuine, as I suspect, then it would seem to indicate that this region never received any significant quantities of this import. If our interpretation of this coinage as essentially a military payment

is correct, the implication then is that Dorset did not contribute men or *matériel* to the fight against Caesar. Quite why this should have been the case is more difficult to answer.

Whether or not we accept the detail of Sills's proposed chronology for Gallo-Belgic E, it seems certain that imports of the coinage came to a sudden stop after the production of class 4 (Sills 2003: 332), since the later classes are extremely rare in Britain. If we do accept the proposed chronology, we can take the argument a little further. In his more detailed recent work, Sills (2005: 4) notes that nine British hoards end with his class 4 heavy type—which he would date to 55/54 BC (see table 20.1, above)—compared to three hoards ending with the class 4 light type, dated to 54/53 BC. The last major episode of importation, therefore, might have occurred towards the end of 55 BC and early in 54 BC, before Caesar's second foray across the Channel.[5] After that second invasion, in the summer of 54 BC, the possibility of further resistance on the part of British warriors was effectively ended and as a consequence imports of the uniface stater produced in late 54 and early 53 BC—the class 4 light type—were much diminished. The Durotriges, however, had made no significant contribution even to the earlier war effort, and as a consequence did not receive batches of either the 55/54 or the 54/53 BC production of the uniface stater, in contrast to most of the other coin-using polities of southeast Britain.

Why did the Durotriges not take part in these campaigns of resistance? There may have been a simple, even prosaic reason: their distance from the focus of events in the southeast, for example. But might it also be possible that their relationship with the Armorican tribes had some bearing on their decision not to participate?

The existence of important cross-Channel relationships between southwest Britain and the Armorican peninsula in the late Iron Age is well-documented (Cunliffe and de Jersey 1997; Cunliffe 2001). Hengistbury Head may have functioned as a port-of-trade from the late second century BC, and certainly through the first half of the first century BC, to judge from the quantities of imported pottery and Dressel 1A amphorae (Cunliffe 1987: 339–40). After the Gallic War, trade through Hengistbury seems to have declined sharply, and indeed it may have 'collapsed totally' (Cunliffe and de Jersey 1997: 107). It is generally assumed that Caesar's defeat of the Armorican tribes in 56 BC brought about this collapse, but it may be too simplistic to view the Durotriges as playing only a passive role in these developments. My particular concern here is to examine whether the date of the Armorican defeat can

[5] It is possible, of course, that the coins produced in Belgic Gaul during the winter of 55/54 BC were not imported until later in 54 BC, following the summer campaign season.

somehow be tied in to the phases of Gallo-Belgic E production discussed above, and additionally to consider how the Durotriges responded to both sets of events. Could the Armorican defeat have influenced the Durotriges in their refusal to contribute to the cause against Caesar in 55 and 54 BC?

The chronology is tight, but not impossibly so. Caesar defeated the Armorican tribes in 56 BC, probably quite late in the summer of that year, and as a warning against further resistance he 'had all their [the Veneti and other maritime tribes] councillors executed and the rest of the population sold as slaves' (*de Bello Gallico* III, 16). It is worth recalling that the Armorican allies of the Veneti are said to have been bolstered by 'reinforcements from Britain, which faces that part of Gaul' (*de Bello Gallico* III, 9), and it is tempting to think that this may have included warriors from Dorset, facing Armorican Gaul.

Whether or not this was the case, the inhabitants of Dorset must have very quickly become aware of the tumultuous events in Armorica, perhaps no later than the autumn of 56 BC. How did they react? The lack of the Belgic Gallic War coinage in the region suggests that they did not respond by joining forces with the tribes of south-eastern Britain to continue the fight against Caesar. Indeed one could argue that they adopted a different response altogether, perhaps taking a much more pragmatic approach and in effect quickly accepting the radically altered situation in Armorican Gaul. Various possibilities suggest themselves. Their Armorican trading partners could have warned them of the power of the Roman forces, suggesting that resistance to Rome was ultimately useless and likely to cause enormous suffering in the short term. One might also wonder how long it took for some of the Armorican Gauls to benefit from the new political situation, and for the opportunities in trade it opened up; news of these benefits may have been conveyed quickly to Dorset, where the prospects of significant economic reward perhaps outweighed the desire to mount what was likely to be a futile resistance. Social and political rivalries with neighbouring tribes in southern Britain may also have played a part: perhaps here was a chance to gain an edge over the Atrebates in Hampshire, or the Dobunni in the Cotswolds, who were less well-placed to take advantage of the traditional southwest/Armorican axis.

As it transpired, this may have been a disastrous mistake on the part of the Durotriges. The decision not to take part in the British resistance to Caesar cost them dearly: initially because no Gallic War gold coinage reached their territory, and subsequently because as a result they were never able to produce a viable gold coinage of their own. The silver which dominated the coinage for twenty or thirty years after the Gallic War is most likely to have been imported from Brittany, possibly in one or two bursts at the time of the defeat of the

Armorican tribes.[6] That supply was exhausted well before the end of the first century BC, and the Durotriges were seemingly never able to obtain any significant quantities of precious metal from their British neighbours thereafter—even though to judge from the coinage of Verica and others, the Atrebatic territory in Hampshire was awash with fine silver in the first half of the first century AD. It is unlikely that their refusal to contribute to the British resistance was quickly forgotten, and indeed there might just be a hint of the opprobrium shown towards them in the ritualistic defacement of thousands of their staters and quarter staters in a hoard deposited near Southampton in the late first century BC.[7] With the focus of cross-Channel trade becoming ever more firmly concentrated on the axis of Belgic Gaul and south-eastern Britain, the Durotriges were marginalized: as Barry has put it, they were condemned to a century or more of 'retraction, isolation and economic impoverishment' (Cunliffe 2005: 160).

Much, if not most of the preceding discussion involves a great deal of speculation, some of it well-founded, some of it less so. The precise chronology of the Gallic War stater is controversial, and it remains the case that these coins might still be found on Durotrigan soil—in which case I must apologize for ignoring Barry's advice about the absence of evidence. But I make no apology for speculating *per se*, because if I have learnt one lesson from Barry over the years, it is that we have a duty to speculate: to bring together what scraps of evidence we have, to build on the minutiae of specialist detail, and through this to construct a plausible account of what we think may have happened. Inevitably some of our constructions will tumble under the weight of new discoveries, but they can always be rebuilt on firmer foundations.

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[6] Details of Armorican coins found at Hengistbury Head are provided by de Jersey (1997: 102–3). The majority of the coins are base silver, and while there may have been occasional imports of earlier Armorican types back into the second century BC, it remains the case that on currently accepted chronologies the base silver coins are unlikely to be earlier than *c.* 60 BC.

[7] See de Jersey (2005: 88–92) for a preliminary assessment of this poorly recorded discovery, apparently made in the summer of 1997 but not reported. The most recent estimates suggest that as many as 5–7000 coins were discovered in one or two wooden barrels, together with some lumps of melted down silver alloy. Virtually every single stater has been deliberately defaced with cuts across the wreath on the obverse; the quarter staters have been bent or folded.

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21

Meme Machines and the Mills of the Imagination: Science and Supposition in Archaeological Enquiry

Lisa Yildiz Brown

> mere facts can never be enough . . . we merge our myths with our facts according to our feelings, we tell ourselves our own story. And no matter what we are told, we choose what we believe. All 'truths' are only 'our' truths, because we bring to the 'facts' our feelings, our experiences, our wishes. Thus, storytelling—from wherever it comes—forms a layer in the foundation of the world; and glinting in it we see trace elements of every tribe on earth.
>
> (Frank Delaney, *Ireland: A Novel*)

Storytelling, it can be argued, is an essential element of the archaeologist's craft. It is because of the necessity for storytelling that archaeology has one foot in the arts and the other in the sciences. Storytelling is more than interpretation borne of observation and the gathering and testing of evidence. It inevitably brings us as individuals into the reconstructions of the past that we assemble during the course of our work. Yet while it is inevitable that we 'bring to the "facts" our feelings', supposition, hypothesis, and theory are not enough. Theoretical constructs are necessary, yet archaeologists are engaged in a constant search to find replacements for those that have failed.

Archaeologists, professional and amateur alike, have long agreed in principle that acceptable practice demands good data, well collected, and accurately recorded in order to lend credibility to interpretation. An empirical approach to archaeological research relies on the recording of observable manifestations of culture, reasoning backwards from phenomenon to mechanism. This method of exploring human behaviour directly through observed

I first heard Richard Dawkins moot the meme idea in Oxford in 1976, and a possible archaeological application occurred to me at that time. The words of Frank Delaney's prologue to *Ireland: A Novel* struck a chord. Above all, I owe a debt of gratitude to Barry Cunliffe, who, over the years, provided opportunities, responsibilities, and memories too numerous to catalogue, but among which is an enormous pile of pot sherds with which we can continue to play.

evidence is not always in vogue but is more satisfying to some archaeologists than juggling conceptual abstractions. Archaeologists are individuals, possessed of distinctive personalities, talents and inclinations. We work differently, see differently, feel differently, but for all that we have a bond of commonality—we all understand imperfectly.

THE PROPER PLACE OF POLEMIC IN ARCHAEOLOGY

Honest dispute engenders scrutiny, inspires exploration and promotes progress in a field of investigation in which understanding is imperfect and verification elusive. Debate and challenge are key tools in the advancement of archaeological enquiry and the profession demands that, in the interests of progress, we cast ourselves constantly in the role of devil's advocate. Honesty dictates, however, that we also acknowledge the sources of our inspiration, the 'giants' on whose shoulders we have stood in our search for the new horizons, the building blocks we have used as the basis of our research. Underpinning fruitful research is data, the record of the evidence, in whatever form it takes—the archives of unpublished fieldwork, the mountain of 'grey literature' that grows with each passing year, the finds and manuscripts under the bed, the published reports. Archaeological records are often inaccessible for any number of reasons and so '[I]t will be another small step in the education of some archaeologists when they learn to give due credit to colleagues who have carried out an excavation and who have willingly released material for whatever interpretation it may inspire. The excavator is then free to critically appraise the interpretations of others' (Allison 1997: 82).

Interpretation and reinterpretation, critical appraisal and building on the work of others are all part of the process of archaeological endeavour. Countless examples of wholly necessary reinterpretation of evidence, originally presented in good faith following painstaking research, can be offered. A broad example is Christopher Hawkes's now largely discredited 'invasionist' paradigm (Hawkes 1960). At a more specific level, Sonia Hawkes's conviction that a medieval 'D-shaped' Enclosure III at the Iron Age site at Longbridge Deverill Cow Down, Wiltshire was a prehistoric feature (Hawkes 1994) can now be convincingly overturned by a reassessment of the finds and stratigraphic evidence and by additional survey work undertaken after the excavation (Bowen and McOmish forthcoming). Likewise, longstanding doubts over her postulation that the distribution of artefacts within burnt roundhouses at the site reflected the routine lives of their inhabitants have recently been supported by research carried out by Webley (forthcoming), which

suggests that they are instead 'closing deposits' relating to abandonment practice.

In another vein, building on the work of others to greatest effect is exemplified by Hill's detailed exploration of Iron Age deposition practices in Wessex, which, by necessity, drew heavily upon the evidence of first-hand fieldwork and published excavations, including Cunliffe's site at Danebury (Hill 1995, *passim*). Carr and Knüsel (1997: 171), following Ellison and Drewitt (1971), also utilized the extensively published Danebury data in their consideration of early and middle Iron Age mortuary practices of central southern Britain, and the list could go on.

The processes that inform archaeological recording are, however, at least as important as the resultant data and are inextricably linked to the production of credible archaeological constructs and narratives. If the opportunities to link observation to interpretation and to the record through a continuous cycle of analysis and appraisal of the evidence are wasted, then the critical element of the history is lost. A formalization of the necessity to define, describe and promote this appraisal process is currently termed (among other descriptions) 'iterative archaeology' (Andrews, Barrett, and Lewis 2000). But the iterative method is not a novel concept, nor have its adherents ever claimed it to be so. 'Social analysis', wrote Hugh Trevor-Roper, 'must, to be effective, be fitted into a narrative form' (Davenport-Hines 2006: 106), but at the same time he despised narrative historians who entirely eschewed the analytical process. His favoured approach was the *interhistoire* (interdisciplinary) method of the *Annales* school of French historians, among them Bloch, Febvre, and Braudel.

Many archaeologists, the recipient of this *Festschrift* included, have employed just such iterative practices throughout their working lives. These archaeological counterparts of the geological world's William Smith (Winchester 2001) embrace the 'dirty science' of first-hand observation and impassioned labour, and are strangers to dilettantism. Such practitioners may be inclined to revolt against what Gatherer (1999) refers to as 'bad theoretical management'. This does not equate to a wholesale objection to theoretical approaches, but rather a belief that clearly observed and considered evidence should underpin interpretation. Unfortunately, opportunities for the architects and directors of both academic and commercial archaeological projects to work at the 'coal-face' are fast diminishing in the wake of the burgeoning demands of bureaucracy.

There exists, then, a fairly clear consensus of current archaeological thought that recorded data is useless unless the data collection process is properly informed, but this agreement is not always followed up in practice. This may be due in part to the constraints of current working conditions, the by-product

of commercial pressures and academic assessment exercises, but the failure goes deeper than that. The field of European prehistory (and to a lesser degree, history) provides at one and the same time a playground for theory and an arena of doubt. How can we demonstrate the proof of our interpretations of prehistoric societies? We have at our disposal an embarrassment of riches by way of data, endless ethnographic comparanda, a host of good ideas and a will to write effective and accessible histories of the past. How then do we proceed to constructive enquiry? We can pose but how can we answer the most important questions, those that will bring us closer to the people of the past? This dilemma is responsible for the type of writing found in many archaeological reports—generalized histories not of 'people' but of 'processes' which 'produce a false dualism between a long-term "structural" history and the short-term "event" ' (Barrett 1994: 3).

There are tactics to hand for improving the collection and handling of data, and continual pleas that these be adopted. Thirty years ago, for example, Collis (1977) proposed a set of procedures, including wider use of seriation, for the analysis of Iron Age pottery assemblages. These have not exactly fallen on deaf ears but have, nonetheless, not been fully embraced or generally adopted by ceramics specialists (this author included) (Collis forthcoming). For these purposes, however, all is not lost if the data have been responsibly garnered, well recorded and placed in the public domain. Another tactic, the route of ethnic comparison, has been well trodden and retains much value for investigating prehistoric societies, but modern societies, regardless of their nature, are undoubtedly remote from those of prehistoric antiquity. In any case, it could be argued that social anthropology has largely abandoned subject matter directly relevant to archaeology. Furthermore, even the most committed anthropologists do not always understand what they see and hear, as Margaret Mead would have found to her cost had she lived to see her study of Samoan adolescents discredited (Mead 1928; Freeman 1983).

It is bound to be the case that a combination of elements—appropriate data collection and dissemination, ethnographic and iterative approaches, science, supposition, theoretical modelling, the 'good idea' and the 'dangerous idea'—will produce the best results from archaeological investigation, but it is especially by working together when possible and complementing (though not necessarily complimenting) the work of colleagues when it is not, that progress will best be made. The responsible commercial sector of the archaeological profession continues to seek strategies and to test tactics for improving 'the product'. The approach of Framework Archaeology, for example, is to bring, through an iterative process, a landscape-based approach to excavation and publication of sites at Heathrow, Stansted and Gatwick Airports. The tactics employed are staged and cyclical appraisals of evidence

designed to arrive at a better understanding of the history of human activity in the Middle Thames landscape.

POTTERY AND PLACE: THE 'STYLE ZONE' DEBATE

When, in 1974, Cunliffe published his study of regional groupings of Iron Age pottery in Britain, based on his earlier research on the Iron Age pottery of southern Britain (Cunliffe 1966), he set in place a major building block. When, more than thirty years on, Collis (forthcoming) comments that 'despite forty years of excavation and attempts to quantify the material, we are left with a chronology little improved on that of the 1960s', he makes a fair point. However, in revising the phasing scheme for Cadbury Castle, Woodward found that the 'only ceramic sequence in southern Britain that has been dated adequately by the radiocarbon method [is] Danebury' (Woodward 2000, 42). This may say less about the Danebury sequence than about the current state of ceramic chronologies of Iron Age Britain, but chronological refinement apart, there is much work to be done with the mass of quantified and typologically classified Iron Age pottery from this site and countless others in southern Britain. Thankfully, the Danebury and 'Environs' material and the quantified and characterised data from the sites are available for reworking.

One of the most conspicuous characteristics of early and middle Iron Age pottery from southern Britain is decoration. Cunliffe drew extensively on the variety of Iron Age decorative devices and applications, in addition to fabric and vessel form, in establishing his 'style zones'. Whatever may be the limitations or perils in utilizing the concept of 'style zones' in socio-economic research, the term has, to some degree, endured in later prehistoric ceramic parlance because it can be tested against a mounting body of evidence and because it is a useful shorthand.

It is surprising, however, that thirty or so years on from the beginning of the 'style zone' debate the subject of decoration and, conversely, non-decoration, of Iron Age pottery in Britain has been so little explored, although the issue has been much more widely investigated for the earlier prehistoric period in Britain (e.g. Thomas 1991; Healy 1995) and in relation to ethnic American and African pottery (Arnold 1994; Braithwaite 1982; Hodder 1991). Both Hill and Morris have recently commented on the absence of detailed studies of later prehistoric decorated pottery in Britain (Hill 2002: 80; Morris 2002: 58) but are yet to take up the baton themselves.

A number of issues present themselves in this respect. Prehistoric pottery production sites in Britain are notoriously difficult to identify and ceramic sourcing is generally attempted through geological tracking of raw materials, identification of trace elements and spectrographic properties, with unity of form and decorative style as additional indicators of centralized production. The few attempts to understand the social and economic dynamics of production through decorative design have taken the form of, for example, painstaking but largely fruitless and unpublished investigations of 'handedness' in the application of shallow-tooled decoration and attempts to identify individual potters, and their age and gender, through fingerprint impressions preserved in the fabric of fingertip decorated vessels. Practical functionality of decoration versus aesthetic display has also been a topic of some discussion, again many of the better studies confined to earlier prehistoric ceramics, although Elsdon (1976) and others have noted the links between decorative motifs on La Tène pottery and metalwork. The debate continues, but without much ferocity, as to whether pottery style and decoration served as a psychological barrier against foreign threat by means of reinforcing tribal identity (Brown 1997; Sharples 1990).

Perhaps most curiously of all, it has sometimes been highlighted, but generally only as an aside, that, apart from Atlantic Scotland, representational or figurative motifs do not occur on British prehistoric pottery. As figurative decoration was a characteristic of ceramic style in some other parts of Europe during the Iron Age, its apparent rarity in Iron Age Britain, along with the need to comprehend the 'grammars' of abstract decoration, are phenomena ripe for investigation. According to Morris, 'the application of new methodologies, such as those derived from psychology... which have already been shown to be impressively effective in the examination of material culture transference and adoption, need to be explored' (Morris 2002). It may be that a version of Darwinian archaeology, the aspiring 'science' of cultural inheritance and replication—memetics—could have an equally effective application.

WHAT ARE MEMES AND WHO DECIDES?

Today's technology is far more sophisticated and complex than that of 10 000 years ago... but there is no progress towards some predetermined or ultimate goal. We did not have to go from stone axes to fax machines—we did have to go from stone axes to something more specialised, more designed and more improbable... technology has been slowly climbing its own Mount Improbable.

(Susan Blackmore, *The Meme Machine*)

Richard Dawkins coined the term 'meme' in 1976, defining it as 'a unit of cultural transmission, or a unit of imitation . . . Examples of memes are tunes, ideas, catch-phrases, clothes fashions, ways of making pots or building arches' (Dawkins 1976: 192). He expands this definition to embrace the concept of a 'meme complex', analogous to 'co-adapted gene complexes . . . teeth, claws, guts . . . [that] evolved in carnivore gene pools' and asks the question, 'Does anything analogous occur in meme pools? . . . we could regard an organized church, with its architecture, rituals, laws, music, art and written tradition, as a co-adapted stable set of mutually-assisting memes' (Dawkins 1976: 197).

Several years after the genesis of his 'meme' idea, Dawkins revised his definition: 'A meme should be regarded as a unit of information residing in a brain', explaining that it is important to distinguish between the meme itself and its 'phenotypic effects' on the one hand and 'meme products' on the other (Dawkins 1982: 109). 'It has a physical structure, realized in whatever physical medium the brain uses for storing information . . . The phenotypic effects of a meme may be in the form of words, music, visual images, styles of clothes, facial or hand gestures . . .' (*ibid.*).

Genes cannot be considered to be conscious, purposeful agents, although natural selection may make it appear that this is the case, tempting us to use a 'language of purpose' in describing, for example, that 'genes are trying to increase their numbers in future gene pools' (Dawkins 1976: 196). We may, in the same way, search for purposeful or 'selfish' memes, but memes cannot compete with each other if they have no equivalent of genetic alleles—rivals for chromosomal positions—except in the sense that ideas have opposites. Dawkins proposes a model in which the meme competes for dominance within the human brain, which is limited in the number of ideas it can process or store at any given time. A meme may contend for the attention of the brain at the expense of rival memes. Thus, cultural evolution may be seen as advancing (or, conversely, remaining in stasis) in the 'interests' of the selfish replicator. As Dennett (1991: 203) asks '*Cui bono*? . . . the first rule of memes, as it is for genes, is that replication is not necessarily for the good of anything.' The replicators that flourish are those that are good at replicating. In these terms cultural evolution does not equate to cultural 'progress', and this may account for the fact that conservative and even regressive societies and practices can flourish.

Like genes, memes are replicators, and a good quality replicator has three traits: 'fidelity, fecundity, and longevity' (Dawkins 1976: 194). The replicator must be accurately and copiously imitated and the imitation process must be long-lived: '[t]he transmission of memes depends critically on human preferences, attention, emotions and desires—in other words, the stuff of evolutionary psychology' (Blackmore 1999: 58). And yet it is precisely these attributes of emotion, desire, preferences (and we could include beliefs) that

are difficult to identify and interpret from the archaeological evidence and to translate and communicate in narratives of the prehistoric past.

Since the origin of the meme idea, there has followed a great deal of debate between mutually antagonistic parties as to whether memetics can have a scientific application, and, if so, whether it can be utilized in other fields of research, including archaeology (e.g. Dennett 1991, 1995; Benzon 1996; Blackmore 1999; Shennan, 2002, 2005). Gatherer (1998), a biochemist, supports the behaviourist stance implicit in Dawkins's 1976 definition, which makes memetic enquiry comparable to existing branches of empirical and socio-psychological investigation, freeing it from the 'thought contagion' idea and the, to his mind, negative factor of the meme-host duality underlying Dawkins's 1982 redefinition. Gatherer essentially agrees with Benzon (1996: 323), who suggests . . . 'that we regard the whole of physical culture as . . . [memes]: the pots and knives, the looms and cured hides, the utterances and written words, the ploughshares and transistors, the songs and painted images, the tents and stone fortifications, the dances and sculpted figures, all of it. For these are the things which people exchange with one another, although they interact with one another. They can be counted and classified and variously studied.' Gatherer's preferred (and similar) definition, therefore, is much closer to Dawkins's original idea, and regards a meme as . . . 'An observable cultural phenomenon, such as behaviour, artefact or an objective piece of information, which is copied, imitated or learned, and thus may replicate within a cultural system. Objective information includes instructions, norms, rules, institutions and social practices provided they are observable.'

PATTERNS IN THE POTTERY

The application of 'memetics' in archaeology is well underway, although some Darwinian (or evolutionary) archaeologists do not favour the specific term. Returning to Cunliffe's ceramic 'style zones' and the wealth of published and archived later prehistoric pottery and ceramic data from sites in Britain, an evolutionary approach to the investigation of decorative motifs and themes applied to pottery of the British Iron Age could be proposed. It is neither intended nor possible to undertake such a project within the limited space available here, but only to explore the potential of such an approach, and to suggest possibilities for formulating 'neutral models' through which various elements of the data can be scrutinized.

The specific application of Darwinian archaeology to pottery studies has been employed by Shennan and others, engaging empirical and quantitative methodologies in tandem with neutral models, analogous in some respects to aspects

of genetic research. The results of Shennan and Wilkinson's study of diachronic variation in the decoration of *Linienbandkeramik* in western Germany 'indicated the existence of some directional selective forces acting on ceramic production decision-making' (Shennan and Wilkinson 2001; Shennan 2003: 16). Neiman (1995: 27) used a similar approach in his analysis of the ceramic culture of the native American Woodland peoples, examining diversity of pottery rim motifs through time within an assumed model of maintenance of tradition through social learning. Neiman's multi-disciplinary approach involved ethnoarchaeological observations of relationships between the teacher and apprentice in the transmission of ceramic traditions (Shennan and Steele 1999).

The formative phases of Iron Age decoration in southern Britain are represented by, among others, a tradition of geometric incised and stamp decorated vessels, accompanied by furrowed bowls (Cunnington 1923) and a range of fingertip/nail impressed and strike/slash motifs current within the coarseware assemblage across much of Britain from the end of the Bronze Age—the 'post Deverel-Rimbury' tradition. From approximately the fifth century BC the range of decorative devices proliferated to include a wider diversity of incised and impressed arrangements, a more complex decorative 'syntax'. Certainly from this point, stylistic groupings approximately corresponding to particular, but somewhat indistinctly defined, geographical areas of Britain can be recognised, and it is these that Cunliffe (2005) refers to as 'style zones'. In his scheme, the regional groupings take their names from type site assemblages (figure 21.1), for example, the Long Wittenham-Allen's Pit group of the fifth to third centuries BC of Oxfordshire and the St. Catharine's Hill-Worthy Down style of the second to first centuries BC, representing an area broadly corresponding to modern Hampshire.

Faced with the range of decorative style 'grammars' depicted on British Iron Age pottery, the initial impression is of a profuse and infinite array of design and pattern. This is arguably more apparent than real, however, as even a superficial inspection of material from a wide range of both published and unpublished sites highlights a notable restriction in schema and application. The decoration is invariably abstract, and figurative or representational forms absent. There are no recognizable depictions of human or animal figures, landscape features, buildings, or objects, despite the occurrence of such representations in metal and stone, and the possibility that they occurred in wood and other organic materials. Although the range of abstract patterns is relatively broad, the constituent decorative elements of straight or curving lines and pecked or impressed dots are basically restricted within what are usually geometric or symmetric arrangements.

The methods of application and finish are also limited. With few exceptions, including distinctive haematite-based red surface finishes and chalk-based

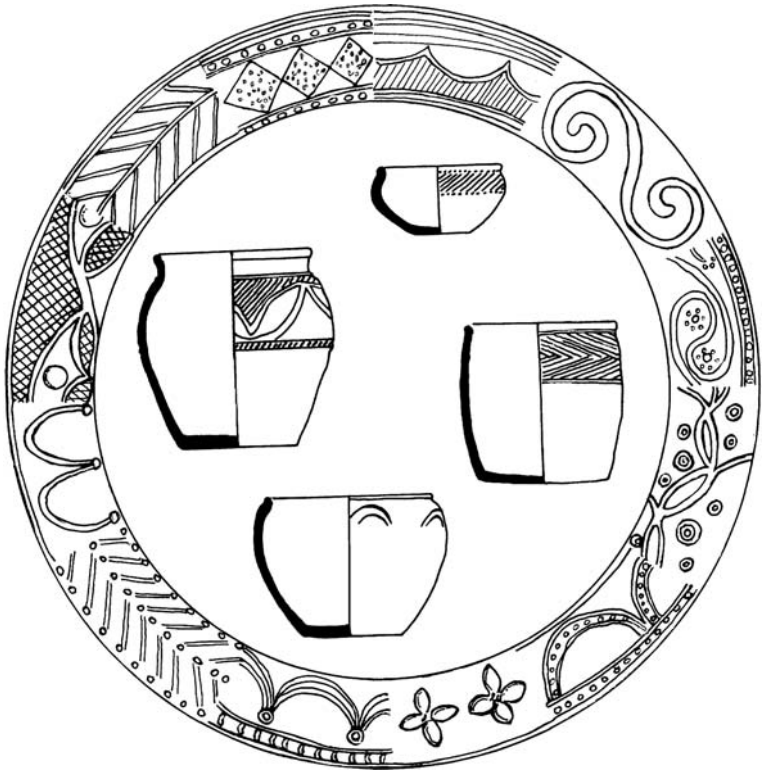

Fig. 21.1 Patterns in the Iron Age pottery from southern Britain
Source: author

white infills on some early Iron Age finewares, paint, slips and other applied colour or contrast are largely absent until the late Iron Age (notwithstanding an apparent preference for red/orange pottery in the early Iron Age and grey/black in the middle Iron Age, achieved through controlled firing)—this despite the fact that plant and mineral derived paints and dyes were certainly used on the body and in textiles. Iron Age ceramic decoration was accomplished mainly by incision or impression, either with the fingertip or nail or a range of implements such as blades and bone or wooden points. Less common is a 'plastic' medium of raised or grooved designs, such as the scrolls, arcs and grouped dimples applied by the Durotrigian potters to their wares (Cunliffe 1999: 572). Burnishing is common on British Iron Age pottery, and, although its main purpose may have been compaction and sealing of clay for water-tightness, the resultant gloss, and contrasting lack of highlight, ultimately produced a

decorative effect as well. Similarly, scoring, as seen on the Trent valley ware of the east Midlands, may equally have been essentially functional, allowing for a firmer grip, but produced a decorative scheme of sorts (Knight 2002: 132).

WHERE ARE THE PEOPLE IN THE POTTERY?

Figurative decoration is a feature of Iron Age pottery elsewhere in Europe, although particularly common in the east. The influence of Greek Red and Black Figure wares is no doubt a factor in some of these figurative traditions, but can by no means be convincingly demonstrated in every case. Furthermore, it seems clear that the phenomenon was likely to have arisen and developed independently in a number of separate locations during the prehistoric period. Figurative decoration is known from the Neolithic in Europe, and the early traditions developed through and engendered later prehistoric ceramic cultures.

Fig. 21.2 People in the Hallstatt pottery from Sopron, Hungary
Source: author after Piggott 1965 (not to scale)

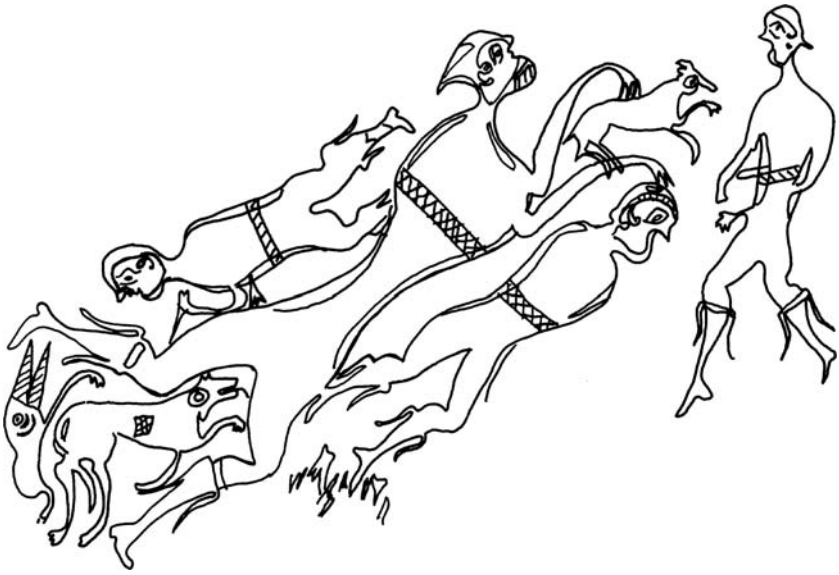

Fig. 21.3 People in the mid-late Iron Age pottery from Los Villares, Caudete de les Fuentes, Spain

Source: author, after Zaldivar 1989 (not to scale)

Whatever the taxonomic complexities of these ceramic ancestries, pottery depicting humans, along with animals, objects, and activities, has been recovered from a number of Iron Age sites on the continent. Among the best known are incised images on Hallstatt pottery from Sopron in northwest Hungary of curly haired women and trousered men engaged in routine domestic activities, dancing, playing musical instruments, and riding horses (Piggott, 1965: 197–9) (figure 21.2). Humans and animals, including fish, birds, and wolves, are depicted on pottery of later Iron Age date from Los Villares, Caudete de Las Fuentes in Valencia in Spain (Zaldivar 1989). They are painted in a dark reddish-brown on light-coloured pottery and their style and application is in complete contrast to the Sopron figures. There seems no possible affinity in either case with the abstract, monochrome decorated pottery of the same period in Britain (figure 21.3).

PATTERN AND PURPOSE: MEMETICS AND POTTERY

Working from a model of a British Iron Age ceramic tradition that involves an abstract design syntax, restricted use of applied colour and decorative devices

and an absence of figurative decoration, we can explore particular scenarios of cultural stability and change within and between specific 'style zones' or ceramic cultural groupings. For example, it may be possible to identify and track admixture, adoption, and adaptation between style groups and to recognize the locations, stability, and drift of the geographical boundaries of decorative zones. Analysis would necessarily involve empirical and quantitative methodologies, particularly seriation, in the identification of the range and extent of variability. Socially learned and replicated practices, such as ways of decorating a pot, will, in memetics, have a history of evolutionary descent, and so the phylogenetic and cladistic techniques of the biological sciences can be adapted for the construction of models of these cultural descent paths.

A certain outcome of memetic applications to a study of British Iron Age pottery is that an element of supposition will remain at the heart of any discovery of any element of the history of prehistoric society, including the choices, rules, and reasons for ceramic decorative techniques. We can know 'that', but perhaps can not get much closer to 'why'. Nonetheless, there are numerous avenues of exploration.

Why, for example, did prehistoric British potters not use figurative decoration, except in Atlantic Scotland, where its occurrence can hint at imported fashion? There may have been taboos in the use of representational decoration on pottery. Clay may have been considered too mundane—or too important—a medium for realistic depiction. An awareness of the 'populated pottery' produced elsewhere would not have been totally lacking in the British Iron Age, especially during the middle and later phases and, in any case, figurative decoration was applied to other materials, such as metal and stone.

Figurative pottery apart, during a prolonged period of perhaps two hundred years or so in middle Iron Age Hampshire, ceramic decoration was limited to a quite specific set of mainly line and dot patterns, repeated on thousands of vessels with little apparent deviation from what may have been a strict set of rules, or syntaxes. Could there have been disadvantages to innovation, to departure from the rules of decoration, in communities that certainly would have been familiar with different abstract styles of ancestral and/or neighbouring peoples, not least because they would have encountered decorated pottery used by their predecessors in the course of routine construction and maintenance work in their settlements? In the *'cui bono?'* sense, how might the adherence to a particular style over a long period have been advantageous in terms of cultural replication, and what is the significance of conformity, conservatism, and lack of innovation in this context?

In his discussion of present-day Andean potters, Sillar (1997: 12) considers whether the 'technical alternatives available to individual potters are

constrained by their culture's perception of the world and the "choices" that may have been made in the past'. Use of specific raw materials, vessel forms and decoration may, in Iron Age Britain, as in the Andes, have served as trademarks of 'reputable' pots produced by reputable potters. By extension, innovation and creative expression in the decorating of a pot may have been discouraged because the resultant product would have been a 'disreputable', untrustworthy vessel.

Iron Age pottery decoration would certainly have represented a means of communication. Abstract patterns are semiological markers, although the language they embodied may be incomprehensible to us. The patterns of line, dot, arc, and wave may have been symbolic maps of landscapes or 'mindscapes'. It is possible that some patterns were skeuomorphic representations of stitching, basketry, leatherwork, or panelling. The designs would at some level have been legible, like writing. The language of decoration may have been a code understood exclusively by potter 'scribes', or perhaps also to those who used the pottery and handed it and its encoded meaning down the generations, and even to those inhabiting adjacent 'style zones'. Decoration may have been the tribal 'strap lines' of Iron Age societies, protecting, warning, encouraging, challenging, or promoting ideas and meaning. The patterns may have represented a means of communicating within a community, with other tribes, or even with a spirit world. It is probably not a coincidence that, at Flint Farm in Hampshire, when a large roundhouse was rebuilt, single small decorated and/or brightly red-slipped sherds were placed on the base of several of the newly dug or newly decommissioned postholes (Brown forthcoming).

Medieval heraldry served just such a symbolic, emblematic role, as do modern decorative devices. In the mid-nineteenth century Owen Jones (1856) produced *The Grammar of Ornament*, designed to serve as a pattern book for designers, architects, and craftsmen. The Iron Age potters of Britain may have used similar pattern guides but perhaps, within a society with the acute brain function required for the transmission of oral tradition, designs were stored in the mind rather than in the form of physical templates; or the pots themselves may have been the templates.

How in memetic terms would ceramic decorative styles have been passed on as cultural traits? Cavalli-Sforza and Feldman's (1981) model of cultural transmission employs the 'cultural trait' as a unit that can be 'learned by imprinting, conditioning, observation, imitation, or direct teaching'. Blackmore (1999: 34) believes, however, that memes are different in that they, by definition, 'have to be passed on by imitation and cannot be acquired by imprinting or conditioning'. In Iron Age Britain direct imitation may have taken the form of apprenticeships or families of potters who, like metal

smiths, held the role and passed it on to their children within communities or even at the tribal level.

If there is the potential to trace the descent of abstract decorative patterns on British Iron Age pottery, it may be possible to isolate specific innovations and evidence of drift, to recognize sudden and radical mutations in style or subtler, nuanced changes, through which, like Chinese whispers, meaning and method were gradually overtaken and lost in time.

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22

'How Dare they Leave all this Unexcavated!': Continuing to Discover Roman Bath

Peter Davenport

The frustrated cry of the young Barry Cunliffe has an odd echo in these days of preservation *in situ*. Sitting in the Roman Baths on his first visit as a schoolboy in 1955, he was astonished at how much was unknown about the Baths, despite their international reputation: large areas 'surrounded by big question marks . . . all around . . . the word "unexcavated" ' (Cunliffe 1984: xiii; figure 1). His later understanding of the realities and constraints of excavation only sharpened his desire to know more. Now, fifty years on and more, due in large part to that drive to know, his curiosity, we can claim to have made as much progress in our understanding of the baths and the city around them as had occurred in all the years before his visit, a history of archaeological enquiry stretching back over 400 years.

In 1955 the baths were much as they had been discovered in the 1880s and 1890s. They were not well understood. The town, or city, or whatever surrounded it, were almost completely unknown, or at best, misunderstood. It was still possible in that year to argue that the temple of Sulis Minerva was on the north of the King's Bath, not, as records of earlier discoveries made clear, on the west (Richmond and Toynbee 1955). Yet as the young Cunliffe sat and mused, the archaeological world was beginning to take note and a modern excavation campaign was beginning; indeed had begun: Professor Ian Richmond, in a short eight years to become a colleague, had started 'his patient and elegant exploration of the East Baths' the summer before (Cunliffe 1969: v).

Richmond initiated a small number of very limited investigations into the East Baths, elucidating a tangle of remains that, while clearly the result of a succession of alterations and archaeological phases, had never been adequately analysed. Richmond's main aim was to understand the developmental history of the baths, and this approach, combined with a thoughtful and thorough study of the rest of the remains, led to a still broadly accepted phasing and functional analysis (Cunliffe 1969).

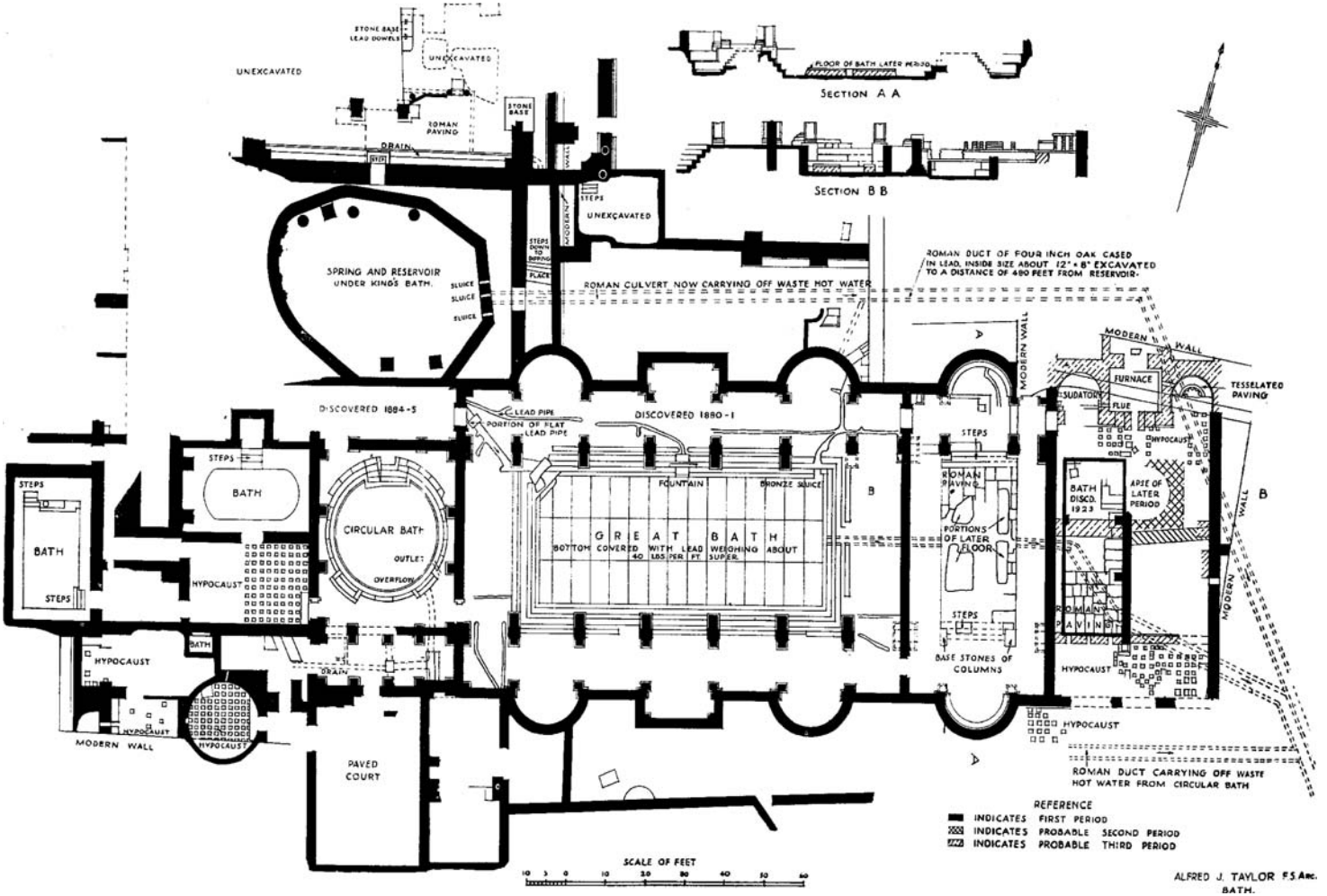

Fig. 22.1 The Baths as known in 1955 (Taylor 1928)

Such an approach was, in fact, the only one possible at the time, and was the one Cunliffe, now a lecturer at Bristol University, took up in 1963, when he was invited to become the Bath Excavation Committee's archaeological director. He continued Richmond's strategy of small-scale, targeted trenching in the baths and published a thorough treatment, not only of the work he and Richmond had done, but a full study of the records available to put all that work in context. Typically, this was published within a very short time (Cunliffe 1969).

The title of the committee shows that its members took as their remit, not the baths, but Bath. Redevelopment provided opportunities to investigate, but access to sites was dependent on the whim of the developers and even when forthcoming did not provide any kind of financing. Large areas were simply wiped off the archaeological map. Much like other historic towns at the time, small-scale excavation in empty lots and, in the Bath context, cellars, provided a way of investigating Bath's archaeology and, to use a modern term, of mitigating the damage being done elsewhere.

Nonetheless, by 1969, the Committee was able to publish work that addressed the Roman archaeology of the baths and temple, the town defences, and the development of occupation and activity inside the walled area (figure 22.2). It had revisited and reinstated the work of antiquaries and started to look at the archaeological possibilities outside the walled area, especially the areas north of the walled town (Cunliffe 1969). This work can now be viewed, again in modern jargon, as a kind of assessment of the resource. It was clearly forward looking.

Outrage at the loss of historic buildings that had gone with the less-noticed archaeological deposits brought a change of attitude to the past in Bath (Fergusson 1973). In 1972 the chance came to re-excavate the West Baths. It was agreed that the excavations, largely covered over since 1895, would be incorporated into the Museum. Here was a chance to carry out large scale excavation and to resolve some of the 'big question marks' that the young Cunliffe had seen in his guidebook. Cunliffe was a professor at Oxford by this time and started a long and fruitful connection between Bath archaeology and the Institute of Archaeology. The results were published in Cunliffe 1976.

In 1977, the Bath Excavation Committee had become Bath Archaeological Trust with an optimistic but realistic aim to carry out research as well as rescue and to communicate the work. In 1979 all the other work carried out in Bath under the auspices of the excavation committee, and by the Bath and Camerton Archaeological Society, between 1951 and 1975 was published (Cunliffe 1979).

Almost immediately, plans were laid to open more areas of the baths and temple, but were overtaken by events. The discovery of a pathogenic amœba

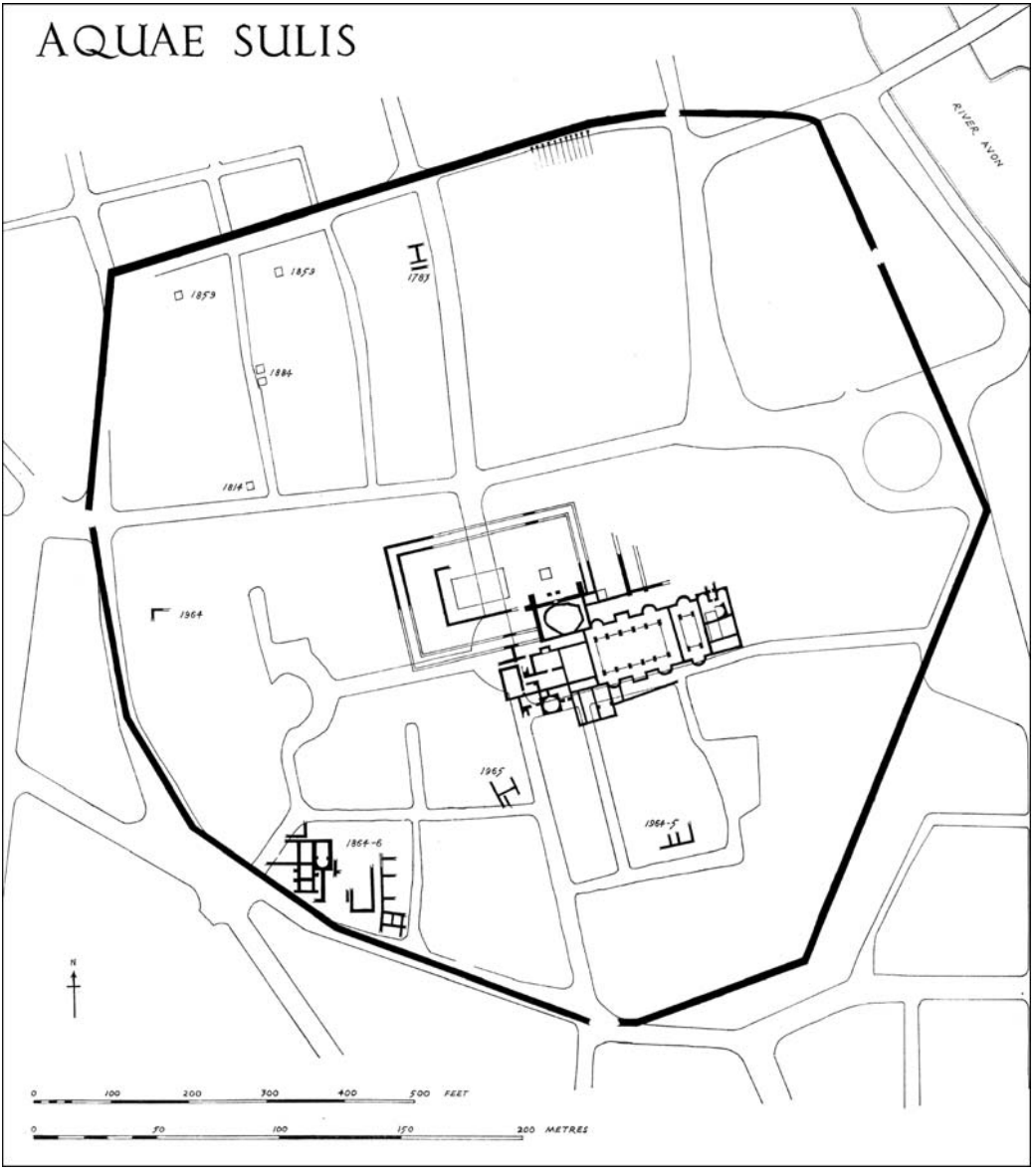

Fig. 22.2 The walled area of *Aquae Sulis* as known in 1969 (Cunliffe 1969)

in the spring water required the investigation of the King's Bath to see if it could be decontaminated, and during these works it was discovered that the Pump Room was sinking into the hot spring. The need to carry out rescue excavations with underpinning work in the King's Bath, led to a combined programme underwritten by the City Council, to prepare the area under the Pump Room for excavation at the same time. The excavations ran from 1979 to 1983, and it was a deliberate decision to make the excavations themselves visible to museum visitors and raise the profile of archaeology. The work was published in Cunliffe and Davenport 1985 and Cunliffe 1988 and the area added to the Roman Baths Museum—more question marks removed (figure 22.3). The Trust also published a regularly updated guide book to the Roman Baths and the town around it, replacing the one that had so infuriated and fascinated the schoolboy, and reaching out to the hundreds of thousands who now visited the baths every year.

In this period small-scale excavations continued outside the baths. One, in 1980, provided the first dating evidence for late Roman defences around the town centre (O'Leary 1980).

The 1980s was when it became possible to take advantage of more and larger archaeological opportunities than before. It became possible, over the next two decades, to start to build a framework within which to hang the amazing detail that had been built up in the baths and temple in the preceding two.

The small number of trenches dug in the 1960s and 1970s that had reached early Roman levels were still able to suggest a picture of little or no development within the walled area until the second century. Excavations in the following decades at Abbey Street, Bath Street, next to the Abbey, and under the site of the new spa buildings confirmed this picture (Davenport and Bell 1991; Davenport 1999 in prep; and Davenport, Jordan and Poole 2007). Meanwhile, however, it had become clear that the first phase baths and temple were astonishingly early for such highly Romanized monuments: a date of around AD 60–70 now seems well established. It appears that little else existed in the immediate vicinity for fifty years or more. However, the central area around the baths was not a complete desert. There is evidence on the spa site, for an otherwise unknown building of equivalent architectural ambition to the baths and temple and probably of about the same date (*op cit.*). It does reinforce the image, however, of an early development in the central area of grand, official buildings, with little in the way of normal urban occupation around it. The range of finds strengthens an interpretation of this area as largely lacking domestic activity. Coins and small-scale metalwork are noticeably rare, as is pottery. As we shall see, this is in contrast to the results from other parts of the town.

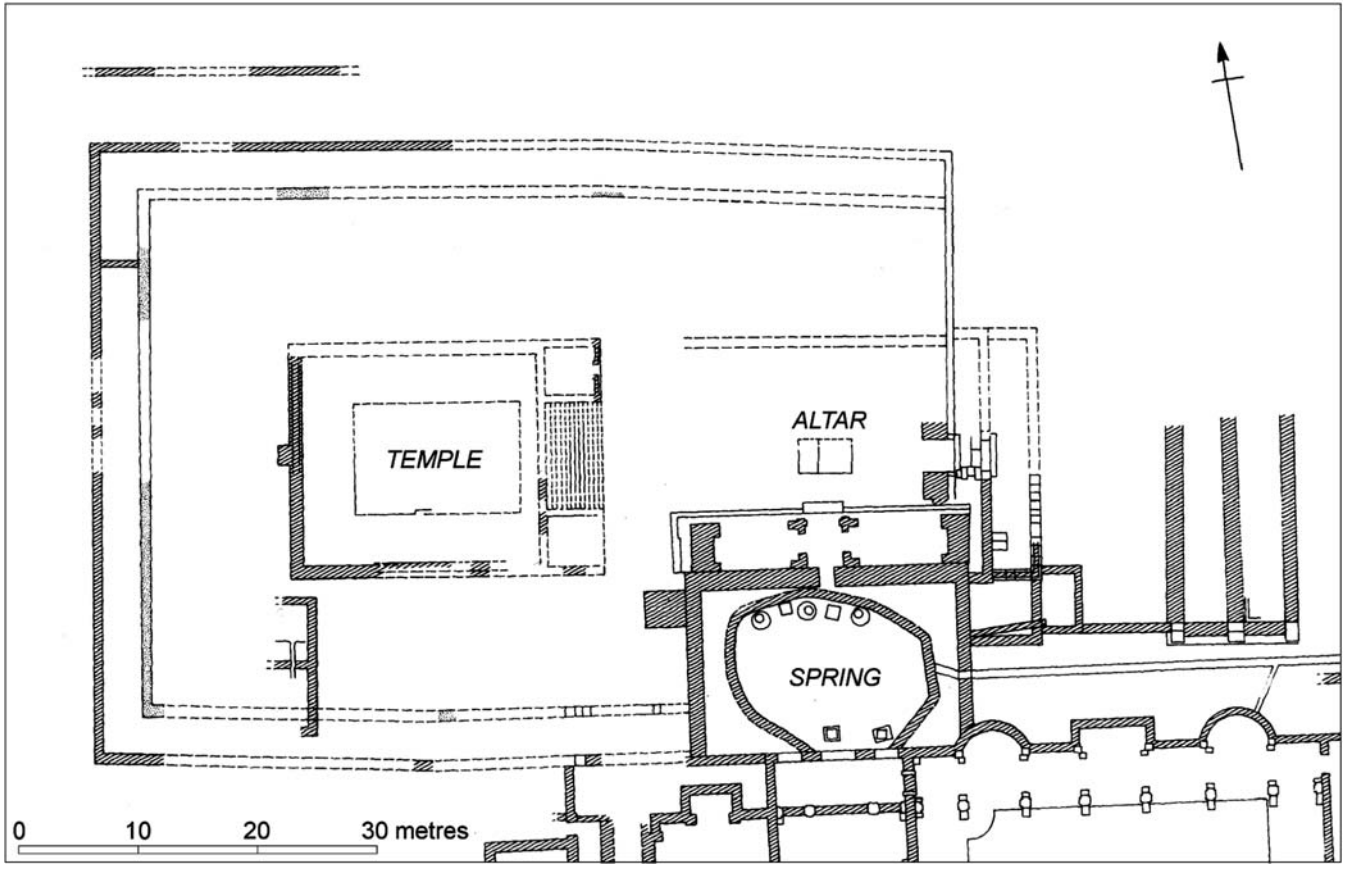

Fig. 22.3 The Temple Precinct in 1988 (Cunliffe 1996)

The picture changes somewhat with evidence of an extensive replanning and redevelopment in the mid-second century. A road west of the temple precinct was realigned and then moved altogether, and the outer temple precinct itself was extended or completed (Davenport 1999: 13). On the spa site a large masonry building was erected around a courtyard at this time on a virgin site. It was probably an official building, perhaps a guest house. It produced little in the way of domestic finds, even allowing for the loss of its floors to truncation (Davenport, Jordan and Poole, 2007). A stone building with a mosaic seen in rescue excavations in 1982 at Abbey Green (Bell and Davenport 1991) likewise dates from after about AD 150, following a sequence of scrappy deposits suggesting small scale craft and industry starting in about AD 70. The beginning of occupation at Swallow Street is less well dated but the evidence is consistent with a commencement of building activity in the second century with the main ranges found belonging to the third (Davenport 1991: 100). A second bathing establishment in the southwest quarter of the central area, the Hot Baths, also went up in a second phase of building which may date to the second century (Cunliffe 1969: 151–4). This redevelopment seems to be part of a programme of investment and change, but how much this was the result of economic stimuli and how much centrally directed, and how exactly contemporary, remains unclear. Certainly, there was no overall urban plan, no street grid for example (figure 22.4).

A large number of other mosaics have been found in the central area, but all in antiquarian observations, so that it is difficult to say what kind of buildings they belonged to. They are likely to all belong to the fourth century when further changes were certainly afoot. It has been suggested that they represent a series of luxurious official dwellings for the officials of the temple (Dark 1993). While this might be true, there is nothing to distinguish them from houses of similar date and status that were built in the mid-fourth century over the site of the outer temple precinct after it had been partially demolished (Wedlake 1979: 82; Cunliffe and Davenport 1985: 101—dating based on post AD 330 pottery not published at the time: pers. comm., Sarah Green). They may well be lodgings of officials, but perhaps not of the temple staff. At the same time as these luxurious buildings were being erected, there is evidence for the more certain appearance of craft and industry inside the walls (which may well themselves be third or fourth century in date) for the first time. Two blacksmiths' workshops are known, one under Bellott's Hospital (Davenport, Jordan and Poole 2007) and another at the Citizen House site (Greene 1979: 9) both of late Roman date. A stone mould for a pewter vessel was found in fourth century contexts in a building, interpreted as a shop or workshop east of the baths during excavations on the site of the Abbey Heritage Vaults (in prep.).

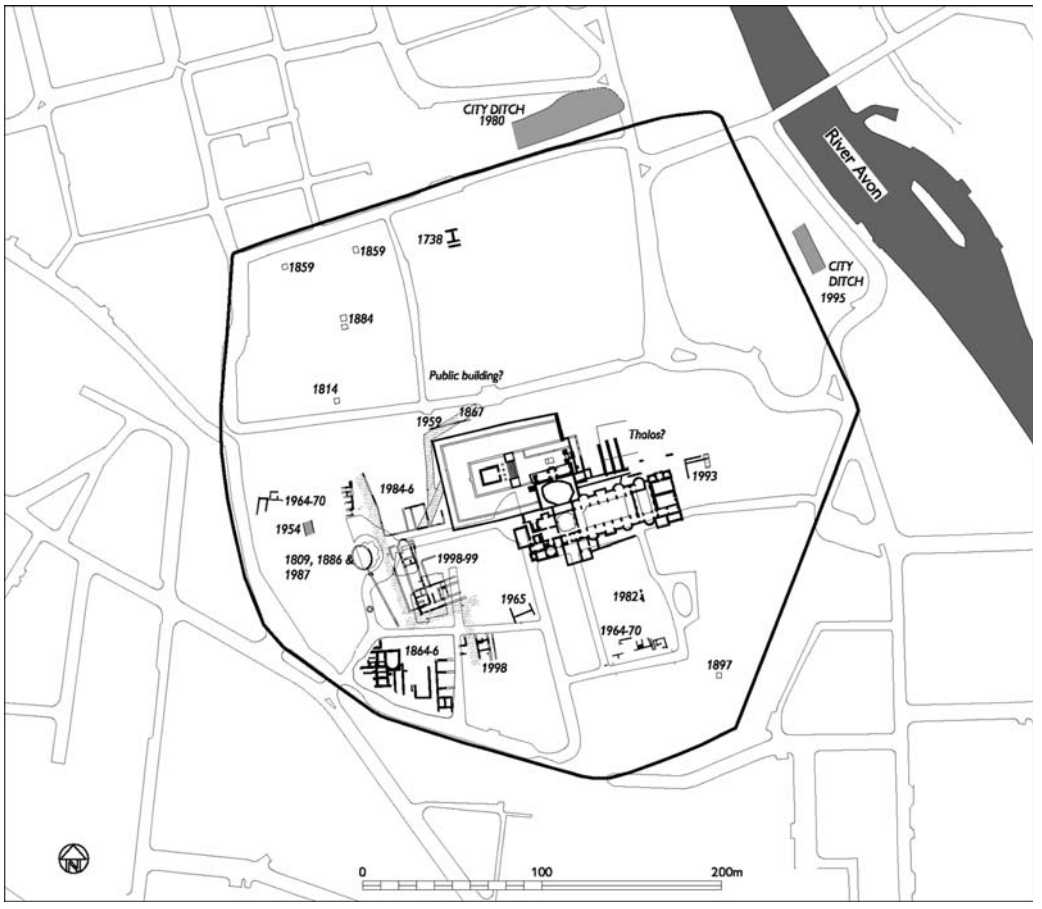

Fig. 22.4 The area inside the walls as currently known from excavation

The picture, then, is not static within the walls of *Aquae Sulis*. In the early period the baths and temple stand almost alone. In the second century much building and a major replanning seem to take place, but there is little evidence of domestic occupation. A very specialized and upmarket development seems to take place in the fourth century, alongside the appearance of some industrialization. The sum of the activities that can be inferred certainly does not suggest a simple small town. It would be naive to expect this in the light of the factor that has barely been mentioned so far, the sacred springs in the very centre of the site. Special or specialized activities must surely be expected around them, certainly changing over time and all surely directly dependent

on what must have been, as well, a major economic engine for the site. Of course, a very large portion of the twenty-four acres (10 ha.) of the walled area was given over to them. The baths and temple, the various springs and other parts of the area enclosed by the walls received heavy and frequent investment and, as Cunliffe has indicated, there are at least two other substantial public buildings in the central area whose sites are not strictly known, the *tholos* (Cunliffe 1996: 85–7) and another building whose huge scale is indicated by the few fragments known (Cunliffe 1969: 147 and 197). Yet, curiously, as we shall see, *Fons* the springs might have been, but they were not necessarily the *origo* of the town, nor indeed, its location.

It was clear from antiquarian records that Roman activity was not confined to the walled area. Most of the material outside has been interpreted as funerary. Norton's work (in Cunliffe 1969: 212–18) used these records to map the major Roman cemeteries around the town. Cunliffe nonetheless plotted the other finds-spots and suggested a major area of settlement north of the town along Walcot Street and Julian Road, both assumed to be Roman roads, and especially around the natural crossing point of the river at the modern Cleveland Bridge (Cunliffe 1986: 20; figure 5; figure 22.5). This is a geologically favoured point where a long raised spur of gravel pushes out across the east bank at Bathwick, otherwise alluvial floodplain, to provide easy and dry access to the higher west bank which here rises sharply up from the river with no low lying margins (Kellaway 1985).

Opportunities to investigate came in the 1980s. Work began slowly. In 1982 a series of trial trenches was dug between the river and London Street about half a mile north of the walled area of *Aquae Sulis* (Davenport 1991: 128). The bulk of these were unproductive, the river in flood having scoured away much of the ancient superficial deposits on this part of the river bank. However, the western trench nearest the road did produce occupation deposits and Roman pottery. Next came an extensive, albeit chaotic, watching brief in 1988–9 during the removal by contractors of nineteenth century cemeteries east of London Street. This was followed by a small excavation of an undisturbed area at Nelson Place in 1989, and then a small trial excavation behind the Hat and Feather public house. These observations and excavations together finally confirmed the existence of extensive and often well-preserved occupation deposits over a substantial area east of Walcot and London Streets (figure 22.6). This led to what felt like an almost continuous programme of excavation and archaeological recording along the northern half of Walcot Street through the following decade, based on a fortuitous series of developments that could almost have been designed to allow a research programme to take place. The works that were carried out were a reflection of the changing attitudes to archaeological exploration that have taken place over these

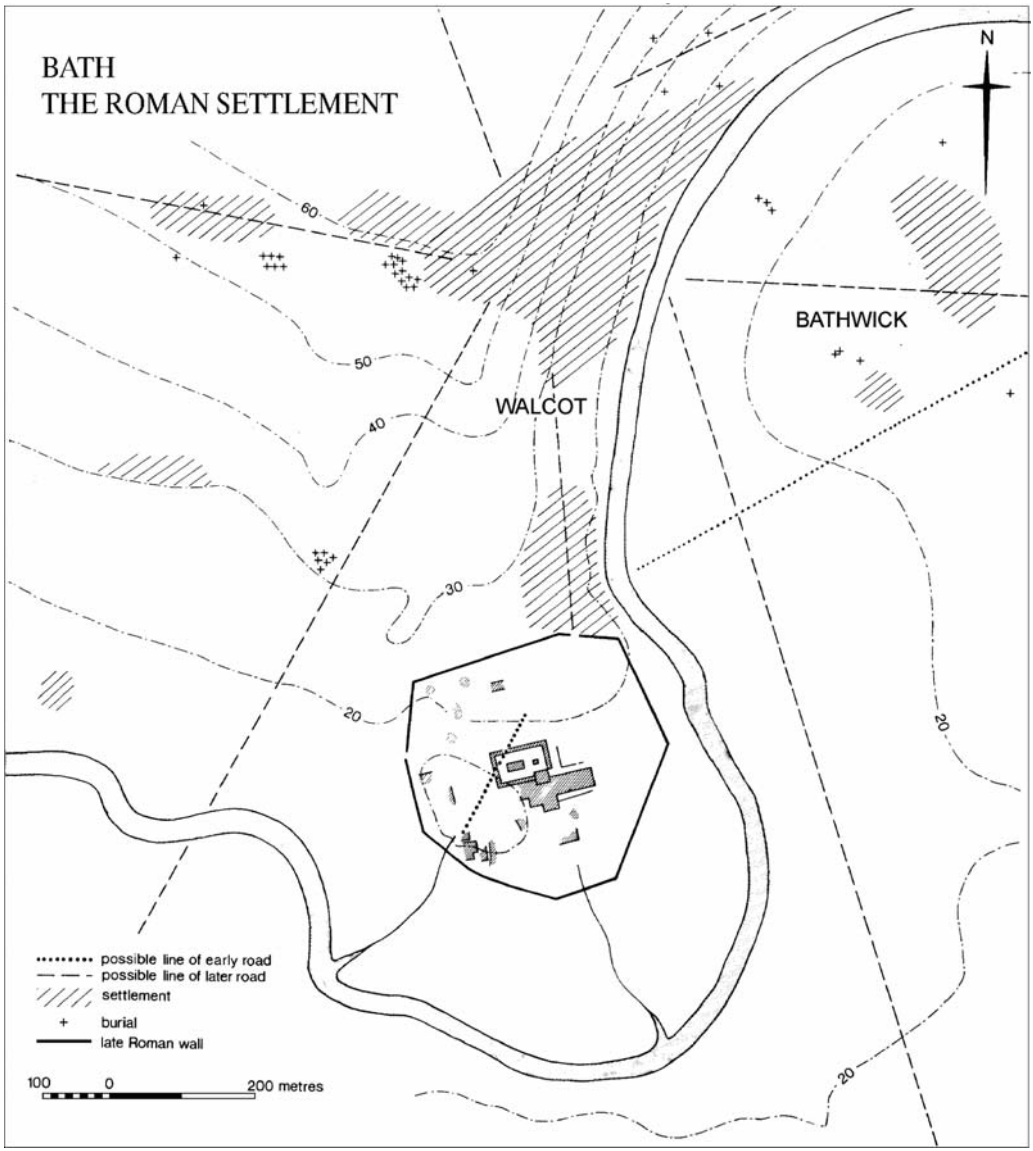

Fig. 22.5 Cunliffe's plot of the settlement outside the walls of *Aquae Sulis* (Cunliffe 1986)

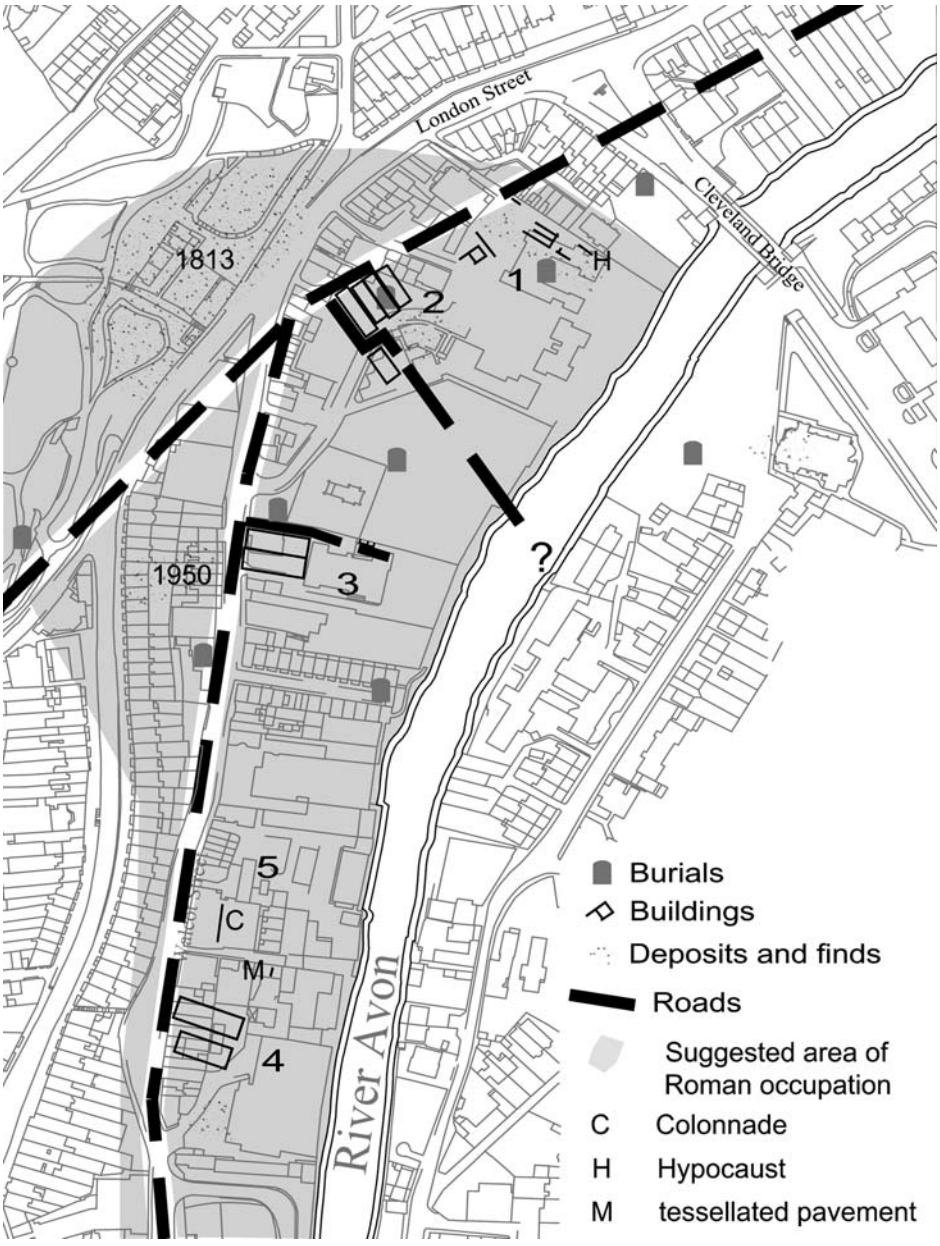

Fig. 22.6 Known Roman buildings and burials along Walcot Street and the likely area of settlement. The later Roman branch road at Hat and Feather Yard is shown. 1 is the Methodist burial ground and the Nelson Place excavation; 2 is the Hat and Feather Yard site; 3, St Swithin's Yard; and 4, Tramsheds or Beehive Yard. Some limited investigation may soon take place at 5

years, at first allowing more investigation but then leading to poorer and poorer information returns as preservation became more and more important.

At the Hat and Feather, where full excavation and ancillary monitoring took place over the whole development site, from 1991–6, it was obvious that the site was highly stratified and long-lived. Plan information became available in depth, over a long time period, and it was soon obvious that we were excavating an essentially urban and densely packed occupation with a wide range of normal urban finds—in the last respect not at all like the picture from the area around the baths and temple. In 1998, an evaluation trench was excavated about 100 metres south, ie nearer the 'town' and a similar, albeit very partial picture was seen. This development, now called St Swithin's Yard, was designed to leave the remains *in situ*, but when work began in 2000 it was discovered that the major drains were not as plotted. This led to the watching brief becoming an extensive mitigation excavation as sewers were rerouted with major knock on effects. Only the upper Roman levels were excavated and recorded, but a similar picture of extensive and deeply stratified urban deposits became clear, a fortunate result of an unfortunate failure to preserve *in situ* (Beaton in prep.).

In 1999 development further south along Walcot Street, at Beehive Yard, required evaluation trenching and a watching brief. This time preservation was more successful, and spatial analysis of the remains was almost impossible. However, once again, deeply stratified occupation deposits were recorded with a sequence from first century timber structures, to later Roman stone ones, and terracing into and out from the hillside (Crutchley, Leverett and Riley forthcoming). Like the excavations at the other two sites it was clear that occupation was not at all restricted to the street frontages but ran back in depth. How far the river edge was utilized could not be studied at any of these sites, however.

All of the recent work was on the east of Walcot Street and limited observation along the west side has suggested that the massive substructures of the Paragon in the eighteenth century had removed all older structures and deposits. However, during the work at St Swithin's Yard, which featured on television, the writer was approached by a retired builder who, on the basis of anonymity, told of the unearthing of coins and metalwork, pottery and bones in 1950, during war damage repairs behind the row of Georgian houses opposite the site. As a young apprentice, he had been sworn to secrecy in case the archaeologists came. This had the ring of truth, as much pottery had been found at about the same time during the rebuilding of Axford's Buildings after bombing, immediately up hill from this site (Cunliffe 1969: 211; The Paragon).

Fewer opportunities arose along Julian Road, the other area proposed as a settlement focus, but excavation behind the Royal Crescent in 1986 and 1987 revealed an enigmatic but extensive cobbled yard surface. This was of early to mid-fourth century date and was curiously rich in coins and metalwork, but had very little pottery. This was a few metres north of unpublished antiquarian observations of a Roman road, burials and masonry buildings, and the opportunity was taken to interpret and publish those records alongside those of 1986–7. Either a ritual or commercial function was postulated (Davenport 1999: 127–51). This only really started to make sense when a small scale evaluation in the Crescent Mews in 2002 led to a larger evaluation funded and filmed by Time Team later that year. While the excavations of 1870 and 2002 agreed in showing that the area had a road running through it and had been used for burials, the Time Team work showed that the masonry buildings that had been found in the nineteenth century were domestic, or at least craft/industrial, were later fourth century and post-dated the cemetery (Davenport 2004). So again, Cunliffe's speculations that settlement had spread this far along Julian Road were proved correct, although the detailed picture, still not fully understood, is clearly quite complex.

These sites indicated that Cunliffe's northern settlement focus was indeed an important and extensive archaeological site with very high potential. However, detailed investigation is unlikely to continue: all recent development proposals along the street have had stringent preservation requirements. Indeed, at Walcot Yard, in 2003, between the Beehive Yard and St Swithin's Yard sites, evaluation trenches were stopped at the first hint of Roman material in the pre-eighteenth-century soils. We have started to dare, once again, not to excavate. Indeed, so extreme was this decision, that revised development proposals may soon result in some further evaluation, as there is not enough information to 'determine the application'.

The ground between the River Avon and Walcot Street and London Street, is a long, narrow, curving 'triangle' with its base at Cleveland Bridge and narrowing nearly to a point at Pulteney Bridge, by the north gate of the walled area. The Roman street ran east of London Street, but from St Swithin's Yard coincided with the modern street line. The slope to the river is steep, but flattens out in the larger space at the north. What is clear is that Roman occupation required the terracing, both negative and positive, of this slope. Built masonry terraces in mortared rubble were the first and obvious remains encountered in the early watching briefs of 1988 and 1989 and terracing of one kind or another was encountered in all the subsequent excavations (figure 22.7). This terracing implies major investment in the land here and therefore gives an insight into its value. An obvious assumption was that the area grew as a suburb along the main road into the area of the baths and temple. However, on this model we

Fig. 22.7 An early Roman centralized building terraced into the hillside at Hat and Feather Yard. The dark patch in front of the scale is the central hearth. The building is cut away on the left by later Roman terracing

would expect that the earliest settlement would be at the south and it would have grown northwards. In fact, the earliest activity was at the north of the area. On the Hat and Feather site the excavation revealed the junction of the *Londinium* road with a route towards the river. The metalling for the *Londinium* road had been laid and a roadside ditch dug alongside. Part of the latter was filled in Claudian or early Neronian times and the spur road laid over it by the 50s. This spur road went out of use and was built over (and replaced with a long-lived street further south) by the early second century. It is probably the military road linking to the strategic route to Poole Harbour. The clear, straight line of this road is known south of the town and is aligned exactly on this point and the spur. This makes sense as it uses the natural crossing point and gravel ridge at Bathwick. Contemporary with this spur road or possibly pre-dating it was the first of the terracing, cut deeply in to the hillside and supporting an octagonal timber building with clay floors and a central hearth (figure 22.7). Early levels were not reached at St Swithin's Yard, where the main stone building went up (on terracing) in the mid-second century. The earliest material at Beehive Yard was later first century. The earliest finds in the centre of town and the Baths themselves, are late Neronian or Flavian and substantial development there, apart from the baths and temple, does not seem to take off until the mid-second century.

The conclusion seems inescapable, that the prime focus for the growth of the settlement at *Aquae Sulis* was not the baths at all, but the river crossing point at Walcot/Bathwick. This view is strengthened by a look at the road system around Bath. Cunliffe was clearly aware of the importance of this area for the local Roman road system (Cunliffe 1986: 11) and modern studies of it show that this point was the survey node for the roads as they converged on Bath from miles around (Davenport in prep.). Major roads from London, Poole, *Abonae,* and the Fosse Way itself, all meet here and are aligned on it. Such a route node might be expected to attract, if for a short time, a military detachment and a small fort, and this spot has been predicted to be the site for such since the 1820s (Skinner Papers, BM). No direct evidence for the fort has been recovered, but there is plenty for an early military presence. Fragments of military equipment were recovered from the Hat and Feather site (Bircher, in Beaton in prep.) and the early coin inventory is typically military (Corney, in Beaton in prep.). High status pottery and much imported early glassware from early dumps at the Nelson Place site are best fitted into a military context. Unfortunately, the epigraphic evidence for a military presence is both undatable and ambiguous. We might well expect sick or wounded soldiers to be at the Spa at any time in the Roman period, and not necessarily with their unit.

Both sides of the river continued in occupation into the fourth century, if not the fifth, but details are only clear on the Walcot side. The extent of occupation may be indicated by the large numbers of finds recovered by Cranch, an antiquities dealer, when what is now the site of Hedgemead Park was developed in 1813. Pottery, coins and other metalwork are recorded (but now lost) in an extensive area north west of the main road. No interest was shown or notice taken if any structures were unearthed. The excavations of the 1990s, however, showed that here rectangular timber buildings replaced the earliest structures and were in turn replaced by masonry buildings from the second century on. Most of these were strip buildings packed tightly side by side and running back from the street frontage. This was laid out to a rather high standard with rammed gravel pavements and stone or timber porticos or verandahs. Side streets were seen and investigated in detail on two sites and buildings well back from the road were also uncovered. Given the steep slope, multistory buildings seem certain, foreshadowing the eighteenth-century practice of adding basements as the buildings extend out over the slope. One of the buildings behind the frontage had a tessellated floor, and numbers of columns and piers testified to a certain degree of architectural pretension. There may be a hint here of higher status houses behind a commercial street frontage. This changed over time: the second century frontage house at St Swithin's Yard had good quality painted and patterned plastered walls, a small courtyard and piped water, but later declined to become a

tilery. A piped water supply was seen in another property on the frontage where a lead pipe was found *in situ* as well as pottery water pipe sherds. There was evidence that the street, rather uncannily like Walcot Street today, was, functionally, a mixed area. There is evidence for a blacksmiths, probably a pottery, the tilery; certainly other 'hot' activities, comfortable residences and oddly, burial.

The Roman cemetery along the London road is generally attested north of the Cleveland Bridge crossing (Norton 1969: 214–15). However, Roman inhumation and cremated burials have been noted just south of the bridge approach and tombstones (always possibly moved and re-used) as far south as The Bell public house between Beehive and St Swithin's Yards. Clearer evidence of use of the area as a cemetery comes from early nineteenth century records of cinerary urns being found in the cemetery that was laid out by the river between St Swithin's Yard and Hat and Feather Yard at that time. 'Red' pottery was recorded then, and large quantities of decorated Samian ware were recovered, unstratified, from the area during the clearance of 1988–9. It was at first thought that this represented an earlier use of the area as a burial ground, overtaken by later development pressures. Discovery of two inhumations at St Swithin's Yard, clearly inserted in the later Roman period next to stone-built houses, showed that this interpretation was not easily tenable. Disarticulated human bone on the same site suggested other burials had previously been made here. While the burials probably took place when the house on the site was in a ruined state and roofless, occupation was clearly continuing on sites nearby (Davenport 2000: 23). The intermingling of burial and occupation seems to be attested along Julian Road, although it is clear that some occupation replaced burial usage. Occupation by the living and the dead seems likely to have been contemporary.

If this was so, then it seems strict Roman rules against burial in towns did not apply. So-called 'backlot burials' are known at other small towns in the province (Cleary 2000) and suggest that a disregard for the strict Roman laws of burial is more likely than traditionally has been thought. The legal status of *Aquae Sulis* is in any case as uncertain as any small town in Roman Britain.

The information that Cunliffe had available to him suggested an area of occupation north of the walled area, the traditional town, of about 60 acres (25 ha.). This has not changed greatly in the succeeding years. Substantial excavation in the interim, however, has succeeded in permitting the characterization of this area as urban, intense, extensive and very mixed in type. What is particularly significant is that this is now no longer seen as a suburb, growing out from the main entrance to the walled area, along the roads to *Londinium/Calleva, Abonae* and *Corinium,* but as a primary settlement, predating the building of the baths by some years and the development of the area around the baths by decades, and growing in a manner rather traditional in Roman studies, from a route centre and a military presence.

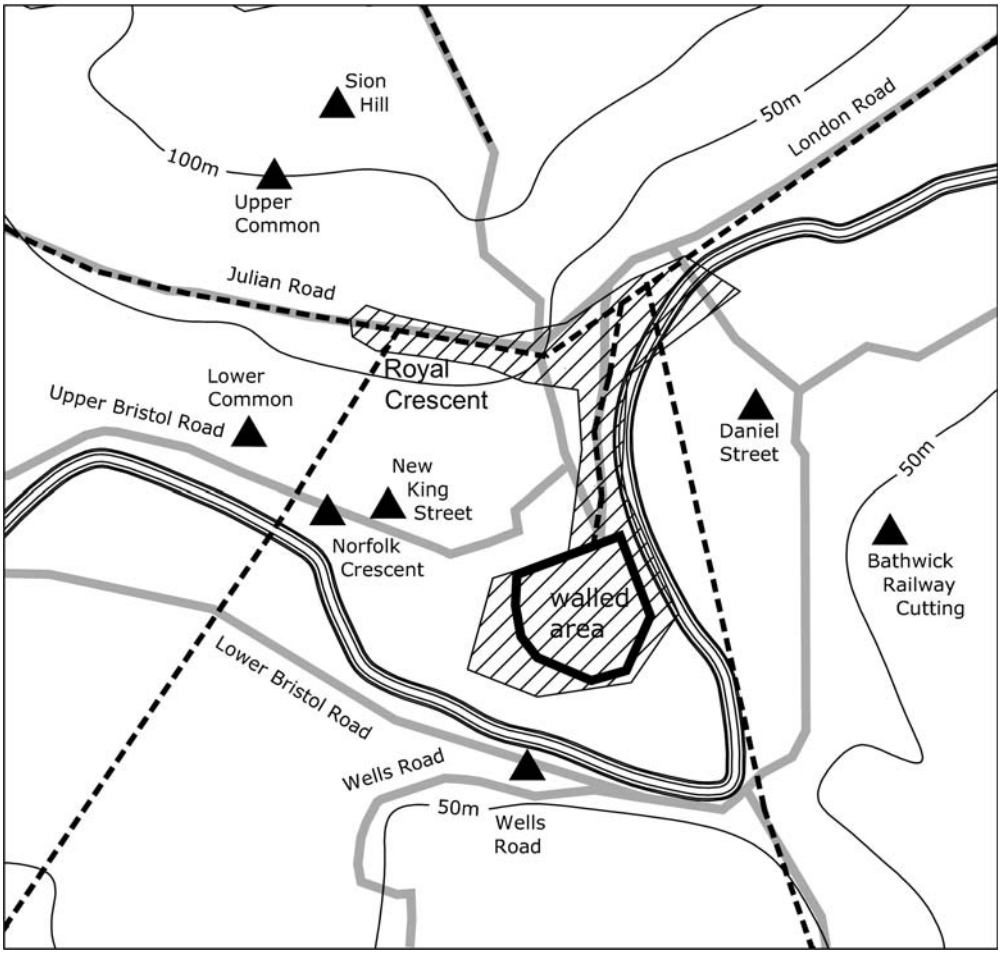

Fig. 22.8 The 'suburban' villas around Aquae Sulis. Selected modern roads are shown in grey and Roman roads in dashed black line. The urban area is hatched

This interpretation takes with it the realization that the road between the baths and the crossing point, modern Walcot Street, the 'High Street' of *Aquae Sulis*, it might be said, was no more than a branch from the main road system (figure 22.8). The London Road had joined the Fosse Way at Batheaston, north of the city and then continued along the modern London Road to Cleveland Bridge, or in fact slightly south and east of the line by the time it reached there (Scarth 1864). From here a route had to be found across the Avon valley to where its line is known on the high ground of Odd Down south of the city. Work by Keevil (1989) has demonstrated that the most likely

route to the river from Odd Down is west of the walled area, crossing the Avon near Norfolk Crescent. The Time Team excavations of 2002 confirmed that the road continued up hill from the crossing and joined the east-west *Abonae* road (Julian Road) behind the Royal Crescent (Davenport 2004). From here it shared the route eastwards of the *Abonae* road towards the *Londinium* road at Walcot. The short length of road found at Hat and Feather picked up the alignment from Cleveland Place and pointed towards the ascent to Julian Road (Beaton, in prep.). Observations by Wedlake in the 1950s strengthened the case for this alignment (Wedlake 1979: 131). In other words, the main roads bypass the religious and ceremonial centre of *Aquae Sulis* and the northern settlement is looking more and more to have grown up alongside the main roads and junctions. Walcot Street seems to have been the main street of the settlement but is not a main road, and merely leads from the main trunk system to the baths and temple. Following on from this observation is that the settlement evidence along Julian Road is actually on a main trunk route. There is not enough evidence to do more than raise the question of whether more intense commercial occupation might be found in future work here, especially around the junction by the Royal Crescent.

Continuing the active academic curiosity that characterized the early years of the Bath Excavation Committee and Bath Archaeological Trust, it has proved possible to fill in many of the question mark areas that outraged the young Cunliffe, both in the baths and further afield. More recent work has added another level to our understanding of the topography and perhaps the social structure of Roman Bath.

It has long been known that, along with Ilchester, Bath has one of the largest groups of satellite villas surrounding a Roman town. Mosaics and 'pavements' found in the early nineteenth century and suggesting buildings of some status, indicate the existence of a class of possible villas as close as half to three-quarters of a kilometre from the Baths (and closer to the occupation at Julian Road and Walcot). These are at Bathwick (where there seem to be two) and at Norfolk Crescent, each as it happens, close to main roads, to Poole and Ilchester (Cunliffe 1969: 212, nos. 41, 42, and 45). It has not been possible to investigate these in modern times, but undoubted villas have been excavated in similar and even closer positions around the town in recent years (figure 22.8).

In 1983 a Roman building was discovered on the allotments at Lower Common, 700 metres west of the Roman baths and not far from the line of the Fosse Way as it approached the river crossing near Norfolk Crescent. Excavations between 1985–8 revealed a late third- to early fourth-century winged corridor villa with a small bath house. It was set in the middle of a stone walled enclosure entered from the east via a stone gatehouse. In the early fifth century a series of ovens was built in the subdivided bath house to rework glass into canes

and beads possibly for millefiori work. Only a couple of hundred metres north, on Upper Common, up hill from the *Abonae* road, a similar building was found during works to add an irrigation system to the golf course there. As the pipes were being laid with a plough device, only a tiny trench was excavated, indicating the existence of a fallen stone column and a stone slab floor. The few sherds of pottery ranged from the second to the fourth century. Geophysical survey by the Bath and Camerton Archaeological Society showed a simple three-room 'cottage villa' with associated enclosures and trackways. Some of these may have predated the building. The Lower Common villa was sited on a late Iron Age settlement and on Sion Hill, a similar distance north again, both Iron Age and Roman occupation is known. Fragments of mosaic and building material from the latter site suggest a middling to high status building. While continuity is not shown on these sites, it seems possible that they represent a local response to the opportunities for luxury and pleasure around the Roman town.

In 1997 the opportunity arose to extensively excavate another, and completely unexpected example of one of these 'suburban' villas, the grandest and closest to the baths of them all. This led to the discovery of a large courtyard villa on the steep lower slopes of Beechen Cliff, just across the river from the area around the baths and temple ('Wells Road' on figure 22.8). Two long wings and evidence of a probable third were uncovered in evaluation and mitigation excavation. East–west the building was 50 metres long and north–south over 30 metres (figure 22.9). The building was in a poor state of preservation, having been heavily plough-damaged. However, one large room retained just enough tesserae and bedding to show that it had originally had a simply patterned tessellated floor. A bath house was indicated by very large amounts of distinctive CBM at the junction of south and west wings. Like most villas in this area, it was built in the late third–early fourth centuries and there was no evidence of earlier occupation. Its position was distinctive: it was terraced into the hillside overlooking, almost dominating the town. Like the other buildings whose plan is known, it seems to be aligned on the main hot springs, or at any rate, the centre of the walled area.

A cobbled road ran alongside the west wing, indicating a link to a possible Roman road along the south side of the river. There is no evidence for a river crossing here, although Irvine in the 1870s claimed a ford behind the railway station, visible at low water levels (it would have been destroyed by the flood prevention works of the 1960s).

Eight of these high status buildings are now known, none more than 600 metres from the edge of the urban occupation, and some much closer. The most likely interpretation, given this proximity both to the town and each other, is that they are suburban villas, almost providing *rus in urbe* to their owners, or at least *rus* very convenient for *urbs*. Where there is dating it is fourth century, but often with an indication of some occupation earlier. The

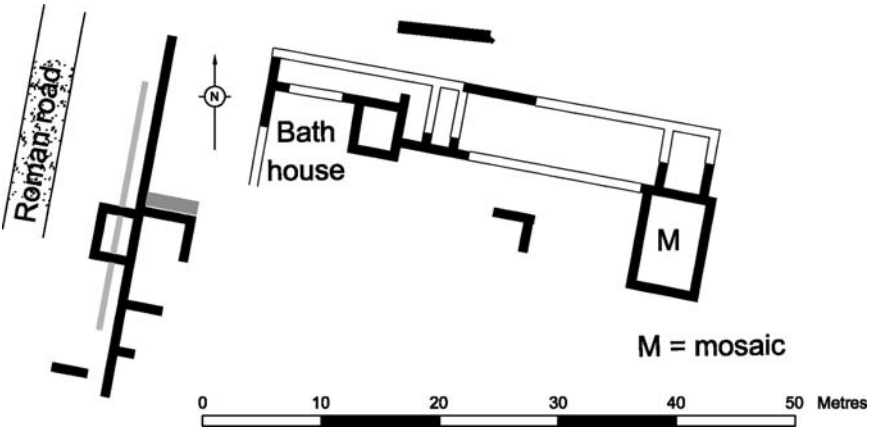

Fig. 22.9 The suburban villa at Wells Road. It is on a steep slope and seems to be broadly aligned on the *Fons Sulis*, the King's Bath. It is only a few hundred metres from the baths and temple

concurrent existence of high status houses inside the town in the fourth century suggests an even attraction or value to both positions and complex social arrangements for the wealthy. It seems we may imagine a fairly 'leafy' suburban fringe of large houses around the urban core. This suggests that the town retained and even developed its attractions, surely social in the first place, well into the late Roman period.

Only the Lower Common villa has revealed any evidence of its later phases and if it is typical, then this arrangement broke down or was dismantled in the later fourth century. A similar change is seen, albeit very dimly, in the alterations in the temple precinct in the later fourth century and later (Cunliffe and Davenport 1985: 66–75 and Davenport 1991: 146 and 2002: 13–14).

Our views on the end of Roman Bath are no doubt more sophisticated than in 1955, not least because there is much more material to work with. Nonetheless, it is still intractable and extremely hard to interpret and date. The evidence for activity in the temple precinct in the later fourth century is clear and makes a strong case for significant changes in the way the temple was maintained, but the evidence for these changes fades away as the later phases get fainter and more poorly dated (Cunliffe and Davenport 1985: 66–75). Similar issues in this and other parts of the town are discussed in Davenport 2002: 16–24). Truncation of late Roman layers by near-ubiquitous post-medieval cellarage, or in the near-rural areas, ploughing, removes evidence all together; but the recognition of this problem is not new, and was tackled by Cunliffe in the 1960s (Cunliffe 1969: 142).

Since that oppressive day in 1955, archaeological investigation in Bath has grown and accelerated almost beyond what anyone might have imagined possible. Today, however, concern for the buried past results more often in attempts to leave it buried for some imagined posterity. An archaeologically correct youth today might well say instead, 'How dare they excavate all this!' But balance is all. Had the nineteenth-century excavators not removed tons of wonderfully rich, stratified archaeological deposits without record, the baths would never have been exposed to view as they are now. Finance and then philosophy would have stopped it happening in much of the twentieth century. Had the developers of the 1970s to 1990s not provided the opportunity, and in some cases the finance, to carry out what were then called rescue excavations and are now 'in mitigation', little of the knowledge of the areas beyond the baths would have been won and had the Bath Excavation Committee and then Bath Archaeological Trust not been in existence then these opportunities would have been lost.

While large-scale excavations in Bath are likely to begin as this paper is being written, it is perhaps difficult to argue that 'preservation *in situ*' is getting out of hand, although, even in this case, the really interesting medieval urban deposits are intended to be left in place. However, modern archaeologists are institutionally afraid to excavate. We should dare to argue for both the continuation of focused archaeological excavation as well as celebrating serendipity during development. How dare we leave all this unexcavated!

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23

Decoration and Demon Traps: The Meanings of Geometric Borders in Roman Mosaics

John Manley

The thousands of mosaics that survive from the Greek and especially Roman worlds are taken by many to be one of the great surviving artistic hallmarks of these two classical civilizations. The decorative variety of the floors, made usually and mostly from small stone tesserae, strikes a chord with those who view them as works of art (Neal and Cosh 2002: 9). They appear testimony to the erudition of the patrons who commissioned them, to the skilled artists who composed and executed the designs, and to the knowledge of those ancients who walked over them and who were able to interpret knowingly what was beneath their feet. Viewing them in a museum context, many of us judge them as we would an eighteenth-century watercolour or an early Picasso—the end product of inspirational artistic endeavour. The near complete absence of written references from the ancient world regarding mosaics means that we are forced to generate meanings from the floors themselves.

What I want to suggest in this chapter is an alternative way of looking at mosaics. I am going to draw on ethnographic and anthropological research to provide additional insights to the archaeological study of mosaics. I want to argue that there is something to be explained in the sheer constancy of some of the geometric borders on mosaics through the Hellenistic and Roman periods—a period of some seven centuries. This constancy is also apparent in overall design in large areas of the Roman Empire. For instance in the northwest provinces, including Britain, the enduring emphasis is on the pattern, and the picture-panels are fitted within this pattern, often in a series of more or less equally weighted panels. These kinds of stability need their explanations just as much as change does. I particularly want to focus on the abstract and geometric

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borders—for example the meander, the guilloche, the wave-pattern—and seek to understand why these motifs were utilized across the length and breadth of the Roman Empire. I want to take a different approach to that taken by scholarly interpreters who seek to find layers of meaning in figurative representations and then ascribe them to erudite ancient patrons (*pace* Perring 2003). I also want to go beyond the obvious consideration that borders are just simply framing devices to contain and separate images. Of course they do perform this superficial function, but I search for deeper meanings. Rather I want to invest the mosaics with a sense of agency, with a power and a compelling force of their own, with a vitality rather than a lifelessness.

My interest in this subject has been generated in part by serendipity. I happen to work for the Sussex Archaeological Society which owns Fishbourne Roman Palace (Chichester, Sussex, UK), a palatial late first century building, excavated so brilliantly by a young Barry Cunliffe. The Palace houses some of the earliest mosaics in Roman Britain. Curiously, despite the manifest palatial character of the building, clearly much grander than a villa, the mosaics at Fishbourne nevertheless do not appear to be of marked superior quality to many other mosaics in this province of the Empire (Neal 1981: 35). Neal particularly contrasts the first- and second-century mosaics from Fishbourne with those of fourth-century nearby Bignor and finds in the latter's favour. However, not everyone concords with this view and Cunliffe (1971: 149) emphasizes the quality of the polychrome mosaic in Room N20 at Fishbourne (as do Allen and Fulford 2004: 23), particularly remarking on the rarity of some of its elements—such as the band of rosettes alternating with vine leaves, and the fish and dolphins on either side of vases. The excavator also underlines that arguably the most important room in the entire Palace, the Audience Chamber, seemed to have the finest quality of mosaic, if the minute size of the tesserae are indicative of such. It is curious also, again in spite of the celebrity of Fishbourne, that the mosaics there do not appear to have been studied in any great detail, save the information recorded in the original excavation report (Cunliffe 1971; Witts 2005: 179). I will therefore comment in particular on a few of the Fishbourne mosaics in what follows, although what I have to say could just as easily apply to mosaics throughout the Empire.

CONSTANCY NOT CHANGE

The recent volume by Dunbabin (1999) provides us with a useful vantage point from which to assess the degrees of structural change in the overall schemata of mosaics across the Greek and Roman worlds. The earliest mosaics, dating from

the Archaic period (*c.* 630–480 BC) in Greece, were made of pebbles and confined to temples. By the fourth century BC such pebble mosaics began to appear in private houses, in which social context they would continue to be prevalent through to the end of the Roman period. A collection of pavements from the town of Olynthos in northern Greece illustrates that the essential structural composition of mosaics (geometric borders framing figurative panels) had already begun to crystallize. Two mosaics from the Villa of Good Fortune depict friezes of beasts and humans surrounded by rectangular bands of leaf-scrolls, meanders, and wave-patterns. One unusual mosaic in the same house provides a clue to the possible significance of such pavements. In a small room a large and small wheel are placed above an inscription reading 'Agathe Tyche'—Good Fortune. Dunbabin comments (1999: 8) that the inscription suggests that the symbols were apotropaic, and probably represented the Wheels of Fortune. One function of the floor decoration was the attraction of good luck and the corresponding repulsion of hostile influences. Indeed, Lavin (2005: 934) takes this argument a little further. He suggests that the mosaics with beasts and humans represent the clear, predictable, narrative rationality normally associated with Greek culture. The good-luck symbols, on the other hand, underline the irrationality, chance and even the demonic. The Olynthos mosaics polarize the reasonable and articulate world of nature and language, with abstract and mysterious intimations of chaos (Lavin 2005: 937).

Mosaics made from thousands of stone tesserae flourished in the Hellenistic period (third and second centuries BC). By this time the structural consistency of mosaics was well established. The most characteristic design consisted of a carpet-like tessellated area, square or oblong. The 'carpet' had multiple geometric frames and borders, and a central field which could contain figured or ornamental panels. There was often a separate threshold panel at the presumed entrance to the room, decorated differently from the rest of the mosaic. On Delos, for example, one of the mosaics in the House of the Dolphins has a square outer border of crenellations, with pairs of dolphins in the corners. Both of these could be interpreted as protective elements: the crenellations may symbolize the protective circuit of town walls, excluding outsiders; the dolphin was speculatively conceived of as the sailors' friend, arcing from the water in front of vessels.[1] On many floors the most striking

[1] Dolphins were recognized as helpful to men in antiquity (Witts 2005: 97). They famously rescued the musician Arion after he had been thrown into the sea, and the Tyrrhenian pirates who tried to take advantage of Bacchus were transformed into dolphins, in which guise they became suitably repentant. Odysseus carried the image of a dolphin on his ring and on his shield, since dolphins had saved his son from drowning. Strabo (quoted in Cunliffe 2002: 7) mentions the Temple of the Delphinian Apollo, a sea-god, at Massalia, who, taking the form of a dolphin, guided ships safely across the ocean, protecting trade and travel. Dolphins are one of the most popular images in Romano-British mosaics; nearly two hundred are known or inferred from over fifty mosaics.

feature was the number and complexity of the borders; the geometric motifs included wave-patterns, crenellations, chain guilloche, bead-and-reel and meander.[2] Some of the geometric motifs were exploited for their three-dimensional character: for instance lozenges of three or more different colours were combined to form the illusion of cubes seen in perspective; this particular *trompe l'oeil* was much appreciated for its illusionistic effects (Dunbabin 1999: 32).

The last point is indicative of the way in which mosaics can be taken apart to reveal individual elemental motifs, both geometric and figurative, which occur repeatedly across the Roman Empire. There is a sense that whatever the social, economic or political mechanisms for the cultural diffusion(s) or emergences of mosaics in the Roman world, the 'form' that was transmitted may not have been the particular composition of various elements of a specific mosaic, but rather the specific popularity of the individual elements, and the overall framework of 'borders framing pictures'. What evidence is there for this? Well, if the compositions of specific mosaics were being replicated in their compositional entirety we should find, perhaps on a regional base, the same compositions, or variations of them, repeated; but the fact is there are very few mosaics that appear to be copies of previous compositions or variations on a compositional theme (Ling 1998: 13), although it does seem that there are broad similarities of design within regions. In addition, there is evidence that picture-panels could be acquired independently of the rest of the mosaic (Dunbabin 1999: 29, 39). This inevitably leads to the presumption that individual artisans might be habitually responsible for different elements in mosaic-making, but not specific compositions. Surely if the 'master-mosaicist' were more common then areas of regional compositional homogeneity, as opposed to broad similarities of design, should be more obvious?

Once the overall composition of a mosaic is deconstructed in this way, it is relatively easy to contrast the aesthetics of appreciation and commission in western art, from mosaical practices in the classical world. Instead of the inspired nineteenth-century artist working alone on a grand and unique composition, we can picture a number of mosaicists working on one mosaic within the confines of traditional repertoires of motifs and picture-panels, with none of those mosaicists having an exact mind's eye image of what the eventual finished mosaic in its entirety would actually look like. And, instead

[2] It has been suggested that the crenellations, and indeed other geometric elements, may have had a close connection with contemporary wall-hangings and carpets. While this may be true it would be extremely difficult to prove the direction of the influence at different periods of time, or that such influences had any impact on how different types of borders were perceived in ancient mosaics.

of an educated and refined patron in a nineteenth-century mansion commissioning a grand tableau for the dining room, we can imagine a scenario where an owner cherry-picks different geometric and figurative elements, with no overall sense of finished design at the outset, or indeed an alternative where the mosaicists present their own elements to the owner more or less as a *fait accompli*.

In the Hellenistic period in Italy, from the late second century BC until the Civil Wars of the first century BC, figurative panels excelled as mosaicists used the technique of *vermiculatum* (very small tesserae) to imitate contemporary paintings. The Darius and Alexander mosaic in Pompeii is a good example of this approach. Even at this apparent apogee of artistic endeavour there are indications of failures in execution. The Alexander mosaic itself, on close inspection, is not without flaws (Ling 1998: 29). More significantly, countering the modern sense of the integrity of overall interior design, there is little to indicate thematic connections between mosaics in the same house, or much evidence of determined attempts to create a link between mosaics and specific room functions or wall-paintings, or indeed linkage between picture-panels in the same mosaic (Dunbabin 1999: 39); although Witts (2000) demonstrates that from fourth-century Britain it may be possible to infer a function as a dining room from the spaces in mosaics left for dining couches, or the orientation of picture-panels. The overall impression, however, is of an arbitrary selection process operating at the elemental rather than compositional level.

During the first century BC in Italy black-and-white geometric mosaics came to dominate the mosaicists' industry, perhaps as a reaction to the fact that figured panels now appeared more often on walls of rooms. Polychrome mosaics now became a rarity and black-and-white geometric mosaics were still predominant in Ostia during the second century AD. It is, of course, in this context that the geometric mosaics of Fishbourne were situated, being works of the last quarter of the first century AD. With the emergence of black-and-white geometric mosaics, borders seem to have become simpler, often consisting simply of two or three solid black lines (as in some of the Fishbourne examples). It is as though, without central picture-panels, the geometric attributes of the mosaics had been transferred to the entire central pavement areas, with the borders correspondingly reduced to straightforward lines. However, there is no doubt that the appearance of all-over geometric designs represented a significant rupture in the tradition of what constituted a mosaic floor. I am not convinced that this radical change was entirely a response to changing fashions in wall paintings, and indeed this interruption might be seen to challenge the argument presented in this chapter. However, the tradition of mosaics as 'borders framing pictures' was re-established in the

second century AD (see below) and its widespread re-appearance might also be taken to indicate its enduring significance. In addition, polychrome mosaics did continue throughout this period, no doubt as a minority, alongside black-on-white examples, as the Flavian coloured mosaic from room N20 at Fishbourne indicates. Indeed Allen and Fulford (2204: 34) suggest that the ratio of polychrome to black-and-white may have been underestimated for the first century AD at Fishbourne.

During the second century AD, polychrome mosaics regained their popularity, although, at least in the western empire, the mosaics differed from their Hellenistic antecedents. In Hellenistic times the emphasis was on centrally placed, realistic, pictures. In the west in the third and fourth centuries AD the design concept and treatment of the pictures was different. The emphasis was on a geometric pattern that structured the pavements, and the less realistic pictures were slotted into the overall geometric grid. New popular motifs and techniques appeared such as the black silhouette figures and vegetal elements. Geometric borders regained their popularity, re-appearing with the same elements. For instance, to take three examples from thousands, the ubiquitous guilloche appears at Croughton in Northamptonshire, and again at Mascula in Numidia, and again at Apamea in Syria all during the fourth century AD. Later still, in sixth-century Greece, Basilica A at Nikopolis in Epirus is richly decorated with mosaics. The transepts on either side of the apse feature central figured panels surrounded by multiple borders, one of which is a wave-pattern, stylistically exactly the same as that from Olynthos a millennium earlier.

In concluding this section of the chapter two further points can be brought to bear in support of my contention that there is an unusual constancy in this mosaic tradition which endures for a thousand years. The first is that there is also a limited repertoire of figured motifs which the mosaicists draw on. These are most often taken either from Greek mythology, or draw inspiration from scenes in the arena or on the hunt; other sources included subjects drawn from Roman legends, theatrical scenes and agricultural operations. There is even some evidence that these figured mythological scenes actually contained elements comprising groups of figures (Dunbabin 1999: 301) and it was these groups of figures that were put together, in different combinations on different mosaics, rather than an overall composition; indeed this is a feature common to other areas of Roman art such as sarcophagus reliefs. There is an obvious parallel here to the elemental characteristics of individual geometric motifs. The second point is that these mosaics appear to contain no signs of any indigenous elements in their composition (Dunbabin 1999: 2). Even when a mosaic demanded elephants and the mosaicist had never seen an elephant, elephants were depicted and not usually substituted with some local

and better known fauna. The overall impression is that these thousands of mosaics were produced throughout the Empire from a limited and conventional repertoire, and within a tradition of mosaic-making that did not encourage innovation. That is not to say, of course, that there was no change at all. The switch from polychrome mosaics to completely geometric ones and then the re-establishment of the 'borders framing pictures' structure indicates that change did take place. But I would argue that that change was minimal when one considers changes in other areas of Roman material culture. The changes, for instance, in the forms of Samian pottery varied considerably in the first two centuries AD, while the four styles of Pompeian wall-painting show marked shifts in taste over a period of two centuries. There was something that maintained this mosaic constancy, and I want to suggest that for explanations we should look at the function of the geometric borders, and at the role of mosaic-maker.

FIGURATIVE AND GEOMETRIC

Having emphasized this structural constancy of 'borders framing pictures' in the last section, I now want to explore how archaeological scholarship, over the last fifty years or so, has approached this conundrum, or at least treated the combinations of borders and picture-panels. Again, Dunbabin's book provides a good starting point. Her discussion of geometric motifs is useful (1999, 291–8), and she comments on the great increase in the number of geometric motifs in the early imperial period, and the importance of floral-vegetal motifs right from the Greek pebble mosaics. However, there is no attempt to try to delve into what the geometric motifs might symbolize. Despite the fact that the great part of the mosaicists' repertoire at all times consisted of ornamental and geometric motifs, there is scant investigation of what these might mean. When geometric motifs are discussed at all the main endeavour seems to be to catalogue and classify the different elements (Neal 1981; Neal and Cosh 2002). A particularly fine example of this genre is a spectacular French publication, *Le décor géometrique de la mosaique romaine* (Balmelle *et al.* 2002). Another mode of examination, especially in relation to those completely geometric mosaics, is to explore how they could have been laid out by the application of simple mathematical rules (Field 1988; Tebby 1994). Tebby convincingly demonstrates, for example, that the 'fortress mosaic' at Fishbourne is laid out on a six units by six units grid (Tebby 1994: 275). The only hint of an inquisitive tone in respect of the geometric

borders is provided by Neal (1981: 33) who suggests that the swastika pattern may have been intended to ward off evil spirits.

With the figurative picture-panels, of course, we are on more intelligible ground. Greek mythology provides us with a store of memorable tales and we can recognize their depiction in the varied figured scenes. Likewise scenes from the hunt and arena, while not to contemporary tastes, appear part sanitized in tesserae and are easily appreciated. It is therefore completely understandable that in most books on mosaics, it is the figured scenes that form the majority of the images (Ling 1998; Dunbabin 1999; Witts 2005) and attract most of the discussion.

The question therefore is why have we relegated the geometry in mosaics to things that can be catalogued but need not be understood, while maintaining our intellectual gaze on the figurative? It may well be that in post-Enlightenment Europe, with its emphasis on art for art's sake, the figurative is deemed art, deemed to be the result of ancient artistic inspiration, can then be viewed with a cold rational eye and judged accordingly, and can also be understood as laying the foundations of post-Renaissance classical traditions of painting. The figurative picture-panels are therefore judged important and worthy of detailed study. The geometric 'artistry' has somehow failed to cross the thresholds of these intellectual movements. Scrutinizing these pleasing patterns with a discerning eye does not lead to rational appreciation. Indeed the mere repetitiveness of the individual cells of geometric borders stands starkly against the individual detail in the figured picture-panels—the former is the work of copying the same, the latter the inspired and unique touch of the artist. With this side-lining of geometric motifs in mosaics we seem to have given up on attempting to provide at least suggestions for their meaning, even wondering if there is any meaning or function in them at all. The flip-side of this argument, of course, is that we ourselves have lost the ability to take meaning from these patterns. Our cultural and educational backgrounds privilege a logical, analytical, informed discernment, above all a conscious distanced perspective, at the expense of an engaged, unconscious immediacy, when confronted by most of the images our culture classifies as 'art'. Pictorial art, for many of us, is supposed to provoke deeper reflection, rather than stimulate the senses. It may be not for this reason that the meanings of geometric borders around Roman mosaics are opaque to us, but our consciously rational outlook does not help us formulate possible lines of enquiry.

Given this culturally conditioned view of classical mosaics, which weighs so heavily in favour of the figurative and downplays the geometric, it is no surprise that we have exaggerated the appropriate ancient personages who must have been the main players in the construction of this art. Many of the

mainstream books on Roman mosaics are thus underpinned by duality of the knowledgeable patron and the principal mosaic designer. The patron and the artist, so much the twin supports of cultural output in the eighteenth and nineteenth centuries, are therefore given their counterparts in countless classical cities across Europe, and we imagine ancient earnest discussions of the aesthetics of mosaics, much rumination over rival designs tendered for a room, choices made, and final flooring detail inspected and hopefully admired. An educated elite is given prominence, and they are invited in to private houses to view the latest mosaic, comment on its appearance, and over a glass of watered wine, nod sagely at the messages the picture-panels impart. And lastly, what artistic endeavour would be worth its salt without the identification of various mosaic 'schools'. Such schools surely would be testimony to a mature artistic tradition, with its intellectual rivalries? And indeed attempts have been made to identify such schools in fourth-century Roman Britain. Latterly, however, a retreat from such conceptions has been sounded. The spectre of the itinerant mosaicist, and the possibility that the individual elements of mosaics spread with an inbuilt force of their own, rather than entire compositions disseminated by artistic advocacy, has compelled some to write of mosaic 'groups', a much less loaded term, rather than 'schools' (Neal and Cosh 2002: 21). It is time now to introduce some specific mosaics and I turn to the examples from Fishbourne.

FISHBOURNE MOSAICS

Fishbourne Roman Palace lies just to the west of Chichester (Sussex, UK). It was built in its final form around AD 75–80, quite possibly as the home of a loyal client king, Tiberius Claudius Togidubnus. According to the original excavation report substantial remains of fifteen mosaic floors were located, but smaller fragments, sometimes only borders, indicate that many others once existed and it must be assumed that most of the rooms would have been mosaic-floored (Cunliffe 1971: 146). Later excavations, conducted on a smaller scale, have produced remains of further floors (Cunliffe et al. 1996). For the purpose of this chapter I want to draw attention to just three of the mosaics at Fishbourne, all in the North Wing. The first is the Flavian geometric black-on-white mosaic in room N12 (figure 23.1). The general pattern is formed by squares set in a framework of diagonal lines forming diamond-shapes; some attempt is made to create the illusion of three-dimensional boxes. This mosaic was laid in a large rectangular room to the immediate east of a courtyard. While ascribing room functions is a

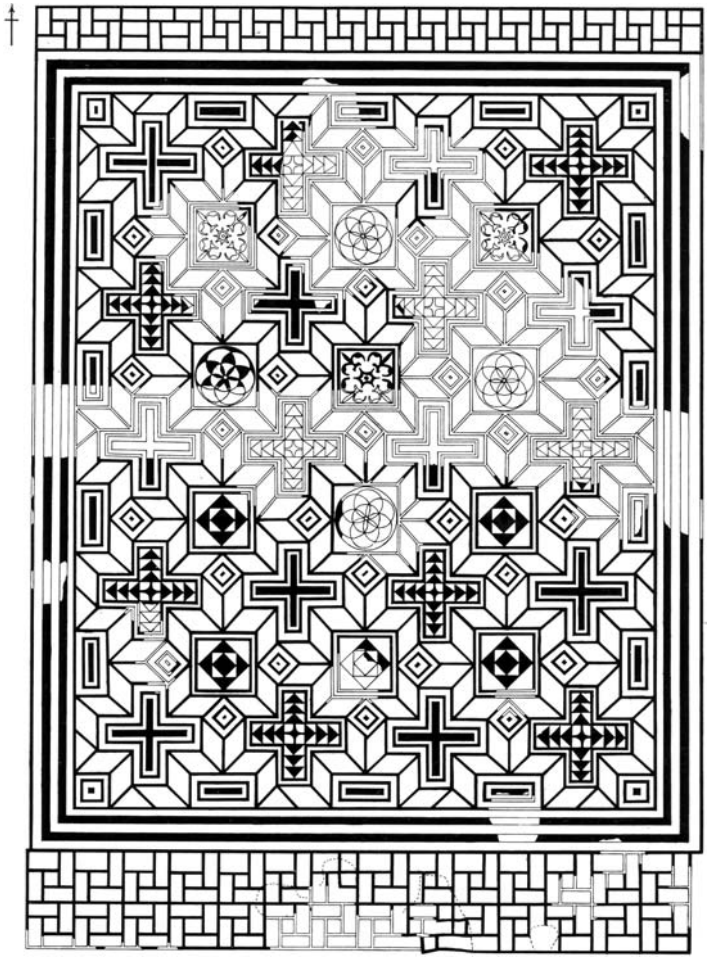

Fig. 23.1 The late first-century black-on-white geometric mosaic from room N12 in Fishbourne Roman Palace

notoriously difficult business in Roman archaeology, it would be possible to view this room as a main dining or reception room.

The other two mosaics I wish to introduce were situated in room N7 (figures 23.2 and 23.3), the second century polychrome mosaic being a replacement for the original black-on-white mosaic that had sunk into a local depression. Once again it would be possible to view room N7 as a main reception or dining room, facing south into the same courtyard. The earlier mosaic was an example of a 'fortress mosaic' complete with gateways on each side of the floor, and corner towers. The interior of the mosaic was divided

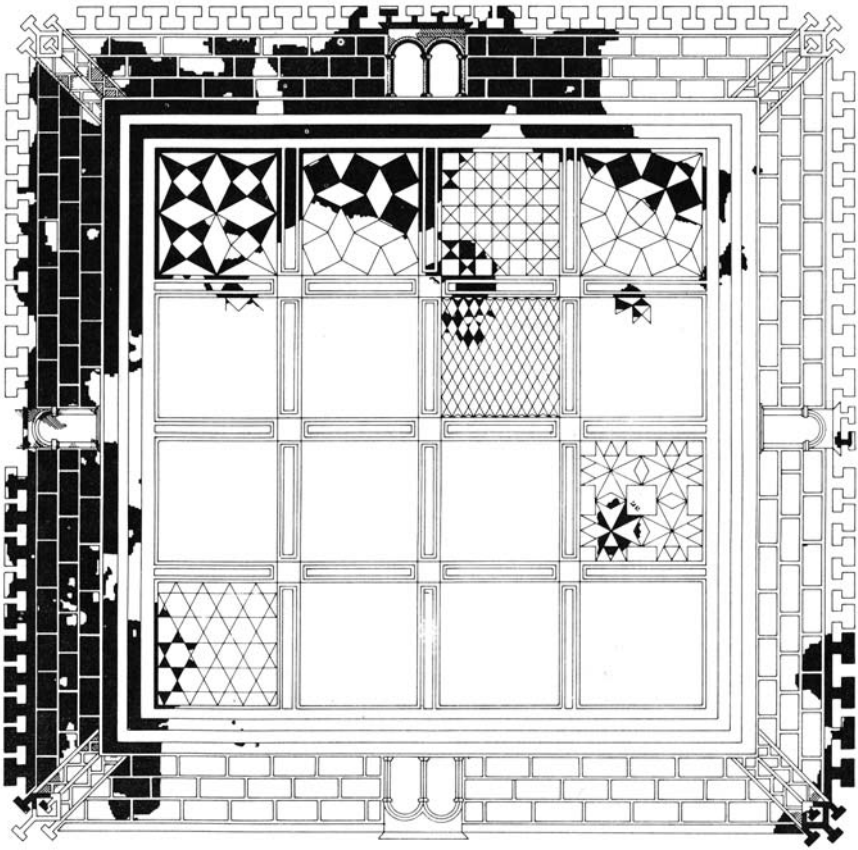

Fig. 23.2 The black-on-white 'Fortress Mosaic', dating to the late first-century AD, from room N7 in Fishbourne Roman Palace

into sixteen equal squares, each containing its own geometric pattern. Materials used for individual tesserae included red ceramics and a pale, grey limestone as well as chalk and cementstone (Allen and Fulford 2004: 23). The later mosaic was the famous 'cupid on a dolphin' mosaic, after the eponymous duo depicted in the central picture-panel. The panel is set within a large circle delineated by a guilloche, and between it and the mosaic border are four semi-circular panels and four quadrants. The panels contain fabulous sea-beasts while the quadrants are filled with simple scallops. The spaces between the quadrants and the panels contain drinking vessels. A mosaic 'mat' in projecting from its south side was clearly intended to symbolize access from the courtyard. Materials used for the tesserae included ceramic fragments and yellow/orange limestone (Allen and Fulford 2004: 23).

Fig. 23.3 The polychrome cupid-on-a-dolphin mosaic (mid-second century AD) from Fishbourne Roman Palace

As has already been remarked there is nothing inherently 'special' about these mosaics, despite their being laid in an extraordinary building in Roman Britain. Parallels for that in N12 occur so frequently in the mosaics of Pompeii that it was evidently the rule rather than the exception in the late first century (Cunliffe 1971: 146). It was also a common pattern on contemporary sites throughout Roman Italy, as well as Gaul and Spain. The 'fortress type mosaic' can be paralleled, for example, in Tunisia, Italy, Switzerland, France and Spain, although seemingly in many of these the 'city walls' element surround the geometric depiction of a labyrinth, associated with the myth of Theseus and the minotaur. The general arrangement of the cupid-on-a-dolphin mosaic is common in the second century in various parts of the Empire. There

are few traces of any indigenous elements in mosaics at Fishbourne, nor need we see any relevance in any of the mosaics to the imagined life of a loyal but local client king. A possible exception to this is the cupid-on-a-dolphin motif that appears on one of the earliest silver coins of Tincomarus (Bean 2000: 243); this motif, of course, is not indigenous, but at least might have had some local ancestry as a Roman symbol adopted by Togidubnus's forebears.

THE AGENCY OF GEOMETRIC BORDERS

In order to present some possible new lines of enquiry into the geometric borders of mosaics I want to draw on some of the ideas discussed by Alfred Gell (1998). Gell's central point is that art objects can be like persons, or social agents; they can possess agency and can cause things to happen in the mind of the viewer (Gell 1998: 18). For example, one of the examples Gell quotes is captivation. In this scenario the viewer is trapped and demoralized when faced with the spectacle of unimaginable virtuosity; the viewer cannot mentally rehearse the origination of the artefact and is literally wonder-struck. The greater the virtuosity the more powerful the entrapment; the idea can equally be applied to art and architecture—think of the ceiling of the Sistine Chapel, the decoration of the Alhambra, or the Gaudi cathedral and you can appreciate his point. And if you take a closer look at the quadruple-guilloche chain around the central picture-panel on the cupid-on-a-dolphin mosaic the pattern seems designed with agency in mind—the pattern throwing down a veritable challenge to the observer to untangle the threads and come up with the right number of strands and how they were braided to produce the effect.

But Gell has quite a lot to say on the subject of geometric patterns (Gell 1998: 74–95) and here lies the relevance to mosaics. Gell argues that decorative patterns applied to artefacts attach people to things, and to the social projects those things entail. He quotes the example of the child who can be persuaded to go to bed more easily if the sheets and duvet are covered with jolly patterns of spaceships, dinosaurs or even polka dots. In contrast, Shaker chairs were made plain so that puritanical Shakers would not become attached to chairs but solely to Jesus. He argues that decoration is intrinsically functional or else its presence would be inexplicable. Decoration, applied to plain objects, may make some objects more appealing, perhaps because decoration brings out the very essence of the material, draws us in and forces us to contemplate the way the material yields to the act of decoration. By contrast, some undecorated objects distance the observer, leaving the eye with no point of focus with which to engage with the object. Gell (1998: 81)

suggests that patterns slow perception down, so that the decorated object is never fully possessed by the beholder. In this sense the beholder and the object are locked in an 'unfinished exchange' , and it is this incompletion that underlies the attachment between people and things.

Gell situated this argument in an ethnographic context when he applied it to the elaborately carved prow-boards of Trobriand Island canoes which featured in the inter-island Kula exchanges (Gell 1992: 44ff.). The prow-boards were impressively large decorative objects, full of intricate curvilinear designs; their location at the prow of the canoe ensured that they were seen by many people on the shore as the Kula canoes approached, the canoe's occupants ready to exchange goods with their Kula partners. The intention in placing the carved prow-boards in such prominent positions was so that the Kula partners on the shore would become entangled in the wonder of the carving, effectively losing part of their grip on themselves, and therefore be lured into offering more valuables to their partners than they would otherwise do. Gell points out that some of the intricacies of the carving, for instance opposed volutes taking the eye in different directions, provoked an optical disturbance which was felt by the observer to be caused by magical powers emanating from the board itself.

So I could develop, following the two ideas indicated above, lines of argument to the effect that the geometric borders of Roman mosaics were an extravagant display of compelling virtuosity, or that the patterns invoked a sense of attachment between floor and owner, or indeed both. But there are also other possibilities. Parts of an artwork convey agency, just as the whole composition does; and parts of an artwork can convey agency in relation to adjacent parts. If I look at the cupid-on-a-dolphin mosaic I might argue that the juxtaposition of the repeating triangles border just outside the double-guilloche strand (not illustrated on figure 23.3) creates a sense of animation; the individual elements seem to move and the eye is carried along, lost in an ultimately futile attempt to break free and re-focus on something still.

The last idea of Gell's I want briefly to allude to is one that I think has special relevance to my discussion of mosaics. As well as being attractive and captivating, the agency of geometric patterns can also be agonistic and defensive. Apotropaic art which protects against an enemy (usually seen in demonic form) is a prime instance of artistic agency. Patterns are used as protective devices, defensive screens, obstacles impeding passage; they are, according to Gell, demon-traps, in effect demonic fly-paper, to which demons become hopelessly attached, and are thus rendered harmless. But what is the sticky stuff on the fly-paper that traps the fly? Gell suggests that the geometric patterns present a puzzle, a challenge, a mental snare and it is this 'cognitive stickiness' that seals the fate of fly-as-demon.

By way of ethnographic examples Gell provides two instances of how this 'cognitive stickiness' works in practice. He recounts hearsay in relation to some Italian peasant farmers who, until recently, would hang a little bag of grain next to the bed. If the Devil approached the sleeper in the night, he would be enticed into counting the grains in the bag and thereby diverted from harm-doing. It is no surprise then that we find such mental snares on thresholds. In Tamilnadu (Southern India) geometric patterns appear on thresholds to ward off demons from entering the home. The designs, called *kolam*, are made by women each morning by letting rice-powder trickle through their fingers. The designs are made at dawn, especially during the time of year when there are many demons about. The designs themselves are composed of four continuous loops of asymmetric configuration and form an effective and maddening puzzle to any observer who attempts, mentally, to unravel the four strands. Here again is an explanation of the 'cognitive stickiness'; the patterns tease and tempt but ultimately block the observer's attempts to reconstruct the intentionality of the pattern, to unravel the strands, to 'do' the puzzle (Gell 1992: 86). The demon is trapped in an endless sequence of attempts to unravel the design.

Van Gennep (1960: 19ff.) especially emphasized the ritual importance of doors and thresholds, indicating that they mark the passage from one social and ritual position to another, and suggesting that such significance was accorded doors in a number of ancient cultures, as well as contemporary societies. The door is a boundary between the foreign and domestic worlds in the case of a dwelling, and between the profane and sacred worlds in the case of a temple. As such, thresholds, and doors, door-post and lintels, are places of liminality, and can be sprinkled with blood, or purifying water, be decorated, or have substances hung from them—all to purify those who seek to enter and repel evil influences. A good contemporary example of such practices comes from the Greek island of Naxos. *Exotiká* are the malevolent demons, fairies and spirits that congregate around the marginal areas of the physical environment (Stewart 1991: xv). The literal meaning of the word is 'things outside or beyond', and they commonly frequent mountains, springs and caves beyond the confines of villages. There is a particular demon on the island that trails behind people to find an open door after midnight at houses where there are unbaptized children (Stewart 1991: 100). To protect her child a mother has to place reed crosses above all windows and doors during this period of danger, and to keep a cross made from cane, and a piece of bread traced with the sign of the cross, beneath the child's pillow.

I want to suggest, in essence, that geometric borders around Roman mosaics and geometric motifs on thresholds fulfilled the same anti-demonic role. For instance, the guilloche knot, common in Roman Britain (Neal 2002:

388), would have been seen by Gell as a protective device, in that any evil spirit would have become so fascinated by its entwined strands as to suffer from a paralysis of will (Gell 1998: 84). Losing interest in whatever plan it had entertained previously the demon would become stuck in the endless coils of the knot and the object, person or place protected by it would be saved. In similar fashion it would be possible to see the 'impossible figures' (see below) that are characteristic of all-over geometric mosaics as the ensnaring puzzles that beguile and trap unwary demons. Indeed, the central image of the cupid-on-a-dolphin mosaic can be read in this fashion. For surely the cupid-on-a-dolphin motif is a good luck charm and the protective quadruple guilloche around it ensures that it is not compromised by lurking malevolents?

THE PSYCHOLOGY OF PERCEPTION

The key sense for perceiving mosaics was the visual one, and it is pertinent at this juncture to offer some brief reflections on the ocular appreciation of mosaic floors. Miller (1987: 99) reminds us that before a child acquires language skills its sense of itself as other and different, and its awareness of the materiality of the surrounding environment, is explored through the physicality of other human beings and objects it can see and touch. This physical exploration, pre-conscious and sensuous in character, dominates until language skills are developed and reflective consciousness is obtained. It is well known, and easily appreciated, that human beings take in a vast array of information visually in a very short space of time. Miller implies that the materiality of objects can be perceived quickly, and that we are drawn to them unconsciously, as a result of this latent faculty which we all exercised in our first year of life. What I want to suggest here, in relation to mosaics, is that the geometric patterns are those elements that are grasped rapidly and unconsciously, while the figurative picture-panels are understood primarily in the conscious domain.

Before looking again at the Fishbourne mosaics, it is worth reviewing the ideas of Gombrich (1979), one of the few authors who have written on the psychology of perceiving decorative art. The argument goes as follows. Human beings have been born with an innate sense of order; this is a survival mechanism that allows organisms to spot potentially dangerous deviations from that order. We delight in creating geometric, repeating patterns because they evoke that sense of order, and because they stand out against the natural world in which geometric repeating regularity is rare. Having established why geometric patterns are pleasing, Gombrich suggests that if the patterns are in

fact too repetitive then our senses become dulled; on the other hand if they are too irregular then conscious exploration is triggered. Herein may lie the different modes of perception called forth by mosaics. The constancy of Roman mosaics lies in the unchanging structural dichotomy of 'borders framing pictures'. These two principal elements bring into play two contrasting cognitive modalities for the perceiver. The geometric borders are sensuously, rapidly, unconsciously felt almost as much as observed, while the pictures encourage a distanced, conscious scrutiny. Each of these structural elements is therefore a perfect foil for its conjoined twin. The function of the geometric border may be to signal to us that there is an impending break from regularity. Miller (1987: 101) develops this line of thinking, suggesting that it is only through the presence of a bordering frame that we recognize the work of art for what it is, responding to it in an appropriate way. The border establishes a relationship of immediacy with our subconsciousness, alerting our consciousness to produce an appropriate response to the art that lies within the frame. Framing is never, therefore, 'mere framing'.

Drawing this stark dichotomy between conscious and subconscious perception, contrasting the figurative with the geometric, allows me to underline my point, but I would not want to suppress potential alternatives. It is perfectly possible to believe that some of the figurative depictions on mosaics had emotive impacts on some of the observers. In an interesting case-study of the feast of St Paul on Malta (Mitchell 2004), attention is drawn to the way in which the statue of St Paul, as it is carried around the town of Valletta, becomes not merely a symbol of the saint but the saint himself. As such the saint acquires agency, and allows the faithful to have a more totalized experiential engagement with him than when he is confined for most of the year in the church. During the festa the saint becomes animated—he is someone people can touch and talk to, even mimic his stance, rather than just offer tribute to, as is the case when he is behind glass in the church. It is possible that some of the people who gazed on the picture-panels of mosaics could have felt similar depths of emotion. Some might argue that this comparison is overdrawn, that I have erroneously linked an essentially religious enactment and a domestic one; however, if the interpretations of Perring (2003) are to be believed, some mosaics were intended to induce sensations of an otherworldly character.

If I remain, however, with our two contrasting cognitive modalities, I might also see these reflected in purely geometric mosaics. If I use as an example the geometric mosaic in room N12 at Fishbourne (described above) I can suggest that subconscious modality is used to take in the overall regularity of the design, dominated by the large, cross-shaped elements. Conscious perception, however, is activated, inveigled indeed, by the representation of what

Gombrich (1979: 124) describes as 'impossible figures'. Between the crosses the brain struggles in vain to make sense of the three-dimensionality of the objects represented. I have already noted the illusionistic effects so popular in the Hellenistic period and I have no doubt that this kind of cognitive puzzle was deliberately sought after in the Roman period. There is a strong strand of *fantasia* which runs through Roman culture, the art of making things seem not quite what you might imagine them to be. If you look at the fantastic architectural perspectives in Pompeian wall-painting, the reality-defying theatricality of the arena shows, or the gastronomic trickery tabled at Trimalchio's feast—e.g. the wild thrushes escaping from the sow's belly—the illusions on mosaics can be fitted into the same make-believe genre.

THE FUNCTION OF BORDERS IN ROMAN MOSAICS

So far I have argued that the geometric borders around Roman mosaics could have functioned as traps to ensnare and dissipate evil influences, and might also have functioned as sensuous frames, tripping and triggering conscious readiness for the figurative art that lay within. Of course, we can never know whether either or both of these explanations, or indeed others yet unformulated, have much bearing on Roman reality. However, I do believe that some inspiration can be drawn from the third of our Fishbourne mosaics, the fortress mosaic which underlay the cupid-on-a-dolphin pavement.

The fortress mosaic clearly depicts a symbol of protection and conversely exclusion, an enclosing city wall (Tebby 1994: 275). Drawing on Roman literature we know that borders, gateways, thresholds, and crossings of any nature were ritually problematic. In Roman Italy the foundation of towns was an event surrounded by ritual practices. Livy attributed the foundation rites to the Etruscans. The boundary line, or *pomerium*, of the proposed town was marked out by stones or by a single furrow. The urban area thus demarcated was ceremonially inaugurated as a *templum*, or rectangular area of sacred character within whose bounds the auspices could be taken. The *pomerium* was therefore a sacred barrier, and clearly gates piercing it, which allowed access across this boundary, were places subject to immense ritual protection.

We can continue this theme of a sanctified and protected space and can apply it to the Roman home itself. Doorways into the home were seen as the province of a god called Janus, and associated with many other protective deities. Many altars, shrines and representations of divine beings were associated with doorways. The general purposes of these altars and shrines must

have been to protect the *domus*, purify the passer-by and purge from them the evil of the outside world (Mahon 2003: 67). It is clear from the numerous household shrines in Pompeii and Herculaneum that the area of the home was a potential ground for contestation between good and evil spirits and that constant ritual vigilance was needed to keep the forces of evil at bay. Finally we can project this theme down to the scale of the individual room. Mosaics often adorned the floors of large rooms, either reception rooms or dining rooms, where outsiders were entertained. We know that the Romans attributed enormous significance to crossing thresholds. The threshold was an object of reverence and to cross the threshold with the left foot first was considered a bad omen. On special occasions a boy was employed to caution visitors to put their right foot forwards when they crossed it. On entering a dining room all dinner guests removed their footwear and washed their feet in purification (Petronius, 31). Indeed mosaic borders were often found in front of beds, protecting the sleeper from nocturnal demons. Here then we have some justification for one of my theories. There is unambiguous evidence in surviving classical literature for the ritual importance of doorways and thresholds; keeping evil influences at bay must have been of paramount importance and the demon-traps represented by the geometric borders on mosaics surely had their part to play keeping the home and its occupants safe. The geometric borders surrounding the edges of mosaics could be construed as protecting the entire room.

I want to take this line of reasoning one stage further. I want to argue that the borders on mosaics provided a dual protective function by keeping at bay evil external influences, and by surrounding with a protective ring those picture-panels that depicted benign forces. The subject matter of picture-panels, as we have discovered, relates to scenes drawn from Greek mythology, apparent good luck symbols (such as the dolphin or the *cantharus*—drinking vessel), or scenes from the hunt or the arena. In essence the themes portrayed are universal ones in which fortune, luck, skill, prosperity, love, life, culture, heroism, and the passage of time are dominant (Witts 2005). The occupant or visitor is challenged to reflect on these attributes in his or her life. But the power of these forces for good might be damaged by evil. The snake-infested head of Medusa, for instance, was a popular image for mosaicists. It was believed that the sight of Medusa's head would paralyse an enemy. It is no surprise, therefore, that we find a Medusa's head at Fishbourne, and two examples at the nearby fourth-century villa of Bignor (figure 23.4). One of the latter is an interesting depiction and can be used to illustrate my argument. This Medusa is contained in a circular panel, surrounded by a two-stranded guilloche. The guilloche could be viewed as the first barrier to ensnare any evil

Fig. 23.4 The polychrome head of Medusa, from a fourth-century mosaic at Bignor Roman Villa, West Sussex

influences, while those who managed to penetrate the protective cordon would be transfixed by the vision of tangled hair and writhing serpents.[3]

CONCLUSION

I hope I have been able to mount a case for a better understanding of the geometric borders around Roman mosaics. I have argued that they may have functioned to repel evil influences and formed a symbolic threshold on entering a dining room or reception room, protecting the room space and

[3] The head of Medusa was, of course, one of the most efficacious protective devices in antiquity against harm or the 'evil eye'. In like manner, the dolphin, the saviour of Telemachus and protective sign of Odyesseus, may too have carried the meaning, *inter alia*, of protection from the 'evil eye'.

its occupants. I have also suggested that such motifs may have protected the very picture-panels themselves, particularly those that were representations of good luck or fortune. In psychological terms I have indicated that the geometric borders appealed to one cognitive modality (our sensuous and subconscious perception) and prepared us for the cognitive switch to rational and conscious appreciation of figurative art. With regard to the mosaicist himself, I have suggested that he was limited, working within a conservative tradition, and dictated to by the spread of diverse and specific elements of mosaics. Which motifs and indeed which picture-panels he had in his repertoire were partly the product of the epidemic-like spread off motifs and therefore partly beyond his individual control. I have also tried to play down the covert emphasis placed by some other writers on the erudition of the patron and the patron's visitors.

At the end of this chapter two related questions still bother me. The first concerns on-going knowledge about the functions of the geometric borders. If the borders were some sort of demon-trap, was that function consciously known by every mosaicist and every owner who wanted a mosaic in their house? There is not much in the way of evidence to help us here. There is a fragmentary papyrus from Egypt in the middle of the third century BC (Dunbabin 1999: 278) which gives instructions for the laying of two mosaics in a bathing establishment. There is detail on one type of border motif the mosaics should have, so at least we have slight documentary evidence for the importance of borders. And we have information, as remarked above in the evidence from Pompeii, that doorways and thresholds, and houses in general, were areas of ritual contestation. So it would not be surprising if in first-century AD Pompeii, there was some general, perhaps generally vague, appreciation that geometric borders on mosaics had this protective role. However, lack of specific knowledge of the protective potential of borders would not prevent the same motifs being repeated within the conservative traditions of mosaic-making.

Nor would I want, however, to over-emphasize the univalent meaning of geometric borders in Roman mosaics. It is possible that the contrast between geometric borders and figurative art at times evoked a fleeting psychological angst for the beholder when faced with the known (figurative) and the unknown or ambiguous (geometric). The figurative elements channelled reflections in a certain direction, while the geometric freed the mind of any pre-determined agenda, allowing it to explore endless possibilities. Ultimately all viewers of mosaics were capable of placing their own interpretation on what was beneath their feet, despite the otherwise intentioned efforts of mosaicists or the owners of fine Roman houses.

The second question seeks an answer to why mosaics of the 'borders framing pictures' type remained so constant, while other aspects of Roman material culture changed. One possible response is that these floors in dining and reception rooms, displaying images of good luck or mythological scenes, acquired a kind of ritual function in the house, in the same way that the more obvious household shrines did. An important element of any dramaturgical ritual or formal performance is adherence to a predictable formula, and it may be that it was this aspect—ritual security enhanced by repetitive production—which ensured the constancy of the underlying structural schemata of mosaics during formal receptions or dinners. If these floors did exhibit a fixity that was the product of ritual and formal associations, the very meaning of geometric borders could have slipped from the consciousness, but ritually re-enforced tradition would have guaranteed their continuing reproduction.

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24

'The Race that is Set Before Us': The Athletic Ideal in the Aesthetics and Culture of Early Roman Britain

Martin Henig

I first met Barry Cunliffe when I came to dig at Fishbourne, and I still remember my amazement at seeing what were clearly stylobate blocks of Mediterranean type being unearthed. In that first season I excavated for only three days, but the memory lingered with me and I later returned to supervise on the east and north wings of this extraordinary site. Subsequently, on my arrival in Oxford to embark on a doctoral dissertation upon Roman intaglios and cameos excavated from British sites, I wrote to Barry to ask whether he knew of any gemstones I might not yet have located. In a characteristically terse, but very courteous and helpful, reply he told me there were over thirty at Bath and that if I were to write them up in two or three months he would be delighted to publish my work in a Research Report he was preparing for the Society of Antiquaries (Henig 1969). Thus, I owe to Barry my first lucky break in the field of archaeological publication. Subsequently, and not too long afterwards, I was invited by him to publish the gems from Fishbourne (Henig 1971).

It seems appropriate to return to those intaglios from Bath and Fishbourne, in order to survey a little of this glyptic evidence, in association with gems and other material from elsewhere, in order to explore a very small but fascinating aspect of a theme which has so often aroused Barry's attention and mine, that of Romanization or, as we have been urged to call it by Greg Woolf, 'Becoming Roman' (Woolf 1998) especially in the first century BC and first century AD. My starting point will be an intaglio from Bath cut with a Greek theme, that of a *discobolos* who is about to throw his discus (figure 24.1). In front of him is his prize, a palm in a vase. This image has previously been used by me to illustrate an essay about Greek themes in Romano-British art (Henig 2000: 133, fig. 5) for the spa at Bath was clearly a sophisticated cultural centre with connections across the Graeco-Roman world ; and it has long seemed very

probable that the patron who sponsored this stupendous work was none other than the Atrebatan client ruler Tiberius Claudius Togidubnus, whose titulature as Great King in Britain must surely have been borrowed from the Hellenistic East (Bogaers 1979; Henig 2000: 126). This British contemporary of Nero might well have further demonstrated his Hellenizing credentials in a number of ways, among them by being, like so many of his contemporaries, an aficionado of athletics.

If so the implications are quite far reaching and require some modification to a view expressed in the most recent book on the subject (Newby 2005: 76–84) that interest in athletics in the West did not reach much beyond the Mediterranean coast of Gaul, where the Greek city of Marseilles was in any case an important factor in cultural diffusion.

The contemporary quotation at the head of this contribution, taken from St Paul's Letter to the Hebrews, is highly relevant to the theme.[1] One might consider Jewish Christians to have been every bit as distant from the world of athletics as Britons, and yet the race is a natural figure of speech and a sign of acculturation. A longer passage in I Corinthians employs athletics and the athletic prize as a metaphor for the Christian life, with full confidence that readers will understand it:

> Do you not know that in a race all the runners compete, but only one receives the prize? So run that you may obtain it. Every athlete exercises self-control in all things. They do it to receive a perishable wreath, but we an imperishable.
>
> (I Corinthians 9: 24–7)

These passages demonstrate the effect that the Greek way of life seems to have had even on non Greeks, at least in the Eastern Mediterranean. Athletics brought with it other cultural acts, including visits to the Baths with their associated palaestra for relaxation. These were places of communal nudity, and essentially highly antipathetic to Hebraic society. As if this were not bad enough the bathhouse might be, notoriously, a venue for sexual promiscuity and especially for homosexuality (Newby 2005: 129). In other words one Greek activity might bring along with it others, considered by hostile critics as even less desirable.

Indeed, such criticisms were keenly felt by traditional, aristocratic Roman society in Rome and in southern Gaul[2] (Hallett 2005: 71–6). Newby implies that Greek sports did not really penetrate the less civilised lands of Northern Gaul, although if we turn from mosaics to glyptics we do find one or two examples of intaglios depicting athletes from outside the area of Narbonnensis. An intaglio from Équevillon (Jura) depicting an *apoxyomenos,* and a

[1] *Hebrews* 12: 1. [2] Tacitus, *Annals* 14: 20; Pliny, *Ep.* 4: 22.

discobolos on a nicolo gem from Morains (Marne) may be noted in this connection, though neither is an especially well cut specimen (Guiraud 1988: 155 no. 574 and 154 no. 566).

In Britain, however, there are several striking gems of very good or in two or three cases of quite exceptional quality depicting athletes, all apparently found in first-century contexts. One of them (figure 24.1) has already been cited. In addition there are two others depicting cupids as athletes, while one of the Fishbourne gems (figure 24.7) is a very athletic looking figure of the god Mercury, based on the study of an athlete. It should be kept in mind that they were used as signets, and would have been highly personal and highly valued indicators of the owner's tastes and personality.

Fig. 24.1 Cornelian intaglio. 12 × 10 × 2.5 mm. *Discobolos* to left, about to throw discus held in his left hand, right arm outstretched. Vase with palm (the prize) in front of him. Ground line. Neronian/early Flavian. From the main outlet drain at Roman Bath. See Henig 1969, 82 no. 14; Henig 1978, 252 no. 520, pl. xvi; Henig 1988, 31 no. 16. Roman Baths, Bath
Photo: Institute of Archaeology, Oxford (R. L. Wilkins)

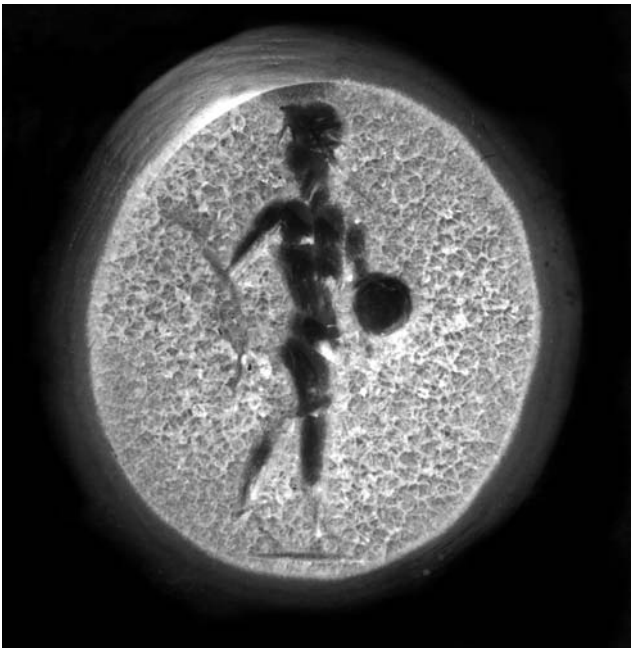

Fig. 24.2 Nicolo intaglio. Blue on dark ground, crazed.. 12 × 11 × 3 mm. *Discobolos* walking to right looking left, holding his discus in his left hand, palm in right hand. Neronian . The stone is one of four intaglios comprising a small gem cache, Eastcheap, City of London (the cache was probably buried at the time of the Boudiccan revolt). See Henig 1984: 13 no. 4
Photo: Museum of London (J. Bailey)

It is not possible to hazard more than an intelligent guess about the sort of people who owned these gems but there is a strong probability that the majority belonged to well-to-do and in some cases politically influential Britons, all members of the local chieftain class. The Silsden signet ring (figure 24.4) was actually found with Iron Age coins. Comparison should be made with a gem-set gold ring in another hoard from near Alton, Hampshire containing coins of Tincomarus. The intaglio in the ring was cut on a banded agate and depicted a maenad[3] (Henig 2002, col. pl. 3a; Esmonde Cleary 1997, 446). In the case of the Silsden example we may have the personal seal of a courtier in the circle of Cartimandua, ruler of the Brigantian confederacy. If the Silsden gem is not of

[3] See Esmonde Cleary 1997: 446 for the hoard, though the ring is not mentioned.

Fig. 24.3 Sardonyx intaglio (gem chipped and burnt). 21 × 19 × 4 mm. Ephebe in gymnasium, nude apart from chlamys, walking left, right arm partly extended, left hand rests on shoulder of herm for support. Stand in front of herm. Probably Augustan. From the Ditches site, North Cerney, Gloucestershire. See Trow 1982

Photo: Steve Trow

remarkable quality in its own right the North Cerney intaglio (figure 24.3) is certainly very striking among Augustan cut gems, of which it can be regarded as one of the finest examples extant and its findspot is suggestive, once again, of ownership by a leading member of a tribe, this time presumably the Dobunni, which Dio tells us was early on in alliance with Rome.[4] The Shepreth gem (figure 24.5) found on the site of a villa near Cambridge, which was apparently overwhelmed in the Boudiccan disaster, was surely the most valuable possession of a Catuvellaunian landowner. Fishbourne, whence the amethyst intaglio (figure 24.7), has most plausibly been associated with Togidubnus, by Barry Cunliffe, and there seems no reason whatsoever to doubt that. An inscribed ring from the site bears the name of Tiberius Claudius Catuarus, probably to be identified as a

[4] Dio Cassius lx: 20, 2.

Fig. 24.4 Sard intaglio. 10 × 8 mm, set in an iron ring. A nude youth stands to the left, holding a strigil in front of him. Before him is a wash-basin (*labrum*).The type of an athlete scraping himself in the course of his ablutions (*apoxyomenos*) is a version of a fourth-century statue by Lysippos of Sicyon. The ring was found with a hoard of Iron Age coins at Silsden, West Yorkshire. Augustan/early Julio-Claudian. Esmonde Cleary 1999, 342

Photo: Institute of Archaeology, Oxford

relative or one of his clients (Tomlin 1997). Another high quality signet from the Fishbourne excavations will be mentioned below.

Togidubnus may well have largely financed the construction of the great spa at *Aquae Sulis*, Bath (Henig 1999). The gems found here including the representation of a *discobolos* (figure 24.1) were very probably being sold to a wealthy clientele of soldiers and civilians, and again native ownership is possible. London likewise had a polyglot population, which has yielded a small cache of gems from a site in Eastcheap, including a second representation of a *discobolos* (figure 24.2). The gems are contemporary and the London cache comes from a Neronian (pre-Boudiccan) pit. A citizen from the colonia of Colchester is the presumed owner of the intaglio depicting Cupid in the palaestra (figure 24.6);

Fig. 24.5 Sardonyx intaglio. 29.5 × 22.5 × 9 mm. The gem depicts an adolescent cupid (Eros) as a boxer (impression). He is depicted as an ephebe but with the addition of wings. He stands on tiptoe in profile to the left; his left arm is drawn back and his right extended in order to deliver a punch. Hellenistic intaglio. From a first-century context in a villa at Shepreth, Cambridgeshire. Henig 1978, 192 no. App. 48, pl. xxv. Museum of Archaeology and Anthropology, Cambridge
Photo: Institute of Archaeology, Oxford (R. L. Wilkins)

only here would it seem more likely that he was a legionary veteran or a member of his family. However the subject is very much a conceit, an example of the practice of showing babies performing adult actions, and it takes its place with other gems depicting infant cupids shooting a bow, playing with animals or, indeed, wrestling as in the case of an intaglio from the fort of Newstead in Scotland (Henig 1978, 301 no. App. 120, pl. xxviii).

If the circus (hippodrome) is added to the list, and this had long been a component of Greek festival games, four other intaglios from Bath need to be added to the total, a cornelian depicting the circus, an amethyst showing a biga, a cornelian depicting a quadriga and another cornelian figuring a

Fig. 24.6 Garnet intaglio, 9 × 7 mm, set in a gold ring. An infant cupid stands beside a herm, presumably showing that he is in a gymnasium. He is accompanied by a goose. First-century. From Colchester, Essex. Henig 1978, 199–200 no. 112, pl. xxxiv. British Museum

Photo: M. Henig

horseman (a charioteer?) mounted bareback on the lead horse, holding a wreath and riding a lap of honour (Henig 1988, 32 nos. 17–20). In addition, from Fishbourne, comes a beautifully cut nicolo, one of the finest representations of a victorious racehorse (so identified by the accompanying palm of victory) known to me (Henig 2002, col. pl. 3b; Henig 2003, 112–13 no. 1, fig. 237). However, as chariot racing had been fully acclimatized as a 'Roman' sport and a hippodrome has now been recognized in excavations outside the Colonia at Colchester (Crummy 2005), this evidence needs to be accepted much more tentatively as an indicator of Hellenized values.

Archaeologists are sometimes a bit chary of using portable objects as primary evidence, though the places where these gems have been found are

Fig. 24.7 Amethyst intaglio.13 × 9.5 × 4.5 mm. The god Mercury is figured, leaning against a column; one leg is crossed over the other. The representation is very much that of a resting athlete, perhaps after Praxiteles. From Fishbourne, Sussex. This is an exceptionally fine first-century gem. Henig 1971, 83–8 no. 1, pl. xviii,1; Henig 1978, 193 no. 53, pl. ii. Site Museum

Photo: Institute of Archaeology, Oxford (R. L. Wilkins)

indicative of high status. People were fully conscious that the devices they selected for the seals literally demonstrated that status. Fortunately the finds do not stand quite alone; in order to understand why the assemblage from Britain is frankly so 'Mediterranean' in character, we need to consider other disparate sources of evidence, all of which point to the highly civilized tastes of the British élite.

The key is to be found in a very well-known literary text; the *topoi* that Tacitus includes in *Agricola* 21 are highly suggestive. Here Agricola introduces the Britons to 'templa, fora, domos' as well as to the toga, baths, and dinner parties. A later and rather slighting reference to King Togidubnus suggests

that as well as Britons in general he may have had especially in mind this particular Briton in his large domus, the builder certainly or plausibly of temples at Chichester, Hayling Island, and Bath (Henig 2002: 51 and ill. 15) and of substantial suites of baths at Silchester, Chichester and Bath (Boon 1974: 127–8, fig. 15; Down 1988: 41–2 and pl. 23; Cunliffe 1969). The coast of southern Britain came to resemble the Italian Riviera with a villa inhabited by one of Togidubnus' associates every few miles (Rudling 1998). Tiberius Claudius Catuarus, an assumed relative or associate of the king who as we have seen lost his ring at Fishbourne, stressed his Latinate culture by means of a seal of high epigraphic beauty, its epigraphy comparable to that on the Jupiter column at Chichester, which also displays two lithe, erotic, and athletic *graces* (Henig 2002: 59, ill. 24).

When we study the baths we note that (at Silchester and Chichester especially) there were large palaestra designed for exercise. These again suggest southern values and perhaps not altogether 'Roman' ones. In Gaul there was always Greek Marseilles, but those like Togidubnus, probably educated in Rome with the sons of (mainly) oriental potentates, may have looked to the culture of the Hellenistic world proper. A key lies in the king's use of the Hellenistic title 'Great King' which he may have learned in Rome during his education with other foreign princes, mainly Greek in culture. If I am right there is an allusion in the dedication of the Chichester temple and in the sculptural décor of the Bath temple to the West pediment of the Parthenon (Henig 2000: 126). Did such Greek tastes go to Togidubnus's head as he walked the corridors of his palace at Fishbourne, especially what amounts to a long gallery along the west wing?

This west wing (together with the little-known south wing) was probably the part of the palace most closely associated with the owner. The west wing's west gallery, all of 110m in length and 5.2m in width, terminating in exedrae, has something of the appearance of a running track and may have been used as such. It was simply decorated, the lower part of the walls retaining paint imitative of grained marble, but the floor does not appear to have been given a mosaic and may have been kept quite rough, or sanded, which would certainly have allowed the feet of any putative runners to grip. The surviving north exedra had a bench around it, which would have allowed our royal athlete to rest from his labours. Something similar, albeit on a much smaller scale, can also be recognized at the villa at Pulborough (Cunliffe 1971: 89 and pl. xviiia; Cunliffe, Down and Rudkin 1996: 77, fig. 4.4 and 78; Rudling 1998: fig. 3). A stadium seems to have been an adjunct to Domitian's palace in Rome, very nearly contemporary with that at Fishbourne, and Mediterranean villas often had stadium like gardens, though these were not necessarily used for strenuous exercise (MacDonald 1982: 68–9; Farrar 1998: 54–7). The Fishbourne and Pulborough exedrae might very well have served to accommodate

statues if they were placed well enough forward not to encumber the bench, and if so why not of athletes, as encouragement to their owners to use the corridors for exercise, especially in wet weather, as suggested. Of course villa baths were doubtless widely used for many other athletic activities such as throwing games with balls, weights or discus, and boxing and wrestling. At Fishbourne, the first baths went back to the Neronian 'protopalace' as did the public baths in Silchester and Chichester, the towns of the client kingdom, and so all date to the period when Greek sports were popular.

Tacitus, an old-fashioned and rather stuffy Roman senator, would have been appalled by the apparent decadence of leading Britons and the taste which we have seen manifested in gems displaying beautiful youths may have been found in larger works of art in Fishbourne and elsewhere, which are no longer extant. There is, after all, a possible sculpture gallery in the Fishbourne palace (the Aisled Hall in Cunliffe 1971: 106–10). Although such figures might have been imperial images or portraits of ancestors, why not statues of athletes? The hints in the works of Tacitus and Pliny that athletics had encouraged pederasty in

Fig. 24.8 Nicolo intaglio 15 x 12 x 4 mm. Achilles holding the armour of Thetis. From the Roman temple site at Marcham/Frilford. Early Second-century AD

Photo: Institute of Archaeology, Oxford (Ian Cartwright)

Gaul cannot have been without foundation, and there is no reason why the taking of boy lovers may have become just as fashionable in native British society as it was in Rome and elsewhere in the Roman world where it was clearly a normal part of the general lifestyle (Clarke 1998: 82–90; Newby 2005: 132–4; John 2001: 158–9). The homoerotic aspect of these works of art may, thus, be regarded as acceptable and, indeed, intentional. It might, in addition, have accorded well with traditions of a warrior caste in pre Roman Britain where men, on occasion, fought in the nude, their bodies dyed with woad ; and in such heroic societies homosexual bonding between members of the élite would not be unexpected. Unfortunately many aspects of Iron Age social life, beyond those which leave material traces, will remain forever mute.

With the exception of the intaglio from the Roman fort at Newstead in Scotland which, as noted above, depicted a pair of Cupid wrestlers (Henig 1978: 301 no. App. 120, pl. xxviii), there are no athlete gems from 2nd century Britain. Instead a few intaglios depicting heroes, especially Achilles (figure 24.8), were based on Greek statues of athletic males. Those holding spears were apparently known as *Achilleae*, evidently identified with Achilles, and according to the Elder Pliny were popular for gymnasia. I published a paper on them, together with others figuring very similar figures of Theseus holding his father's sword (figure 24.9) suggesting that they were especially appropriate to members of the army, although some, like one from Bedfordshire and another recently found in excavations at the temple site at Marcham-Frilford near Oxford[5] (figure 24.8) come from civil sites. It is becoming clear that my onetime rigid division between the tastes of Roman soldiers and Romanized natives was far too simplistic[6] (Henig 1970). Heroic nudity on these gems had, by now, become merely a convention rather than part of the lifestyle of the wearer, as it may well have been for the first generation of Romano-British aristocrats reared, as mentioned above, in the unusual hothouse, public school atmosphere of Rome's *pedagogium*.

While no doubt athletics was practised later in the Roman period evidence is restricted. Apart from mythologized examples mentioned above to my knowledge there are only three cases. One is a marble statuette of a laureate athlete, nude apart from the chlamys draped over his left arm, from the baths on the site of the old railway station in the Colonia at York (Tufi 1983: 66 no. 108, pl. 29). From the Fortress baths at Caerleon in south Wales a piece of sheeting depicts in repoussé two athletes, one of them a boxer as shown by his clenched fist. Between them is a discus (Zienkiewicz 1986: 189 no. 186, fig. 63 and pl. xxa). Finally a fourth-century mosaic from the frigidarium of the villa

[5] See http://www.arch.ox.ac.uk/research/research_projects/marcham

[6] For *Achilleae* see Pliny, *Naturalis Historiae:* xxxiv, 18.

Fig. 24.9 Red jasper intaglio 16 x 12 x 2.5 mm. Theseus holding the sword of his father, Aegeus. From the Walbrook, London. Early second-century AD
Photo: M. Henig

baths at Lufton, Somerset displayed (presumably) four studies of athletes of whom only one, muscular and short-cropped, maybe wearing a skull-cap, remains (Cosh and Neal 2005: 266–8, mosaic 208.8).

Wrestling more often than not alluded to the contest between Hercules and Antaeus (Toynbee 1964: 258 and 304) as on the base of a *trulla* in the Capheaton Hoard or as the subject of a fourth-century mosaic at Bramdean, Hampshire. However a second-century house in the colonia at Colchester displayed a mosaic portraying two wrestling cupids (Henig 1995: col. pl. vii), while allusion has already been made to an intaglio from Newstead engraved with the same subject. Horse racing, always much more fully acclimatized in Roman society, was another matter, as apart from mass-produced items like glass and pottery beakers, chariot racing was the theme of a second-century intaglio in a gold ring from Chesters, on Hadrian's Wall (Henig 1978: 251

no. 513), two figures of charioteers in the round from Bedford Purlieus, Northamptonshire (Henig 1995: 89, ill. 57) and a relief showing a boy charioteer from Lincoln (Toynbee 1962: 159–60, no. 86, pl. 88), all probably second century (and perhaps funerary) and fourth century mosaics from Horkstow, Lincolnshire (Neal and Cosh 2002: 153, mosaic 53.1) and Rudston, Yorkshire (*ibid.*: 358–62, mosaic 143.7a).

To all intents and purposes Newby's general observations hold. The counter evidence provided by the gems from Britain points to a special but significant element in the population of this new province, in the first century, closely connected with the tribal aristocracies and mainly though not exclusively located in the south. These were the same sorts of people who had, before AD 43 at any rate, brought back the exotic ideas and subject matter used in the coinage of the Atrebates and Catuvellauni, and who were still in evidence as enthusiastic Romanizers in the second half of the first century. They were the class of people whose Campanian style houses, embellished with veneers of exotic marbles, for a few brief decades transformed favoured locations on the south coast into approximations of seaside villas on the Bay of Naples. The importance of this phase was that it was a key period in the emergence of the concept of 'becoming Roman' in Britain, and it initiated a process which continued right through Roman times, even though the process radically changed its nature, as demonstrated by, among other aspects, attitudes to the human and especially the male body.

Barry Cunliffe's more recent Roman project, surveying the later villas which evolved from Iron Age farms in Hampshire (the Danebury Environs Project) is throwing fresh light on this; it has revealed, as at Thruxton where my own interests and Barry's have coincided (Henig and Soffe 1993), fourth-century Britons like Quintus Natalius Natalinus enthusiastically taking up Graeco-Roman religious and philosophical ideas, though *not* the Greek athletics which, as the beautiful intaglios illustrated here in all their hedonism and flagrant sexuality demonstrate, had so appealed in earlier times (Henig 2002: ch. 6; Hallett 2005). Late Roman nudes are invariably divine or sub-divine like the satyrs with their equine tails, prancing around the frieze of the great Neptune dish from Mildenhall. Lively as they are, by no stretch of the imagination could they be described as human youths or excite desire (Henig 1995: 144, ill. 86).

In place of the oiled and athletic Graeco-Roman ephebe, the Roman ideal of male beauty was replaced in later Antiquity by that of the perfumed young man, with long flaxen hair, clad in gorgeous robes and pouring wine from silver flagons into crystal cups (Henig 2002: 121, ill. 50). This was already the world of Gregory the Great's beautiful, fair-skinned, flaxen-haired boys, the Angles whom he interpreted as angels (Colgrave 1985, cited in Mayr-Harting 1991: 57–8)!

Romanization, how to become Roman, was a constantly changing process and as this short chapter has tried to demonstrate, it will take the researcher all the way from the culture of Ancient Greece to Late Antiquity and Byzantium.

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