CHAPTER 11

RETROSPECT AND PROSPECT: ADVANCEMENT OF KNOWLEDGE, METHODOLOGIES AND PUBLICATION

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INTRODUCTION

There are three major themes which need to be addressed in these conclusions. The first relates to the advancement of knowledge and understanding of the towns themselves, the second to the methodologies employed in excavation, including the associated recovery of material culture and biological data. In post-excavation the third theme considers more generally the theme of publication — or the lack of it — and the methods of dissemination.

It is clear from all the contributions that there have been very significant advances in our knowledge and understanding of the larger Roman cities and towns of Roman Britain since 1990. Prior to that year the thrust of archaeological investigations had been to establish, first, the plans of towns and their constituent buildings and, second, their chronologies. The wave of late nineteenth- and early twentieth-century investigations on the greenfield towns of Silchester, Caerwent and, latterly, Wroxeter, where research was curtailed by the outbreak of WWI, gave us, as was thought at the time, two complete or near-complete town plans and a range of urban building types from the forum basilica to *mansiones*, bath-houses, temples, town-houses and the more humble *tabernae*. Chronologies, particularly of the development of town defences, began to emerge in the 1930s, perhaps most famously at *Verulamium* where, through moderately extensive excavations, the Wheelers defined their 'Belgic and two Roman cities' (1936).

All the research pre-WWII helped to inform the interpretation of the fragmentary remains discovered through rescue excavations associated with post-War developments in England's historic cities. New overarching interpretive frameworks were developed in the 1960s and 1970s. Graham Webster (1966) argued that the Roman army played a major role in the development of the towns of the provinces, while John Wacher (1975) gathered together all the evidence to have emerged from the major towns, setting it out in a structure of Rome-led developments. The latter included the clear *de novo* Roman foundations of London and the *coloniae* of Colchester, Gloucester, Lincoln and, eventually, York. The remaining towns, the *civitas* capitals, responsible for the administration of justice and taxation in their respective cantons, were set up, Wacher argued, in a series of planned initiatives, led by the provincial governors (cf. Tacitus, *Agricola* 21), which followed in the wake of the advancing Roman army and the territorial expansion of the province. This began with Claudio-Neronian initiatives in the South-East and was then followed by Flavian and Hadrianic foundations. This Rome-centric model was challenged by Martin Millett who offered an alternative model where native political systems and centralisation represented by the emergence of *oppida* in the late pre-Roman Iron Age played a significant role in the development of the *civitates* (1990, 65–103).

In parallel with new thinking about the genesis of the towns of Roman Britain, new techniques and approaches, such as open-area excavation in preference to the Wheeler grid system, single-context recording and environmental archaeology, were being applied more systematically in state-sponsored rescue excavations in historic towns with Roman forbears in the 1970s and

1980s. The systematic recovery of charred plant remains through flotation and of faunal remains, principally through collection by hand, became standard practice in urban archaeology. Overall, there was much better stratigraphic control of the recovery of finds assemblages of all kinds. Unfortunately, improved techniques of excavation, recording and finds recovery produced excavation archives which outstripped the resources available to publish the results. While there have been publications of major importance of rescue excavations undertaken between the 1960s and the 1980s, there remain unpublished investigations of potential great significance from those decades from almost all of the major towns of Roman Britain.

However, while the main focus of pre-1990 urban development had been on historic town centres with the consequent concentration of Roman urban archaeology on the intramural occupation, it is clear that since 1990 the emphasis of urban development has been in the suburbs of the historic towns with Roman predecessors. Only London has seen extensive and extraordinarily productive excavation within the Roman walled area as well as in its suburb, south of the river in Southwark. We can summarise the significant outcomes of commercial archaeology in Roman towns since 1990 under four headings: origins, intramural, extramural/suburban and characterising urban life.

ROMAN TOWNS SINCE 1990: PRINCIPAL RESULTS[1]

ORIGINS

The 25 years of commercial archaeology since 1990 have seen major contributions to knowledge in respect to both the late pre-Roman Iron Age and the Roman origins of several towns. From the indigenous, late Iron Age perspective we have valuable contributions towards understanding three south-eastern *oppida* (Fulford, above, Ch. 5). The continuity of landscape organisation into the Roman period is evidenced in the immediate hinterland of the legionary fortress, subsequently *colonia* of *Camulodunum*, which itself was located within the territory of the late Iron Age *oppidum*, with a corresponding absence of evidence for the development of a planned, Roman organisation of the *territorium* of the *colonia*. From Fishbourne, to the west of Chichester and located inside the rectilinear arrangement of earthworks known as the Chichester Entrenchments, which are centred on Fishbourne itself, we have the first evidence of stratified, pre-conquest occupation, dating from *c.* A.D. 25 and associated with a linear ditch running parallel to the earthworks to the north. Distinctive features of the assemblage include a high proportion of imported pottery of North Gaulish and Mediterranean origin and a faunal assemblage with a high percentage of pig. Despite the apparent absence so far of other structural features of definite pre-conquest date, when taken in conjunction with the quantities of residual, pre-conquest, imported pottery from the adjacent site of the Flavian palace and from further east, to the east and south-east of the Roman Chichester itself, the cumulative picture points to a major focus of late pre-Roman Iron Age occupation within the enclosing earthwork system west of the river Lavant. The difficulties of identifying and characterising the occupation of the late Iron Age (pre-conquest) *oppidum* can be paralleled at *Camulodunum* where the density of Claudio-Neronian activity at the Sheepen sites excavated by Hawkes and Hull (1947), Niblett (1985) and, since 1990, at the Colchester Institute obscures the earlier occupation represented by abundant, but residual pre-conquest, imported pottery. The residuality of pre-conquest material in post-conquest contexts is also an issue at *Calleva* where continuing excavations are gradually teasing out the relatively fragile evidence of pre-conquest occupation and distinguishing it from the Claudio-Neronian (Booth 2013, 337–8, fig. 17). Given the commonality of residual pre-conquest imports at these sites, it can only be a matter of time before the associated pre-conquest structural and other occupational evidence emerges at Fishbourne and Chichester. Finally, turning to the funerary evidence, the two high-status burial sites at Folly Lane, St Albans (*Verulamium*) and Stanway, near Colchester, both dating to around the mid-first century A.D., give powerful, but contrasting insights into

1 The reader is referred back to the individual chapters for the relevant bibliographies

the respective local élites, which, however, also share a common funerary tradition with their counterparts in northern Gaul.

From the Roman perspective there have been major gains in knowledge concerning the origins of Exeter and London in the south and of Carlisle in the north. Excavations of four sites, two at a little distance from Exeter at Topsham, 6.5 km downstream, and at nearby St Loye's College, and at two sites adjacent to the pre-Flavian legionary fortress, at Princesshay and Mount Dinham, are all contributing valuable new and, certainly for Britain, collectively, unparalleled information on the context of the fortress and its associated supply systems (Holbrook, above, pp. 96–100). Unfortunately none of these sites has so far been published. In the case of London, while there is little disagreement that the town was a Roman foundation, now with a dendrochronological date of A.D. 47/8 for the construction of the main road leading west out of the town, the debate about the extent of military involvement in its development still continues (Perring 2011; Wallace 2013). On the basis of further evidence for a double-ditched enclosure east of Walbrook, Perring (Ch. 3) continues to make the case for the existence of a Claudian fort, which shaped the development of London east of the Walbrook. Other important discoveries of the pre-Boudican period include the evidence for high-status buildings on both banks of the river, around Plantation Place on the north bank, and at Winchester Palace on the south. While, on the one hand, establishing the presence (or absence) of a Claudian fort is important for our understanding of the military tactics of the conquest period, on the other, it is a distraction. For it is clear that what drove the development of London from the late 40s was its role as a centre for the supply of the advancing Roman army. While the majority of inhabitants fulfilling this role might have been civilians, *negotiatores*, etc., their reason for being there was dictated by imperial policy towards advancing the conquest of Britain, executed in the first instance as far as the development of London was concerned by the governor, Ostorius Scapula. The distinctive pre-Flavian, Roman pottery assemblage of amphoras, samian, mortaria, flagons, etc. that is characteristic of London is also characteristic of pre-Flavian fort and fortress sites such as Colchester, Kingsholm, Usk and Exeter, but very different from contemporary assemblages from Silchester, the nearest town to London to the west (cf. Pitts 2014).

Excavations since 1990 in Carlisle have provided much new information on the development of the first Roman fort in timber from A.D. 72/3 and its successor from *c.* A.D. 105 (Bidwell, above, p. 129). Waterlogged levels have provided a rich array of organic finds, including ink writing-tablets, which provide an invaluable comparator to the Vindolanda material, while dendrochronology of the timber has provided a series of closely defined dates which have provided the basis for the chronology of the early forts and a link to the record of the written sources, for example, the association of the initial construction of the fort with the governorship of Petillius Cerialis. The construction of a stone-built military base followed in the third century. This probably also served as the *civitas* capital of the Carvetii from about this time and the pattern of fourth-century coin loss in the vicinity of the headquarters building suggests market activity within the fort (Bidwell, above, p. 129).

INTRAMURAL

With the exception of London, the scale of historic town centre/intramural excavations affecting the Roman period has been on a considerably lesser scale since 1990 than in the previous three decades. For the most part, investigations have revealed aspects of the development of domestic buildings, although in Leicester valuable insight has also been shed on the plan and architecture of the *macellum*, where the remains indicate a building at least 16 m in height with its aisles divided from the nave by arcuate rather than trabeated colonnades (Bidwell, above, p. 125). With regard to town planning, Holbrook (above, pp. 101–2) draws attention to buildings not aligned on the projected street grid in Dorchester, Dorset, making a comparison with the situation at Wroxeter. Similar irregularities (to us) in orientation and alignments can also be seen in the north-west quarter of the town, raising the possibility that Dorchester lacked a regular street grid (Durham and Fulford 2014, 368).

As far as the domestic context is concerned and again with notable exceptions, such as in

Dorchester (County Hospital), Leicester (Vine Street) and Winchester (The Brooks), the recovery of fragmented plans of structures has tended to be the norm. This is partly a product of post-Roman truncations of the Roman stratigraphy and partly a result of mitigation strategies designed to minimise the impact of development on the historic environment.

While all of the above sites await publication in full, priority has been given to the epigraphy which has given us extremely valuable insight into urban society, reminding us of how transformative written sources can be in this context. This is particularly the case with Leicester (Bidwell, above, p. 128) where a lead curse tablet from the Vine Street site lists sixteen men and three women from a *paedagogium* interpreted by Tomlin as a 'slave quarters'. Allowing for the man making the curse, this implies a group of about twenty individuals, giving us the first insight into the size of an urban household in Roman Britain. A second curse tablet from the site makes reference to a *septizonium*, the first example of this type of shrine recorded from Roman Britain. The same site also produced two lead sealings, respectively of the Twentieth and Sixth legions, which, along with another sealing of the latter legion found in 2005, brings the total of military sealings from Leicester to eight. As Bidwell points out (above, p. 128), Leicester is exceptional with regard to this type of find which, collectively, probably indicates a strong connection with military supply to the North in the late second and early third century.

It is, however, discoveries from London which dominate the growth of our knowledge of the development and evolving character of urban life in Roman Britain in the period since 1990 (Perring, Ch. 3). However, the more that is learned about London, the more different it appears to be from the other towns of Roman Britain. Indeed, its record of rapid expansion in its first hundred years of development on its own sets it apart from other towns. In so far as what became by the early third century the intramural area on the north bank of the Thames, excavations since 1990 have shed important new light on all periods of the town, a community arguably promoted to city status as a *colonia* by Hadrian. Perring makes the case that for London it is possible to construct a chronology using traditional sources, such as the Boudican and Hadrianic fire horizons, but also, and notably, dendrochronology, that is sufficiently refined for distinct phases of development to be associated with particular governorships and emperors. Although selection is always invidious, and building on the discoveries relating to origins (above, pp. 21–3), prominent results of work since 1990 and of interest both to London and the wider province (and beyond) include evidence for the town's recovery post-Boudica, with the construction of a fort (Plantation Place) and of quays by A.D. 63 at Regis House (where a cache of Vespasianic lead pigs confirms London as a port for their export in the later first century). Wider military involvement in the reconstruction work or in the provision of timber is evidenced by the find of wood stamped by the Augustan unit of Thracians. A strong case can also be made for the association of the Gresham Street wells and water-lifting devices, the earliest of which can be dated to A.D. 63, with the construction of the Cheapside bath-house. The discovery of the wells and water-lifting machines also has resonance far beyond London itself since it offers another means of supplying water in considerable volume, sufficient to supply a large population or operate a bath-house, other than through the construction of an aqueduct tapping sources of water remote from the town. As for the characterisation of urban life in London, the excavation of streetside buildings and their environs on the west bank of the Walbrook at, and in the vicinity of, 1 Poultry, associated with remarkably well preserved material and biological culture, offers exceptional insight.

The early to mid-second-century discoveries from the Walbrook Valley also have important resonance beyond London itself. These include evidence for large-scale glassmaking and the production of Verulamium-region type pottery, virtually indistinguishable from the previously known production concentrated at Brockley Hill. The Walbrook is also well known as a source of human skulls whose discoveries over the years have invited a variety of different explanations for their origins. While some may have been washed out of inhumation cemeteries to the north of the town, it is clear that the majority were deliberately deposited over a period between the mid-first and the mid-second century A.D. Recent analysis of a large sample has shown that a significant proportion belonged to young adult males, with evidence of a range of injuries *ante mortem*, including decapitation, and inviting the interpretation that they were the victims of military justice. This invites comparison with the late second- to early fourth-century burials of

over 80 males in York (Driffield Terrace), most of whom had been executed (Ottaway, above, p. 52).

The waterlogged environment of the Walbrook Valley continues to produce well-preserved organic finds of exceptional importance as the very recent (2013) excavations in advance of the Bloomberg development have shown. In addition to the earlier, 1 Poultry find of a second-century writing-tablet recording the purchase of a Gallic slave girl, Fortunata, by a slave of a slave belonging to the imperial household, very recent finds from Bloomberg include significant numbers of legible writing-tablets which promise to provide further valuable insights into the social and legal life of the city. The potential for further discoveries of written texts adds very considerable value to the as yet undisturbed archaeological deposits of the Walbrook Valley. These are, potentially, a unique source of information on the wider province of Britannia as well as London itself.

Late Roman discoveries since 1990 from intramural London of wider significance include a third-century monumental building and late fourth-century structures such as the basilica, possibly Christian, from Colchester House and the massive tower from Plantation Place in the south-east quarter of the city. Remarkable in their own right, these buildings also attest to major building activity not evident elsewhere in towns in Britain other than in London in the later Roman period. Also very rarely documented elsewhere in urban Roman Britain, late Roman intramural burial is evidenced by a small cemetery on the site of the amphitheatre and a single burial close to the Walbrook crossing (Perring, above, pp. 37–8). Although much of third- and fourth-century Roman London has been truncated by subsequent medieval and modern developments, the last 25 years have seen several discoveries of domestic and other buildings of third- to fourth-century date, which have led Perring to moderate his earlier views that London experienced major decline and population loss after the Antonine period, perhaps as a result of the transmission of plague to Britain (above, pp. 32–3).

EXTRAMURAL/SUBURBAN

The built environment: London

As commented on above, it is clear from the regional surveys that there has been a significant shift in development towards the suburbs of historic towns with Roman predecessors with consequential rapid expansion in our knowledge of Roman suburbs and their cemeteries. Before considering the contribution that cemetery excavations have made, it is important to assess significant additions since 1990 to our knowledge of the physical fabric of the suburbs. Pride of place surely goes to the discovery of the circus at Colchester, constructed in the early second century and the only one of its kind so far known from Britain (Fulford, above pp. 74–5). Its discovery reminds us of the potential for finding other major extramural structures such as amphitheatres, up to now only attested at a small number of towns in Roman Britain. Evidence for suburban temple building is prominent in Southwark, where the recent discovery of a temple and bath-house close to the approach road to the bridge across the Thames adds to the discoveries of two Romano-Celtic temples in Tabard Square, dated *c.* A.D. 160–80 and associated with a dedication to Mars Camulus (Perring, above pp. 30, 33). At *Verulamium* (Folly Lane) there is further evidence of suburban temple building of Romano-Celtic type, built between the late first and mid-second century A.D. (Fulford, above pp. 63, 75). Together with what is already known of suburban temple-building at Colchester, the three cities of Colchester, London and *Verulamium* distinguish themselves from other towns and cities of Roman Britain in the incidence of suburban temple-building of Romano-Celtic type. Further distinguishing aspects of these three cities are discussed further below.

Excluding the Southwark temples mentioned above, further very significant additions to our knowledge of suburban life and architecture have accrued from London. As with the intramural area north of the river, there have been an exceptional number of interventions since 1990, particularly south of the river in Southwark, where much important information has emerged since Cowan *et al.*'s synthesis of work undertaken there between 1973 and 1991 (2009). There

have also been significant discoveries in the eastern and western suburbs north of the river. Although most of the work at the Southwark Winchester Palace site was completed in the field before 1990, an outstanding sequence of high-status 'palatial' building, suggested to be the residence of the governor, beginning in the pre-Boudican period, and followed by Neronian restoration with yet further development in the early second century, has been revealed. Close by there is evidence of further, substantial building in masonry, perhaps the *mansio*, constructed from A.D. 74. While these buildings, like the temples described above, command attention, we should also include the very important sequence of *tabernae* and other street-fronting buildings along the approach road to the bridge. They shed important light on the occupational character of individual buildings as well as, by implication, on the economic vitality of the suburb from the earliest period, including the first evidence for Boudican destruction south of the Thames. The dedication of one of the Tabard Square temples to Mars Camulus is also one of the most important inscriptions to have been recovered from Roman Britain since 1990 (Grew 2008). It was set up by a Gaul from the region of Beauvais, northern France, who is described as *moritix*, an official involved presumably with cross-Channel trade. In the late third and early fourth century the treatment of major buildings such as the demolition of the possible *mansio* and the baths associated with the 'palatial' building at Winchester Palace can be paralleled by developments north of the river and elsewhere in Britain. The encroachment by burials on areas of Southwark which had previously been inhabited is another notable development of the late Roman period, again, paralleled by similar behaviour north of the river (Perring, above, p. 37).

For the third and fourth/fifth centuries it is the discoveries east and west of London north of the river which also command attention in a provincial or diocesan context. Excavations at Shadwell, 1 km to the east of the walled city, have shed further light on the remarkable élite third-century complex of a bath-house associated with a tower-like structure. For whom it was built and the purpose it served remain unclear. The discovery of a high-status inhumation of early fifth-century date at St Martin-in-the-Fields to the west of the walled city provides an important insight into élite residence in the immediate rural hinterland, but beyond the zones devoted to cemeteries in the late Roman period (Perring, above, p. 38).

Urban cemeteries

Since 1990 there has been a combination of new excavation and synthetic study with the application of new techniques, notably isotope analysis (Pearce, above, Ch. 8). Several Roman towns have seen extensive excavation of their later Roman cemeteries, notably Colchester, Gloucester, Winchester and York, with over 4,000 burials excavated and with evidence of distinct burial groups, not previously seen in Roman Britain. These include the decapitated burials from York (Driffield Terrace) (which recall the skulls from London) and the Gloucester mass burial, perhaps resulting from the plague. Against the background of all the new discoveries in so many towns, Lankhills, Winchester with its component of fourth-century burials distinctively furnished with brooches and belt sets remains unique among a growing number of urban cemeteries in Britain.

Much, too, has been learned since 1990 through careful excavation which takes account of the burial context and not just the burial itself, revealing the rituals and processes of burial associated with cremations in particular, but also inhumations, with a rich variety of practices revealed as, for example, at Colchester (Pearce, above, p. 146). That this evidence can survive makes it all the more important that machine-stripping does not destroy valuable contextual evidence. While synthetic studies of skeletal populations, drawing on both pre- and post-1990 data, have multiplied since 1990, this has been hindered by the lack of digital publication (above p. 140). However, much important work has been done to shed light on urban populations and their lifestyles (further, below).

CHARACTERISING URBAN LIFE

Looking beyond the increase in knowledge relating predominantly to the buildings of individual cities and towns and their structural development over time, there have been major advances in

our general characterisation of urban life in Roman Britain since 1990. With the reservations expressed above by Maltby and Robinson (above, Chs 9 and 10), we should note the excellent quality of information derived from the study of the material and biological finds pertaining to the characterisation of urban life. The Winchester Northgate House and Discovery Centre excavation is a good example where a very fragmented sequence and distribution of structures and their development over time have been richly augmented through a study of the finds, such that the latter have become the significant contribution of the project (Ford and Teague 2011). Whereas the study of the material finds, including their systematic quantification, can identify activities such as spinning, weaving, leather-working, wood-working, etc., it is often only through the analysis of bulk finds such as the faunal remains that antler and bone-working can be identified. The characterisation and quantification of iron-working slags, including microscopic residues indicative of smithing identified from the residues of wet-sieving, also make a vital contribution to understanding the varying location and intensity of this potentially important urban industry over time and form the basis for comparison between different towns. In addition, the analysis of the macroscopic plant remains in this Winchester report can inform us of animal fodder and grain storage, another important element in the characterisation of urban life.

Indeed the agricultural facet of urban life suggested by the presence of animal fodder is further borne out at other towns, as at Leicester, for example, where pig slurry from an early Roman context has been identified at the Vine Street site alongside small fields or stock pens (Bidwell, p. 127). With better recovery of smaller mammal bones through wet-sieving the incidence of finds of neonate cattle, sheep and pig adds further evidence for the role of stock-keeping in and around Roman towns (cf. Ingrem 2006, 179–80; 2011, 262–4; Maltby 2010, 287–91). As demonstrated at Vine Street, Leicester and recently at Silchester Insula IX, micromorphology and the analysis of insect remains and mineralised coprolites have a valuable role to play in demonstrating the presence of domestic animals within the town (Banerjea 2011; Robinson 2006; 2011). Archaeobotanical and entomological research are also complementing zooarchaeological approaches with the insights they are providing into the extent of crop-processing (limited) and grain storage (widespread) within towns as well as urban environments including horticulture (Robinson, above, pp. 171–2; Smith and Kenward 2011).

Robinson (Ch. 9) emphasises the complementary contributions that the different categories of botanical data can make, including the importance of mineralised and waterlogged assemblages in comparison with charred plant remains. He also points out that in particular urban contexts pollen analysis can shed light on the consumption of plant foods, e.g. brassicas, rarely otherwise preserved. Mineralised assemblages, generally from latrine pits, are particularly informative of the food consumed by the inhabitants and the survey by van der Veen *et al.* (2008) has clearly shown a close relationship between the consumption of imported food types and the larger urban communities. Robinson also points to the potential of well-dated botanical assemblages for understanding the adoption and diffusion of species, such as coriander and dill, and fruits such as the cultivated apple, plum and mulberry, initially imported into Britain but capable of being cultivated in the province.

New research on the stable isotopes of carbon and nitrogen preserved in human remains is also shedding important light on diet, for example, a significant shift towards a greater intake of seafood in the Roman period compared with the Iron Age (Pearce, above p. 156)

Zooarchaeological research (Maltby 2010; above, pp. 179–84) is also giving insights more generally into the meat supply to towns and the variable proportions of cattle, sheep and pig, with mortality profiles, particularly of cattle, showing selectivity in the age at death which privileges adult (but not elderly) beasts, predominantly cows. Valuable insights are being derived from study of butchery and of fragmentation more generally. Use of cleavers is particularly associated with cattle and suggests specialist butchery of these animals, while the distinctively urban pattern of fragmentation and subsequent treatment of long bones points to the systematic and widespread extraction of marrow and the processing of the bone to extract fats and make glue. The perforation of scapulae to hang the meat for filleting or smoking is also another largely urban characteristic. Dumps of bone with a very high proportion of cattle add further support to their specialist treatment in the urban context. The combination of observations relating to

the particular treatment of cattle raises questions as to the manner of their supply to towns and whether they were supplied as a tax in kind.

The analysis of the human remains from the extramural and suburban cemeteries is also beginning to shed powerful new light on urban communities, though we lack the equivalent study of rural populations to enable a comparative approach between town and country (Pearce, above, p. 157). We have learned that, though male stature was greater than in the Iron Age, there are frequent incidences of indicators of poor health among late Roman populations, for example in Gloucester and London. In Dorchester, Dorset, fewer individuals reached late adulthood in the Roman period and, for the non-adults, there are very high frequencies of indicators of poor health and trauma.

At the same time the analysis of stable isotopes, oxygen and strontium, is providing valuable new insights into urban mobility in Britain in the later Roman period. From research carried out on samples from some of the larger towns, it appears that *c.* 40–60 per cent of those sampled had spent their earlier years in other regions of Britain or outside the province. Given that there is no evidence for expansion of the urban area after defences began to be put in place from the end of the second century onwards, this research indicates that urban populations were not capable of renewing themselves without inward migration. As York was a legionary fortress, other explanations may account for the particularly high proportion of long-distance migrants which has been noted from the Driffield Terrace burials. With particular relevance to Lankhills, Winchester, this research methodology of isotopic analysis has also undermined associations which have been detected between particular burial rites and geographical origins (Pearce, above p. 151). Isotopic research has also shed light on breast-feeding and weaning practice in Roman Britain and a large study of infants from London shows that practice was distinctly Romano-British in character (Powell *et al.* 2014).

The analysis of the material culture from urban excavations — where it is published — also contributes to the theme of characterisation but there are still insufficient reports since 1990 with quantified data to pursue questions of variability in consumption either within individual towns or between them. There are notable exceptions, such as the publication of the evidence for pottery and glass production in London, which has already been commented on above. However, the general lacunae in publication relate both to assemblages of registered finds of metalwork, bone, stone, glass, etc., and to the pottery which consistently dominates the record of material culture finds from every intramural excavation. In the case of the former, there is increasing adoption of Nina Crummy's (1983) methodology of classification of registered finds, which consistently shows urban assemblages with finds relating to dress, personal ornament and grooming in the majority. Crummy's approach also provides the basis for comparative studies. These inevitably draw on the finds from pre-1990 excavations and post-1990 research excavations, as, for example, Silchester (N. Crummy 2006; 2011; 2012).

With its huge archive of finds, centrally stored in the LAARC, London has seen considerable research on intra- and extramural distributions of different types of artefact to assess variability in their consumption spatially and over time. Such research, which also draws on pre- and post-1990 finds, includes, for example, brooches (Plouviez 2008), intaglios (Henig 2008), metal figurines (Durham 2012), Pompeian Red Ware (Podavitte 2014), samian inkwells (Monteil 2008), toilet instruments (Crummy with Pohl 2008), and late Roman coins and pottery (Gerrard 2011), the latter addressing questions about the occupation and eventual decline of the city in the later fourth and fifth century. Other research has addressed questions of variability between towns and between town and country. Eckardt's study of lighting equipment (2002) and Durham's of metal figurines (2012) show the exceptional nature in terms of both the quantity and variety of the respective London assemblages in the context of Roman Britain as a whole. In these two studies, and for similar reasons, Colchester also stands out as second to London in the distinctiveness of its assemblages of these categories of artefact. Pitts' analysis (2014) of first-century Roman pottery and brooch assemblages from South-East Britain also highlights the distinctiveness of the profiles of consumption in London, Colchester and *Verulamium* and how different these are from those settlements, such as Chichester and Silchester, which show a more linear development from pre-conquest patterns of consumption.

Other than building materials, pottery makes up the largest single category of material culture from urban sites, but publications of quantified assemblages from excavations undertaken since 1990, where there has been sufficient consistency in the methodologies applied to the pottery to support comparative research, are still few in number. Even in London, where there has been the greatest number of publications of work undertaken since 1990, the level at which comparisons of quantified assemblages can be made between sites and between the work of different organisations is at the common denominator where only the wares (i.e. groups of fabrics, e.g. amphorae, imported fine wares, oxidised wares, etc.) are quantified and tabulated (as in Hill and Rowsome 2011). In his study of the end of Roman London, Gerrard (2011) only noted where the latest pottery fabrics were present. Consistency in reporting standards, adopting a national approach as advocated for pottery fabrics by Tomber and Dore (1998), is still urgently needed. Perring and Pitts set out the problems that they encountered in attempting a regional synthesis for part of South-East England, but including Colchester and London (2013, 13–22, 93–135).

Where individual pottery wares are concerned, the most significant advances which bear on the major towns relate to the study of samian. Willis has undertaken major, province-wide studies of the samian from British sites, with a particular focus on the interpretation of the differential representation of fabrics, forms and decorated vessels across different categories of settlement including the major towns (Willis 1998; 2005; 2011). In parallel the publication of the Gallo-Roman samian potters' stamps, *Names on Terra Sigillata*, from across the Roman Empire (Hartley and Dickinson 2008–12) has also facilitated new and far-reaching interpretative studies, including of its representation in the larger towns of Roman Britain (e.g. Mees 2011; Dannell and Mees 2013). In this context London appears pre-dominant in Britain as a point of deposition (cf. Fulford 2013, 4–5; Dannell and Mees 2013, 183).

Other studies have addressed the question of the relationship between town and country and the extent to which towns acted as markets. A major analysis of material culture assemblages from a range of rural and urban sites in the hinterland of London and Colchester once again highlights the degree of difference between these two urban communities and the settlements of their hinterland and questions whether they had a significant market function in the early Roman period (Perring and Pitts 2013). While this question had previously been raised in relation to Wroxeter and its relations with its rural hinterland (Gaffney *et al.* 2007), analysis by Timby (2012) of pottery assemblages published from mostly post-1990 rural investigations in the hinterland of Silchester came to a similar conclusion that this major town did not play a significant role as a regional market centre, particularly in the early Roman period.

To conclude, in compensation for the general lack of publication of individual urban sites since 1990, finds research has taken a more synthetic approach, often on a province-wide basis and drawing on both pre- and post-1990 material, the latter often in advance of site publication, to identify patterns of urban consumption very distinct from those of the countryside, with London benefiting most from detailed intramural analyses.

Structured deposition

Since 1990 more attention has been given to the composition of assemblages of finds, both material and biological, particularly from pits, wells and ditches, but also from the foundations of buildings. While researchers warn of the difficulties of distinguishing between the deposition of rubbish *qua* rubbish and materials which appear to have been deliberately placed as some kind of votive deposit (Maltby 2010, 297–304, and above, pp. 79, 188; Eckardt 2006), there is a growing record of the incidence of these, now often described generically as 'structured deposits'. Such deposits have a very variable character, often taking the form of the burial of articulated animal remains, either as complete or partial skeletons, on their own or in combination with whole pots, often pierced in the belly or, in the case of flagons, with the necks deliberately removed. Before it was appreciated how widespread these practices were, both in urban and rural contexts (cf. Fulford 2001), there was possible over-interpretation of their significance. For example, at Greyhound Yard, Dorchester (intramural), such deposits have been related to the foundation of

the town, while at *Verulamium* they have been considered to be part of ritual associated with a suburban temple, and at Swan Street, Southwark (suburb), they have been regarded as votives relating to the crossing of the Thames and contributing to a wider canvas of ritual and ceremony in London (Fulford, above, p. 75; Holbrook, above, p. 101; Perring, above, p. 26). By contrast, similar deposits in suburban Winchester (Fulford, above, p. 79) have not been imbued with any particular significance. In conclusion, possible interpretations of individual 'structured deposits' need to be considered in the light of similar and widespread depositional behaviour across the province.

METHODOLOGIES

IN THE FIELD

While the deployment of sampling strategies for the recovery of macrobotanical and micro-faunal remains has become well established, even before PPG 16, though, as van der Veen *et al.* have argued (2007, 193–202), with a decline in quality of practice, other methodologies of potential value for reconstructing urban environments have been applied more sparingly. We have become familiar with the application of micromorphology to the study of late and post-Roman dark earths, but opportunities to use this technique, potentially in combination with geochemical analysis of the soils, to understand other deposits have not been realised as fully as they might have been. Thus there is the possibility of analysing building interiors as well as external surfaces where suitable deposits survive to help identify use of space. At Silchester, in a research context, a combination of micromorphological and geochemical analyses has been applied to a variety of deposits, including hearths and hearth surrounds, shedding valuable light on the differential use of internal space. Thus, on the one hand, a building has been identified which was used for the stabling of herbivores, on the other, concentrations of metal residues have indicated the presence of non-ferrous metalworking at different periods, including its association with particular hearths. These approaches have been particularly helpful in the context of the interpretation of the use of timber buildings with clay and earthen floors (Banerjea 2011; Cook 2011; Cook *et al.* 2005; 2010). Although the identification of the presence of pig slurry has been noted in the forthcoming publication of the Vine Street, Leicester, excavation (Bidwell, above p. 127), the potential of a more widespread application of the technique in combination with geochemical analysis, particularly in the early Roman period when earthen-floored, timber building predominates, has yet to be realised.

Lack of facilities for either short- or long-term storage has led to differential treatment of finds from urban excavations. Even if the residues are retained for sorting in post-excavation, the flotation and wet-sieving of soil samples routinely takes place on site as the excavation proceeds and few soil samples are curated beyond the excavation itself. Urban excavations also frequently produce large assemblages of ceramic and stone building materials for which there is no prospect of either short-term storage with the organisation undertaking the fieldwork or longer-term curation in museums. Although disposal on site following a selection of individual specimens exhibiting evidence of working or deemed to be of intrinsic interest, but without systematic study of the entire excavated or stratified assemblage, remains common practice, there is much information to be gained from systematic on-site recording with a quantitative approach prior to disposal and retention of selected specimens. Ian Betts' research on ceramic building materials from London has shed important new light on the development of the industry and the provenance of materials (e.g. Betts 1995; Betts and Foot 1994), while Peter Warry, in research undertaken at Silchester, where building materials have been disposed of after on-site recording, has demonstrated how much valuable information can be gained both on the character of the tile industry supplying the town, but also on the roofing structures of individual buildings (2011; 2012). At the same time and drawing on his geological expertise Kevin Hayward has been available to identify, quantify and sub-sample unworked stone for further research before on-site disposal and to incorporate the field data into subsequent publication (2007; 2011).

IN POST-EXCAVATION

Whereas prior to 1990 there had been a tendency towards developing thematic publication programmes of urban archaeology, particularly in London and York, and exemplified here by the recent publications of Winchester's archaeology by Winchester Museums (above, p. 77), the nature of commercial archaeology has seen a welcome return to the publication of both structures and their associated assemblages of material culture and biological remains from individual excavations. The treatment of the finds does, however, vary between different projects. For example, as noted above, the systematic sampling for botanical and faunal remains has become commonplace in field archaeology, the sorting of residues from wet-sieving for other microscopic remains, such as of iron-working, is not routinely embedded in practice. In the case of Causeway Lane, Leicester, the focus of the sampling of the 1980 and 1991 excavations was clearly on the environmental evidence (Connor and Buckley 1999), whereas the reporting of the more recent (2002–7) Winchester Northgate and Discovery Centre excavations clearly demonstrates that wet-sieved residues were checked for magnetics, producing hammerscale and other microscopic residues typical of iron-smithing (Ford and Teague 2011). On the other hand, it is not clear from the Head Street, Colchester excavation of 2000 (Brooks 2004), whether the lack of iron-smithing residues is because they were absent from the residues of flotation and wet-sieving or whether the latter had not in fact been checked for magnetics (Fulford, above p. 68). No significance can be attached to the potential presence or absence of particular activities, such as iron-smithing, in urban contexts, unless there is a clear statement on the application of techniques (or not) to recover the appropriate evidence.

Extracting maximum value from urban deposits led in the 1970s and 1980s to the development of high levels of expertise in certain areas, notably in the study of botanical, entomological and faunal remains, but also, through the petrological work of Peacock and Williams at Southampton University, the characterisation of pottery fabrics and the provenancing of stone artefacts and building materials (Peacock 1998). High quality research has continued in some, but not all areas since 1990 and there are clear issues regarding the availability of appropriate expertise in several research areas, such as micromorphology, as we have noted above. Allen (2013, 191–2) regrets the lack of a critical scientific approach to the study of stone with an over-reliance on hand-lens inspection and the same also applies to the study of the macroscopic evidence for iron-working, where it has become customary to associate 'furnace bottoms' or 'hearth bottoms' with iron-forging rather than iron-smelting. However, analysis of such evidence from Silchester by chemical and microscopic analysis has demonstrated that such 'furnace bottoms' derived from iron-smelting and not smithing and that the tradition of using either simple bowl furnaces or a shaft furnace with a depressed, slag-trapping floor could be traced throughout the life of the town from the late Iron Age to the late or sub-Roman period (Allen 2012). As he observed in his conclusion, reporting of the slags, characterised by inspection in the hand, from other Roman towns would suggest that iron-smelting was much more widespread than has previously been thought (ibid., 101). Even if the evidence does not suggest a high volume of smelting, in comparison with, for example, producers in the major rural centres of ironmaking, determining the extent of its presence and absence in urban contexts is clearly vital in the overall characterisation of metalworking in the towns of Roman Britain. The fact that iron-smelting was taking place at all in towns also says a great deal about the nature of the supply of billet iron to the towns.

We have seen in the case of Lankhills, Winchester (Pearce, above, p. 156) that the relatively costly analysis of stable isotopes has become part of the suite of post-excavation methodologies applied to human remains in the publication of a major late Roman cemetery, but such approaches have yet to be applied as part of the publication process of individual settlement sites in respect of faunal remains. While it may be argued that stable isotope analysis is more appropriately applied in the context of regional or national research strategies, and should not be the concern of individual projects, there are serious emerging issues relating to the long-term preservation of 'bulk finds', such as human and animal remains, which need to be taken into consideration. The provenancing of the meat supply of a Roman town, perhaps especially of

cattle, whose butchery and disposal of remains differs from that of other animals, is, as we have seen (Maltby, above, p. 188), a major research question. If faunal collections are in danger of not being permanently archived, then there is a pressing case for research, such as stable isotope analysis, to be undertaken prior to disposal. Selection of key deposits for long-term curation for research purposes would be much more preferable. National and international research, such as the current AHRC-funded project on the chicken (www.chickenco-op.net), will be seriously undermined if well-excavated faunal assemblages are not guaranteed the long-term preservation which will enable further research beyond what is currently regarded as routine in the level of reporting for publication.

CHRONOLOGY

Establishing urban chronologies continues to rely heavily on the evidence of coins and certain types of artefact with relatively closely dated typologies, such as samian and brooches. Through the groundwork of the research undertaken in regional centres and funded and overseen by the Ancient Monuments Laboratory in the 1970s and 1980s, dendrochronology has also become an established dating technique which has had major impact on our knowledge and understanding of the development of towns where waterlogged deposits are frequently encountered, such as Carlisle and London (cf. Tyers 2008). Other scientific approaches such as archaeomagnetic and radiocarbon dating have also been applied to a limited extent and with variable success. Yet, particularly in the case of radiocarbon dating there remains a great potential for a much more routine deployment in urban archaeology. Traditional reliance on dating dependent on material culture tends to fail us over questions of beginnings and endings or continuity (or not) from the late Iron Age into Roman and Roman into the early medieval period and it is in these contexts that radiocarbon dating has the potential to be the most useful. We have seen (above, p. 73) that a more strategic application of C^{14} dating might have shed more light on the Iron Age to Roman and Roman to medieval transitions at Winchester. Although we have become accustomed to micromorphological analyses of late and post-Roman dark earths, the selection of suitable material for radiocarbon dating from these deposits is the exception where it should, wherever possible, be the rule. Equally, in the case of urban cemeteries and human remains without evidence of independent dating, which is generally the case with late Roman inhumation burial, serious consideration should be given to more generous programmes of radiocarbon dating. It is only through the accumulation of numerous dates from individual towns and the application to them of Bayesian statistics that we will be able to understand better these periods of transition or abandonment.

VISUALISATION

Whereas illustrations to visualise buildings and urban environments tended to be confined to popular accounts of Roman Britain, including guidebooks to individual monuments, before the 1990s, with a gradual increase in the use of colour from the 1980s onwards, there was a tradition of publishing architectural reconstruction drawings of individual buildings, such as Janet Frere's work on the buildings of *Verulamium* (Frere 1972; 1983) and David Neal's reconstructions of the Gorhambury buildings on the outskirts of *Verulamium* (Neal *et al.* 1990). Justification of such reconstructions is generally lacking and the input of professional architects, such as Sheila Gibson on the temple of Sulis Minerva in Bath (in Cunliffe and Davenport 1985) and Nigel Sunter on reconstructions of the amphitheatre and forum basilica at Silchester (1989; 2000), has been invaluable. Since the late 1990s, however, it has become common practice to include at least one illustration in colour to help visualise a particular building, urban neighbourhood, or a particular event such as a burial, in almost every archaeological monograph. The introduction of PPS 5 in 2010, followed by the National Planning Policy Framework in 2012, has provided further stimulus to the presentation of visual interpretations of the results of archaeological excavations for a wider, general interest audience, as well as the specialist and academic readership. There is little doubt as to the difficulty of making these representations, given that so much of our urban

past has been reduced to foundations, robber trenches, rubbish pits, etc., with so much of the infrastructure and character of buildings to be inferred from the size and depth of foundations and associated building materials, with occasional reference to surviving standing remains in Britain and other Western provinces. However, at the same time, since 1990 there has been little justification of the basis for particular representations of buildings and the associated urban environment and a more critical and reflective approach needs to be encouraged (cf. Mathews 2011; Morris *et al.* 2011). A dialogue between architect, environmental scientist and excavator can often be very helpful, if not fundamental, in the development of interpretations of individual structures and their urban environments.

PUBLICATION

It is evident from comments from all the contributors to this volume that publication, or the lack of it, has remained a serious problem for Roman urban archaeology since 1990. Some towns, where major work has taken place, such as Exeter, have seen no publication of that work since the 1980s. Taking a selective approach in this survey, authors have tried to identify outstanding reports of what they regard as important sites for the potential contribution they have to make to the knowledge and understanding of particular towns and which, on the face of it, deserve publication. These are formidable and challenging lists, which are by no means exhaustive. Nor do they diminish in any way the need to bring to publication major urban sites from rescue excavations conducted before 1990, and particularly numerous from the 1960s onwards. Non-publication stems from a variety of reasons, such as lack of resourcing, poor estimation of post-excavation requirements, poor management of available resources and lack of continuity from the fieldwork stage of staff with personal knowledge of, and commitment to the project in question. The complexity of bringing urban excavations to publication is evidenced by the time it takes to complete the task and, as we have seen in this survey, it is very rare for a substantial excavation to be published within a period of five years following on completion of the fieldwork. The majority of investigations undertaken since 1990 have been published between five and ten years following the fieldwork. If an investigation has not been published within about ten years of its execution in the field, it follows that it is unlikely that publication will ever follow. Thus the chances of work undertaken between 1990 and the early 2000s, and not yet published, of ever being published are slight and receding without further resources being found for them.

In a rapidly developing digital age it is remarkable that there is virtually no digital publication, a lacuna which is much regretted by Pearce in his survey of urban burial and is holding back research (above, Ch. 8). He asserts that, without digital publication of the skeletal data from urban cemeteries, it is extremely difficult to develop synthetic approaches. With the notable exception of the on-line publication of reports relevant to the theme of this volume as pdfs by the Colchester Archaeological Trust, traditional publication in book or journal article form remains the norm, sometimes supplemented by publication of specialist archives as pdfs through the Archaeology Data Service (ADS) at the University of York. A model for the digital publication of an urban excavation in Britain, which links the analysis of the site and its finds with the primary archive of context records, single context plans and finds records, is available and could be developed further (Clarke *et al.* 2007). However, it relies on the embedding of a digital approach from the very start of the fieldwork itself (cf. Fulford *et al.* 2010). With increasing confidence in digital methodologies, this offers the most promising way forward for the publication of urban archaeology and the provision of the digital resource to facilitate the kind of comparative research that Pearce demands.

There are serious obstacles in the way of taking digital publication forward. The fragmentary approach inherent in commercial archaeology since 1990 has led to a variety of organisations undertaking work in the same town with different recording systems and different approaches to post-excavation methodologies. Curators do not insist on the application of digital methodologies, which could lead to a consistency of approach towards all the investigations in the towns for whose HER they are responsible. Ideally, and to facilitate comparative research, there should be a consistency of approach towards all investigations in all our towns. At the same time individual

commercial organisations have developed their own digital strategies with little commonality between them, but two organisations whose work has historically been concentrated in the eponymous cities, Canterbury and York, share the same system, the Integrated Archaeological Database (IADB), developed by Rains at the York Archaeological Trust, which also supports the Silchester Town Life Project. Curators need urgently to agree on systems which satisfy their requirements and then require compliance from contractors.

Millions of pounds have been expended on archaeological interventions for which, in the current environment, there is little or no likelihood of them ever being published. Such reporting of work undertaken since 1990 that has been published is of variable quality and the lack of digital publication makes it much harder to investigate underpinning data and undertake comparative research. The longer the delay between the investigation in the field and its publication, the less likely that it will ever appear, without the deployment of further resources and such resources have yet to be identified in each and every case.

It is hard to avoid the conclusion that inadequate resourcing, perhaps combined with other factors such as weak enforcement by the city archaeologist, a lack of expertise in the units and imperfect project management, is the fundamental explanation for the poor rate and variable quality of publication. This review has highlighted a number of areas where improvements can be made, all of which require additional resource both in the fieldwork stage and in post-excavation and publication. If there are already inherent problems in the resourcing of the execution and publication of urban excavations, this contribution, in seeking to raise standards further, can only exacerbate the matter in the sense that yet further investment of resources is required. Yet techniques and ideas continually develop and this can be seen in comparing projects published in the 1990s with those of the 2000s. It is therefore incumbent on us to endeavour to apply the best approaches available at the time of implementation of a project, rather than work to a quality benchmark of, for the sake of argument, 1990, 2000, 2010 or 2015. Although part of the answer may lie with a greater selectivity of sites in which to make the greatest investment of resources, making use of the ever-improving quality of remote-sensing techniques such as ground-penetrating radar in deeply-stratified urban contexts, this will not address the challenge of the particular, selected site which is seen to merit very expensive investigation, post-excavation research and publication with costs beyond what might be deemed to be reasonable by the developer. Can a point be defined where part of the cost of a development-led project might reasonably be seen to be in the wider public good and a legitimate call on scarce public resources in order to achieve the best results (as was the case with the English Heritage contribution to scientific dating associated with the Winchester Northgate House project)? In fact, if more of the unpublished work from the towns is to be brought to publication, it will require expenditure of public resources, whether through English Heritage (Historic England), the Research Councils, particularly AHRC, or the HLF. There is also an opportunity for greater collaboration and partnership with Universities following the model set by the Collaborative Doctoral Awards scheme (CDA) established by AHRC which has seen important contributions, especially, in this context, in relation to the study of Roman material culture. With Universities required to demonstrate the impact of their research through the Research Excellence Framework (REF), there is an opportunity to deepen partnerships through collaborations at all levels from doctoral, through post-doctoral to established academic positions.

The Oxford Archaeology publications of recent work in Winchester (*The Late Roman Cemetery at Lankhills, Winchester* (Booth *et al.* 2010) and *Winchester – City in the Making* (Ford and Teague 2011)) demonstrate that high standards can be achieved, but, presumably, with a corresponding investment of resources. Interestingly, in both cases the developer was a public authority, Hampshire County Council. While we do not know the particularities which lay behind these success stories, they do suggest that the development of guidance, drawing on good exemplars and on best practice across all the specialisms embraced by urban archaeology, would be helpful to curators and practitioners to raise standards of archaeological fieldwork and publication across Britain's historic cities and towns.

While there have undoubtedly been very substantial gains in our knowledge of the major towns of Roman Britain since 1990, much remains to be done. In the first place the grey literature from

these towns should be reviewed to establish what should be published, and in what form, and what needs to be done (and at what cost) to those reports to make this happen. Priority should be given to those sites where further research and publication will make a clear and substantive difference to knowledge. Second, a thorough review needs to be made of the condition of the archive and its potential contribution to knowledge of those excavations for which no grey literature report exists and an assessment made of what would be required to bring examples of this category of site to publication. Such a project would embrace both pre- and post-1990 investigations and establish clear priorities for further work. Third, an assessment needs to be made of the smaller towns, not considered here or in the current English Heritage and Leverhulme-funded project on the Rural Settlement of Roman England. This should begin with a review of the published information to parallel this investigation of the larger towns, followed by an assessment of the grey literature and a review of the potential of other unpublished sites in this category.

The three recommendations outlined above concern the past, but we also need to look to the future. The development of guidance of good practice in the field and in post-excavation needs urgently to be established in parallel with the development of partnerships which will broaden the resource base and underpin the quest for excellence in urban archaeology.

To conclude, there have been outstanding advances in our knowledge of the major Roman towns since 1990, but there remain issues around the quality of work at both the stages of excavation and post-excavation. Non-publication, already a major problem before 1990, remains pervasive and persistent.

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