

Yorkshire Archaeological Research Framework: research agenda

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ABSTRACT

This report represents the outcome of research undertaken into the extent, character and accessibility of archaeological resources of Yorkshire. It puts forward a series of proposals which would allow us to develop their use as a research and curatorial tool in the region. These involve systematically testing the evidence for patterning in the data, augmenting the present database, and establishing the research priorities for the Palaeolithic to the Early Modern period.

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SUMMARY

This report draws together the implications of the papers presented by Manby et al. (2003a) with the results of the recently-completed resource assessment (Roskams and Whyman 2005) in order to develop an archaeological research agenda for Yorkshire, a region with a clear geographical and cultural identity which has been subject to intensive and extensive investigation over an extended period of time. It is divided into two sections.

Section 1 argues that, if present holdings are to play a pivotal role in facilitating future archaeological research and curatorial decision-making in the region, we will need to test the patterning identified in our own *Resource Assessment*, define its relationship with HER holdings, and integrate Yorkshire databases as a whole with a wider range of institutions and data sets than has been usual thus far. This will involve:

- creating time and resources to tease out further patterning in the existing *Resource Assessment* datasets and interpret it in meaningful ways (1.1)
- developing strategies to ensure that *either* this existing database can be updated from HERs *or* that the HERs themselves develop mechanisms to reconcile present inconsistencies to allow truly *regional* research directions to be established and investigated (1.2)
- enhancing the quality of data generated by recent commercial projects (1.3)
- incorporating the archives of a number of additional, prioritised museums (1.4)
- integrating remote-sensing data from the region, both ground-based geophysical outputs and the wealth of aerial photographic evidence (1.5)
- plotting systematically water-logged and maritime/coastal resources, both as a curatorial tool and to identify areas with research potential (1.6)
- undertaking further quantification of industrial archaeology for the whole region along the lines employed thus far only for West Yorkshire (1.7)
- including information about standing buildings (1.8)
- adding information from medieval documentary sources and, on a more selective basis, documentary material related to the more recent past (1.9)
- collating information concerning Yorkshire's human resources and allowing all interested parties to access this systematically on both a geographical and thematic basis (1.10)

Section 2 summarises the results of the *Resource Assessment* on a period-by-period basis, employing 'conventional' chronological categories running from early prehistory up to the early modern period. Unsurprisingly, a plea can be made in each of these divisions for better-dated evidence involving a more balanced distribution across the region. Beyond these common requirements, however, the following should be noted:

- for the Palaeolithic period, there is a need to check on erroneous attributions in existing databases to get an understanding of the real size of the resource. In addition, the period has been given only cursory treatment in synthetic discussions of Yorkshire, despite the overall potential of the region being recognised. There is an urgent need to map the palaeoenvironment with greater accuracy in order to identify ‘niches’ where pre-Devensian sediments remain protected from later glaciation; and, for the Upper Palaeolithic, to look for finds on the resource-rich margins of Lake Humber in order to study the process of recolonisation (2.1)
- for the Mesolithic period, clear concentrations of data are largely a product of collection factors, although those on the Moors, and the sparsity on the Wolds scarp, may be ‘real’ aspect of early prehistory. The challenge is to obtain greater chronological resolution for many museum collections; to generate more material by exploiting the investigation of modern riverine sediments; and to compare systematically ‘provable’ vs. ‘possible’ database finds spots and then test each against existing Mesolithic models (2.2)
- for the Neolithic period, pivotal requirements involve the creation of a vegetational synthesis for the region underpinned by C14 dates; questioning the nature of the interface between Mesolithic and Neolithic periods; and, in the process, pulling apart the notion of a package of changes involving agricultural innovation, ceramic production and landscape monumentality, replacing it with a fuller consideration of the interplay of the chronological and functional categories embedded in the project’s database (2.3)
- for the Bronze Age, we have more, and better-dated, data entries than before. Remaining challenges include relating burial practices to landscape development (the latter made more problematic by the different approaches to dating prehistoric enclosures across the region); understanding external exchange mechanisms in relation to internal social relations; and thinking through the implications of the apparent links between Late Neolithic and Early Bronze Age development, and between Late Bronze Age and Early Iron Age trajectories (2.4)
- for the Iron Age we have a still more chronologically-refined picture than for any of the previous periods, yet the aforementioned issue of the classification of late-prehistoric landscape features, notably enclosures, needs rationalisation; the east-west split in data density across the region limits understanding, notably in relation to mortuary practices; the interplay of pastoral and agricultural regimes needs more careful examination; and surplus extraction from rural production needs to be related to the development of social hierarchies across Yorkshire (2.5)
- in the Romano-British period, increased chronological resolution shows some clear changes to Iron Age trajectories, but more often in pockets of development rather than across the board. The challenge is to move beyond purely military and political dynamics in explaining this diversity of response; to understand any continuity with pre-Roman trajectories in terms other than simply ‘native’

- in the Early Medieval period, a paucity of evidence in general, and of huge east-west density differences, both resurface. The latter suggests different research strategies in each zone (e.g. detailed ceramic fabric characterisation to increase chronological resolution and aid study of trade in the east, topographical and geophysical survey and C14-dated palynological sampling to develop less fine-grained frameworks further west). The variety of evidential sources within 'single' functional categories (sacral/funerary covers early pagan cemeteries and later ecclesiastical sculpture for example) imply investigation of each sub-set for meaningful analysis, together with more sophisticated models of transition transcending simple Anglo-Saxon/Viking or Pagan/Christian dichotomies (2.7)
- in the High Medieval period, the dearth of sites in the west with concerns beyond purely agrarian production requires detailed investigation and interpretation, as part of a more general study of medieval landscape contexts which the region is admirably placed to take forward. For a range of the larger settlements across Yorkshire, existing documentation should be collated as a starting point for understanding urban hierarchies, further augmented by deposit modelling based on desk-top studies, borehole data and environmental evidence, and by studying finds assemblages to elucidate types of economic activity and to characterise a town's 'footprint' on the landscape (2.8)
- in the Early Modern period, a struggle still exists to get archaeology acknowledged as being relevant to development control decisions or research outcomes, despite our survey of West Yorkshire's holdings showing how much information is available there, and what can be made of it by knowledgeable staff. The region has a strong record in developing methodologies which integrate above- and below-ground archaeology with artefactual, documentary and oral sources. It now has to extend this role by developing conceptual frameworks which avoid technologically-deterministic explanations and take on board the complex nature of industrialisation, and link it to aspects of labour organisation and to social spheres beyond (2.9)

INTRODUCTION

This report endeavours to draw together the implications of two recent outputs in order to set out some ideas on the development of an agenda for archaeological research in Yorkshire. On the one hand, the perspectives put forward in the various papers in *The Archaeology of Yorkshire: an assessment at the end of the 21st century* edited by Manby et al. (2003a) provide an up-to-date statement of current thinking about the region, in the form of (mainly) qualitative statements. On the other, the Resource Assessment undertaken by the project team (Roskams and Whyman 2005) generated a series of conclusions about the region's resources founded on the quantitative information incorporated into its database.

Both of these documents were produced in reaction to an increasing, country-wide emphasis on the need to generate regional research strategies. The latter demand is, in part, a result of well-known changes in the archaeological profession: the divorce of curatorial and fieldwork practice since the issuing of PPG16 in 1990; the development of competitive tendering for commercial work; the distancing of rescue and research, setting data gathering apart from its analysis and interpretation; and the prioritisation of site protection over investigation.

More is at stake, however, than just political and organisational issues. Beneath these trends there lies a common principle: that archaeology generates knowledge with a social value. Material remains are significant because they elucidate past societies. Hence these resources deserve to be taken into account when planning modern development which impacts on them - housing, agriculture, 'unofficial' metal detecting and service corridors such as road schemes; or when dealing with 'natural' forces which eat into them - dewatering of landscapes, coastal erosion, climate change. This social value thus resides within contemporary society and to impose it on the past, we need two things: a) some knowledge of the archaeological resource with which we are dealing, and b) an assessment of this database in relation to current research objectives. Our *Resource Assessment* represented an attempt to carry out the quantification required in the first sphere. Patterning in the data gathered in our database, together with the perspectives set out in *The Archaeology of Yorkshire* volume, were an attempt to articulate the second.

In theory, one could carry out an archaeological resource assessment at any geographical level. Further it has to be acknowledged that, when interpreting archaeological patterning in a particular period, any geographical entity defined at one level of spatial resolution may obscure more than it shows at another. Yet this project was always conceived as a *regional* assessment due to three factors: regional government plays an increasingly important role generally within the UK; the changed role of curators noted above means that their advice is needed across wider areas than hitherto; and archaeological interpretation of past human development, in many cases, seems best understood at a regional level.

The English Heritage publication *Frameworks for Our Past* (Olivier 1996) signalled the need for regionally-defined agendas within England and set out a structure for the development of such assessments across the country. Yorkshire clearly had to be considered as part of this process, and this for four main reasons.

First, taken together, its various parts represent a topographically coherent unit limited by the Pennines, North York Moors, North Sea and Humber Estuary. Discussion of its geology by Gaunt and Buckland (2003) provides a detailed definition of these limits and of internal divisions comprising, essentially, eight distinct landscape blocks linked by three river systems draining into The Humber. These have had both a marked effect on the resources and environmental conditions encountered by earlier inhabitants of the region, and have determined and biased archaeological visibility, in turn influencing the establishment of research traditions in different spheres (see further below).

Second, and in a sense at odds with the above, this geological context can be set beside Innes and Blackford's (2003) assessment of the region's palaeoenvironmental resource. The landmass defined by geology embodies a variety of landscape contexts and natural/environmental resources. This means that all periods, and the many diverse types of human activity and adaptive strategies, are represented archaeologically within Yorkshire. These landscapes run from Pennine Dales and North York Moors on the one hand, to the Lowlands of Holderness, the Vale of York and the Humberhead Levels on the other (Ottaway *et al* 2003, 2). Such variety offers great potential for comparative analysis within a single region.

Next, important archaeological research has been carried out into all periods in Yorkshire, as has the development of institutional and methodological practices. Addyman (2003) shows how fieldwork and synthesis has flourished here from the 16th century, starting with antiquarian interests, through the learned societies in the 19th century, to an exponential increase in output from the middle of the 20th century (of course, Yorkshire is by no means unique in this process of developing interest). Additionally, this material has been gathered, stored and disseminated within contemporary governmental structures created on a regional basis. This practical element remains important, notwithstanding Wrathmell's point (2003, 363) that archaeological data do not come with an inherent 'Yorkshire' label attached.

Finally, and perhaps of most significance, a vital objective of the English Heritage initiative to produce resource assessments was to help people have access to their 'own' past. This region has a very clear, and strong, sense of its own 'cultural' identity (Addyman 2003, 11) - many of its inhabitants see themselves as coming, first and foremost, from Yorkshire. Thus they would have expected any nation-wide programme of assessment include this entity, and to do so in its entirety. Subdividing it or, heaven forbid, combining Yorkshire with another region, would not have been seen as appropriate.

Notwithstanding what has already been achieved here, important gaps in coverage and period interest remain. In addition, the research *foci* of early investigators were often less than Yorkshire-wide – extensive synthetic treatments become more apparent only in the archaeology of proto-historic and historic periods. Thus Greenwell and Mortimer were mainly associated with the Wolds and the Howardian Hills. Raistrick, slightly later, laid the foundations in the Pennines, with subsequent researches of Raymond Hayes on the North York Moors and Cleveland Hills. Finally, the work of Boynton concentrated in the Humber wetlands, one of the less visited lowland zones.

Yet, taken as a whole and over time, archaeological interest across Yorkshire is certainly at least as vibrant as in any other region in the country, and a good deal more

energetic than many. For example, environmental archaeology, especially in urban contexts, developed here and continues to play a leading role. Research centres at prominent universities can be drawn on, and local societies still contribute significantly to work in the region. Finally, individual projects have been pivotal to taking matters forward. This includes those explicitly presented in the Manby *at al.* volume: the Dales in prehistory (Laurie 2003) and the medieval period (Moorhouse 2003a, the Humber Wetlands (Van de Noort 2003), the Foulness Valley (Halkon 2003), and at West Heslerton (Powlesland 2003). Yet others beyond should not be forgotten: Hayton, Flixborough, Wharram Percy, Thwing and Whitby, to name a few.

That said, archaeological research in Yorkshire has focussed on a series of ‘core’ areas for much of its history. These are often characterised by exceptional archaeological preservation and/or visibility, and have generated their own distinct traditions of research as a result. A truly regional agenda will offer, for the first time, the chance to view the whole in the round. In this way we can hope both to illustrate the impacts of any discrete, sub-regional research ‘zones’, and then to point the way for research and interpretation to transcend them, redressing those imbalances in earlier research efforts and thus knowledge.

To this end, the *Resource Assessment* endeavoured to develop a series of chronological and functional categories which allowed us to gather data holdings from diverse Historic Environment Records (henceforth HERs, though originally called Site and Monument Records when data gathering took place), museum and commercial sources (see its Chapter 3.2 for details). The resulting database has proven two things. First, reassuringly, material held by a wide variety of institutions can indeed be linked in a single structure. And second, when plotted, the distribution of this data suggests significant patterning which can help form the basis for developing a variety of research directions and projects within Yorkshire. Yet, even at this formative stage, it is possible to take up the challenge of investigating the implications of some of these data distributions straight away.

Hence, in *Section 1*, we first put forward the need to test systematically the patterning provisionally identified in the *Resource Assessment*, and to think about how the integrated database used in the *Assessment* should relate to HER systems. We also suggest that databases across the region should be augmented by including a wider range of institutions and data sets than has been possible thus far, and by enhancing data quality. Only with a more complete access to all holdings can they play a pivotal role in facilitating future archaeological research in the region. A greater number of better-founded research themes would no doubt emerge from further analysis of our own database and augmenting, in an integrated way, the region’s databases as a whole. Yet even the present level of analysis in the *Resource Assessment* has thrown up some significant patterning for particular periods, and hence suggested some avenues for future research deserving of our attention. At the general level at which they are phrased, most of these trends seem likely to stand the test of time. Thus, in *Section 2*, we summarise each, and draw out their implications.

SECTION 1: TESTING, ACCESSING AND AUGMENTING YORKSHIRE'S DATABASES

Introduction

Analysis of the database created by the *Resource Assessment* has already produced some significant results. Yet, with further time and resources, much more could be teased out of the existing data (1.1). Secondly, the content of Yorkshire's databases will need to be made accessible to all potential users in a consistent way, yet will also need to be updated with archaeological data which will continue to be generated in the region in coming years. This raises the vexed issue of how the integrated *Resource Assessment* database should relate in future to the holdings of diverse HERs across the region (1.2).

Whatever the solution adopted here, additional data sources, most of them originally excluded from our own project for purely practical reasons, should also be incorporated into Yorkshire holdings if the latter are to act as an effective curatorial tool and to identify areas with research potential. Such additional work should enhance the quality of data generated by recent commercial projects (1.3) and integrate the archives of a wider range of museums than hitherto (1.4). Remote-sensing data from the region, both ground-based geophysical outputs and the wealth of aerial photographic evidence, much of which is now being collated by other projects, should be included (1.5), as should water-logged and maritime/coastal resources, plotted systematically (1.6). Next, although the *Resource Assessment* attempted to make some assessment of later periods, further quantification of industrial archaeology along the lines undertaken thus far only for West Yorkshire would be very useful (1.7). In addition, we would note the need to incorporate information about buildings (1.8) and documentary sources (1.9), certainly for the medieval period and, perhaps selectively, for the more recent past. Finally, information concerning Yorkshire's human resources, on which everything else ultimately depends, needs to be collated and systematically presented to all interested parties (1.10).

1.1 Testing the *Resource Assessment* database

Inspection of our database has allowed a certain number of important conclusions to be reached, but this process should now be taken forward in four particular ways. *Firstly*, detailed investigation has allowed significant data patterning to emerge. However, although some of the patterns which suggest themselves to the naked eye are worthy of our attention, others may not be. Equally further patterning, although not so obvious by such informal means, may exist within the dataset. Hence a programme of fuller testing, perhaps including statistical manipulations within a true Geographical Information System, is required. The 'underlays' of current land-use, landscape relief, and solid and drift geology already incorporated into our database will aid this analytical process, as will continued, and systematic, awareness of the influence of data collection methods (for example in and around spa towns, or adjacent to modern route-ways through the landscape – see Chapter 4 of the *Resource Assessment, passim*).

Secondly, more time should be dedicated to examining these preliminary hypotheses at a more detailed level of resolution, to allow localities to be distinguished within more broad brush trends. For example, the social dynamics which underpin the east-west distinction identified for elite activity in the high medieval period could be investigated further by looking for any distinctions between monastic and non-monastic components presently subsumed under the higher-order ‘sacral’ category. Such additional work should also indicate the level of certainty with which a particular pattern holds, and thus of how definite any interpretations drawn from it might be. Existing analysis has been dependent, for the most part, on the expertise of the two authors of the *Resource Assessment* and there would be considerable merit in getting the views of a much wider constituency, based on detailed discussions with the full range of experts in the region using meetings defined by period or by theme (or by a combination of both). Their involvement will be essential in moving from *Research Agenda* to *Research Strategy*.

Thirdly, it is clear that some of the preliminary interpretations put forward in our patterning can only be assessed by means of greater degrees of chronological resolution in the evidence. For obvious reasons, knowing where this is the case already represents an important step forward in the research process. The next move is to investigate whether or not better dates are available. In some cases, especially for early prehistory, this may be a matter of correlating periods and spheres of interest with known C14 determinations. In others, we may find that more accurate dating than is already recorded in the HER records underpinning our database. This may be seen either directly, for example, with ceramic finds which routinely distinguish between early- and late-Roman assemblages. Or it might be evident indirectly. For example we might be able to argue that burial types in our ‘Dark Age’ category, or building types in our ‘early medieval’ category, are more likely to belong to one part of those extended periods of time than another.

Of course, if one has gone through such procedures and the dating resolution required is still lacking, there is no alternative but to return to primary data gathering, for example by direct investigation of museum assemblages. Yet even this less preferred outcome means that the researcher can then design a coherent strategy, and so avoid either reinventing the wheel by looking at material which has already been recorded to the level of detail needed for one’s research objectives, or attempting to answer a research question from secondary sources, only to find that they lack the required quality.

Finally, again concerning chronology, our *Resource Assessment* suggested that, for some purposes, certain chronological boundaries employed by existing institutions may conceal more than they show in terms of underlying social dynamics. For example, there may be a case for merging late Mesolithic and early Neolithic periods, but distinguishing between this newly-defined category and the point at which monumental constructions were set up in the landscape later in the Neolithic. Equally, the period of monumentality might itself be best distinguished from the subsequent development of sedentary agriculture in Yorkshire, running from the very late Neolithic, at the earliest, until well into the Bronze Age and beyond (see further below, Section 2).

Realigning our database to fit with such new divisions would be a fairly straightforward matter, and could take place without having to alter the underpinning databases lodged with museums and HERs. These more useful functional analyses would allow better understanding of fundamental social development, for example the change from

itinerant communities to those who attempted to regularise landscape movement by means of monumental claims, thence to those who began to settle down and divide up that landscape in still more detailed ways. Such conclusions should be set beside more general environmental evidence, notably the data generated by the EH regional environmental archaeology review (Hall and Huntley forthcoming). Environmental evidence, e.g. from pollen sequences, does not fit easily in data storage systems based on individual sites and monuments. Yet an updated vegetational history for the region is now within our grasp, providing a wider context for elucidating the complex relationship between culture and nature in all periods. Such studies are not only important archaeologically, but also allows us to contribute to inter-disciplinary study of landscape development as a whole.

1.2 The relationships between the *Resource Assessment* database and Yorkshire HERs

To act as a research tool, the existing *Resource Assessment* database could be usefully made accessible to all relevant users. The latter groups embody a great variety of different concerns, ranging from particular interest groups, to various period societies, to 'the general public'. Pivotal in all of this will be local societies and community archaeology organisations (Selkirk 2003): they have been central to many projects thus far (for example in the East Riding: Halkon 2003), and seem destined to play just as full a role in the region's archaeology in the future. Technical discussions on making our information available suggest, at the present time, that all data might be best held on a website. Search facilities could include allowing 'underlays' of natural topography, geology, extent of modern urban settlement etc. to be displayed in order to facilitate analysis of data distribution patterns. Such a web-based mechanism would also aid links to the range of types of users and thus make archaeology accessible to those beyond, for example in schools education.

The above proposal, in turn, raises the issue of the future use of that database. Although the exact end date attached to information downloaded into it is a little different for the various sources of evidence, it does provide an outline, point-in-time statement of the holdings of a wide range of Yorkshire's most critical archaeological institutions. Yet each of these organisations will continue to accumulate material on a regular basis. In addition new information will be generated by specialist groups, for example the Yorkshire Quern Survey being carried out by the Prehistoric Section of the Yorkshire Archaeological Society, or from other projects in the region, for example the recent work undertaken within the Vale of York (see Whyman and Howard 2005 for an interim statement of what has begun to emerge). So there is a pressing need to decide how to automatically update the database(s) on which future archaeological work across Yorkshire will be based.

Two approaches are possible if truly *regional* research directions are to be established and kept up-to-date: *either* the Yorkshire-wide database should continue to be updated from both HERs and an increasing range of data holders; *or* the HERs should develop mechanisms which reconcile present inconsistencies between them and allow the data held by others, especially museums, to be incorporated into their systems. Each approach has its advantages and disadvantages.

The first scenario would see the existing database not as an interim statement, rather as a long-term mechanism providing a convenient way into the more detailed data held by HERs, and perhaps as a research tool to set beside those curation tools. If this route was adopted, it would be fairly straightforward to incorporate new data from HERs, especially those using the ExeGesis system. Things may be a little more complicated and individualised for accessing museum data (although this will be the case whichever option is preferred), whilst incorporating ‘grey literature’ generated in commercial work is still more problematic (though equally vital for the reasons noted above). Solutions will only emerge here once the hurdles discussed previously have been jumped.

This approach has the advantage of working within a single, overarching structure which can cover the full range of relevant archaeological institutions across Yorkshire, and offers the opportunity to view data against aforementioned ‘underlays’, vital in understanding the implications of any data patterning in that data: matters such as site visibility will be well known to curators who have a detailed familiarity with their region, but may not be so obvious to those approaching an area with less background knowledge, but no less interest and commitment. Indeed, using a dedicated database in this way may help define general research *foci* and areas of interest for non-curatorial sectors, as a route into the more detailed material held in HERs.

The downsides of this first strategy are equally obvious. HERs will remain the main institutions for holding the majority of the region’s archaeological data into the foreseeable future. They have been set up specifically to update these holdings on a systematic basis and to ensure that curatorial decision-making is integrated with them. Creating an alternative system could be seen as reinventing the wheel; adding another stage to making data available; providing evidence in a summary way when ‘the devil’s in the detail’; and divorcing the curation and research processes, when they should be a seamless whole.

However, despite their clear advantages for detailed and professional curatorial practice, HERs also face some difficult challenges if they are to be retained as the fundamental building blocks on which a truly regional research strategy is to be developed. As our project has clearly shown, the way in which data has been categorised over time in individual HERs has produced internal inconsistencies. In addition, and rather more intractable, there are fundamental differences between HERs in how data is defined, both in terms of chronological resolution and, particularly, functional attributes. As a result, plotting data across Yorkshire can throw up apparent sub-regional contrasts where none actually exist, or obscure real variations. In addition it is extremely difficult to carry out systematic analysis of changing functions across the landscape because of the way in which the functional attributes attached to individual data entries are nested hierarchically within each other. Finally, although information from other institutions is found in HERs, this has not been provided on a consistent basis. This may be due to historical accident or because, in the case of museums, the ways in which data has been classified in other organisations, though internally consistent, does not map simply onto the data structures of the receiving HER.

In short, therefore, whichever route is taken (and there may be some ‘happy medium’ to be defined here), some challenges will remain, and some resources will have to be allocated towards answering them. Such matters can only be solved at a Yorkshire-

wide, strategic level. This question - of how the relationship between the *Resource Assessment* database and the HERs is conceived and articulated - obviously affects all of the issues on enhancement of data holdings set out below.

1.3 Enhancing the quality of recent commercial data holdings

The *Resource Assessment* flagged up a number of examples where the quality of the datasets used in the project are less than had been hoped, and some examples whose quality cannot be determined definitively. Most of the first type are easily solved. For example, some HER entries are either simply inaccurate or internally inconsistent in their period assignments. Thus a high-status Roman site with underlying evidence for earlier settlement might be recorded as an 'Iron Age villa', or a settlement site with evidence for agricultural activity may be listed under a wide 'prehistoric' chronological label when, at most, it must belong to the Neolithic period or later (such an entry would still have appeared in our scheme as 'possibly Palaeolithic' - plainly impossible). That said, most of these inconsistencies are known to HER officers and should not mislead any sensible person using that source for research or curatorial reasons. Indeed, their continued existence is mostly a function of a lack of resources and time to produce corrections.

Rather more intractable is the problem of the quality of 'PPG16' data generated from the early 1990s. There is circumstantial evidence of a considerable disparity between the grey literature which certain commercial organisations *say* they have produced, and the project listings provided by AIP, EH-Register and NMR sources (see 3.3 of the *Resource Assessment* for details). However, the order of magnitude of this mismatch is entirely opaque, whilst its causes can only be guessed at. Clearly, this problem needs to be tackled if we are to systematically employ some of the best quality, and certainly most geographically diverse, data gathered in the region in the last two decades.

An additional issue concerns the precision with which this commercial work is transferred into HER holdings. In most cases officers, understandably, utilise summaries and abstracts supplied with the grey literature. Where we have been able to check, this process of translation seems to be fairly accurate. There is rather less certainty concerning how exact, and all inclusive, that abstract or summary might be in the first place i.e. how well it reflects the detail of the body of such reports. There is a suspicion, for example, that when a project designed to answer questions about certain periods also runs into ephemeral traces of earlier activity, the latter finds may not always get noted in its summary. Thus a project may be listed under fewer periods than its detailed findings deserve.

Of course, the issues involved in accurately transferring and disseminating grey literature are by no means confined to Yorkshire (see, for example, Bradley's comments (2006) on bridging the gap between commercial archaeology and the study of prehistoric Britain, and also the recently-developed *Roman Grey Literature Project* being carried out by Cotswold Archaeology and Reading University). For Yorkshire, only limited resources would be needed to make reasonable estimates of the impact of the matters listed above, and thus allow recommendations to emerge on what needs to be done to correct things. Indeed, some of this information is already directly available

by word-of-mouth from HER officers, which could form the basis for more detailed, quantifiable work.

1.4 Museum holdings

As noted in the *Resource Assessment*, archaeological holdings in museums were always considered a vital part of the work of the project. These institutions have a long history of development in Yorkshire, from those created by philosophical societies in the early 19th century to the public bodies emerging by the end of that century (O'Connor 2003, who notes, for instance, that the first meeting of the still-influential Museums Association took place in York in 1889). Innovative approaches in the region to the presentation of archaeological evidence have continued up to the present, for example in York with Jorvik, Barley Hall and Dig. Finally, the Portable Antiquities Scheme (Paynton 2003) is now securely developed within the region in association with our museums. Its output has been integrated with our database accordingly.

However, in the event, museum holdings could be incorporated into the *Resource Assessment* on only a partial basis. We believe that we have incorporated the most important institutions in the region, in terms of archaeological holdings, yet it would be highly desirable to work further down our prioritised list of such organisations. In particular, Malton, Scunthorpe, Whitby and Craven Museums hold records which include substantial archaeological materials and contextual information. In addition, finds held by the Ashmolean Museum and the British Museum, although few in number, are likely to have considerable historical significance and should be added. Now that a coherently-structured database has been set up, such work could easily be undertaken by IT-literate individuals for minimal costs.

1.5 Remote sensing evidence

Geophysical data was not incorporated into the holdings of the *Resource Assessment*. Projects carried out by English Heritage's Geophysical Survey Team in the region are listed online, but proved impossible to access in a format which could be readily incorporated into our database. Work undertaken by the Vale of York project (Whyman and Howard 2005), however, seems to have solved this problem. So these datasets could now be linked with other datasets properly. Beyond EH-generated data, it would be fairly straightforward to find out about geophysical work being undertaken here by the few qualified commercial contractors and by some university departments, and then check to see how much is reaching the relevant HERs and add in any extras.

A rather more problematic, and probably more important, data source not yet covered by the project concerns the wealth of aerial photographic (AP) evidence from Yorkshire. It is presently impossible to say how significant a gap this might be in defining any future research strategy. Stoertz's recent (1997) summary for the Wolds ably shows the huge potential of such evidence, at least for this small portion of the Yorkshire landscape (and, even here, her summary has quickly become outdated with further discoveries in the last decade). Other areas require corresponding data collation and descriptive synthesis. For example the Vale of York, once thought unpromising, clearly allows the recognition of archaeological features from the air when conditions

are right (Whyman and Howard 2005). In addition, further east, the recently completed work undertaken in the East Riding Aggregates Assessment (EH project 4828) and the Yorkshire and Humber Estuary RCZA (EH project 3729), both incorporating AP transcriptions done to NMP standards, have identified many new sites of all periods.

When all of this new data, plus that generated by other mapping programmes (Horne and MacLeod 2004), has been fully assimilated and incorporated into relevant HERs, we will be much better placed to assess the implications of AP work in the region. In the meantime, the list provided by Jecock (2003) provides a convenient starting point for some projects (and, equally important, for earthwork surveys). However, the data set involved overall is of already of a considerable size, and increasing on a daily basis. Thus it will be necessary to develop a coherent strategy, and to ensure sufficient resources, in order to carry this forward this process of integration.

AP evidence might best be incorporated into other databases as an underlay, colour-coded in relation to the morphologically-defined feature types put forward by Stoertz. This would allow elements identified from the air to be set against those visible in the surface topography (the latter, in the long term, perhaps being identified by a concerted LIDAR campaign across critical areas). Patterning should also be compared with that evident in other data. For example, Stoertz hypothesises that certain features belong to particular periods: square-ditched barrows of Iron Age date, curvilinear enclosures belonging to the early medieval period, and so forth. It would be useful to investigate systematically whether this suggestion is supported by either excavated findings or in the distribution of dated metalwork recovered by the Portable Antiquities Scheme.

1.6 Waterlogged and coastal evidence

The *Resource Assessment* flagged up cases where archaeological evidence in waterlogged contexts has considerable research potential, for example in the medieval coastal town of Scarborough. However, with the exception of York, such areas of water-logging have never been systematically mapped for any of our medieval towns. Further, insufficient has been done on preservation conditions in the landscapes beyond and for other periods, notwithstanding the sterling efforts of the Humber Wetlands Project (van de Noort 2003) to alert us to what is possible.

This gap is particularly unfortunate: the existence of anaerobic deposits, even in quite localised zones, can revolutionise the research potential of an area, and thus significantly affect any curatorial decisions on threatened development (see van de Noort and O'Sullivan 2006 for a recent attempt to rethink our approaches to wetland archaeology and thus exploit its potential more fully). Knowing the location of such water-logging with some accuracy is important not only in its own right, but because deep development in adjacent, aerobic areas can cause dewatering of a wider zone and thus impact on the preservation conditions of water-logged materials beyond the development's immediate footprint. When landscape characterisation has been completed for the whole of Yorkshire, we may be able to progress this aspect on a more systematic basis.

A related issue concerns underwater evidence in maritime and coastal contexts. This was largely by-passed in our own work, in part because the assessment project was

planned in advance of the development of an EH policy on Maritime Archaeology (Roberts and Trow 2002). That said, the Yorkshire component of work now taking part at a national level might be distilled and incorporated into the region's databases to good effect. For example, the aforementioned Yorkshire and Humber Estuary RCZA (EH project 3729) includes the Yorkshire coast north of Whitby, whilst various Seascapes projects are extending Historic Landscape Characterisation to the offshore seabed.

This sphere is especially important at the present time, given the possible proliferation of wind farms off the Yorkshire coast to fulfil obligations to increase the number of renewable energy sources, which will create a significant threat to wreck sites and other underwater survivals. On a more positive note, however, analysis of the data generated by general projects has the particular potential to elucidate the impact of sea level change in relation to glaciation on early prehistoric sites, a period when the use of coastal resources may be pivotal in understanding the change from mobile to more sedentary forms of human subsistence strategies.

1.7 Industrial archaeology

The assessment project commissioned a general, quantitative study of industrial archaeology in West Yorkshire (Appendix 5 of the *Resource Assessment*), utilising the expertise of Helen Gomersall of the West Yorkshire Archaeological Service. This work, when set beside the detailed consideration of methods and approaches carried out in Sheffield, proved extremely useful in putting flesh on the bare bones of definitions and general issues, all that would have been possible otherwise within the constraints of the project. Similar work could now be carried out at other HERs across the region to identify the nature of their holdings and to provide quantitative information corresponding to the WYAS evidence. The end product should then be fitted within the project's functional categories and added to its database.

This additional work would allow an understanding of how incomplete different sections of HER data might be, and hence help to define a strategy for enhancing them. In addition, the results could be cross-referenced to documentary holdings (see below), so that good archaeological preservation could be set beside well-researched, accessible paper archives (notwithstanding the debate over what the relationship between industrial archaeology and economic history might be). Finally, the whole process would aid local expert groups, who exist in various forms across the region, to define research priorities for their detailed areas.

1.8 Standing buildings

Yorkshire's legacy of medieval churches, monasteries and castles is well known, as is its concentrations of later industrial structures (see above). Thus the *Resource Assessment's* omission of standing buildings for the medieval period onwards is unfortunate, particularly given recent arguments for the reintegration of 'above' and 'below' ground archaeology and the long term work of bodies such as the Yorkshire Vernacular Architecture Group. At the moment, we are in the paradoxical position that stray medieval finds have greater prominence in our database than contemporary *in situ*

features. Hence a medieval font in a church might be listed, but not the building which contains it! Such absurdities would be remedied, in part, by the incorporating information from the listing process and from Pevsner's surveys. This would accommodate some of the most important, or at least the most well-known, examples. Consultation with vernacular architecture groups would then ensure more complete coverage, thus allowing a more considered assessment of research priorities in this sphere to emerge.

In addition, by assimilating such richly-textured evidence, the functional categories developed by the *Resource Assessment* could be revisited to good effect. In some cases this questioning of the terminology may lead to further subdivision, for example by considering the seemingly ubiquitous HER category 'dovecot' in greater detail. In other cases, amalgamation of groups of terms may be in order, or perhaps even a re-configuration of our higher-order functional categories altogether. All of this would serve to remove unnecessary biases/misleading patterning in our own database and make it a more usable research tool. There would be corresponding implications for the region's HERs. Finally, data holdings need to be brought consistently up-to-date by incorporating the output of the Defence of Britain project for both World War I and, particularly, World War II monuments (database held by the Archaeology Data Service). Addyman (2003, 15) has argued that, in the latter category, more survives in Yorkshire, and in better condition, than almost anywhere else. Incorporating this material would allow archaeology to appeal to wider audiences, for example children studying 20th century warfare within the National Curriculum.

1.9 Documentary sources

Our work avoided the evidence of documentary surveys, perhaps understandable in an archaeological *Resource Assessment*. However, for medieval and later periods, it would be very useful to compare the distribution of documentary records with more purely archaeological patterning. This would allow us to link areas where quality evidence from one discipline matches that of the other. In addition it would generate a research dividend in its own right. For example, do concentrations in economic exchange activities suggested by archaeological materials in small towns correlate with evidence on market centres derived from medieval documents?

The most obvious documentary candidate for such analyses would be soft copy of information from the Domesday survey (Darby and Maxwell 1962), for example to set beside the east-west differences in elite and military sites across Yorkshire (see below, 2.8). Clearly, there are well-known problems in utilising such sources, which cannot be just trawled for information without considerable expertise (Roffe 2007). Nonetheless, such comparative work is not only interesting of itself, but should elucidate changes within the period 1050-1500. If Domesday makes a statement about the distribution of certain aspects of social and economic power near the start of the period, other archaeological evidence might suggest how this had developed by end, perhaps in relation to the development of the absolutist state. The final product might be to redraw the period boundaries in the last millennium to give a more adequate reflection of the timing of significant points in the change from medieval to modern society.

1.10 Human resources

Finally, the most significant consideration in how the region's archaeological resources are recorded, collected, analysed and curated is that of the people who carry out this work: Yorkshire's human resources. Thus far, the *Resource Assessment* has brought together a number of listings of groups, both 'professional' and 'amateur', with a great variety of roles and interests. This information must now be consolidated into a coherent form, and structured in a way which gives access to information on category of activity, geographical focus, type of archaeology and period of interest. Such listings should then be linked to updated contact details and websites, and note relevant associated information on institutional status, membership, archives and other information held and their accessibility etc..

SECTION 2: PERIOD PRIORITIES

Introduction

This section summarises the results of the *Resource Assessment* on a period-by-period basis, employing ‘conventional’ chronological categories running from early prehistory up to the early medieval period (2.1- 2.7). In each case, the main aspects of the project’s data distributions are described first, then they are discussed in relation to current interpretative frameworks, in particular those published in the synthesis volume on Yorkshire’s archaeology edited by Manby, Moorhouse and Ottaway (Manby *et al.* 2003a). The High Medieval and Early Modern periods, although dealt with by the project on a different basis from the foregoing, are reviewed at the end (2.8, 2.9).

2.1 The Palaeolithic period

The Palaeolithic period runs from *c.*250,000 BP to *c.*10,000 BP, longer than all of the other periods put together, yet it contains the smallest data set in our *Resource Assessment*. Furthermore, most ‘Palaeolithic’ entries could be discounted by too liberal a use of the generic term ‘Prehistoric’. Equally, of those entries ascribed solely to that period, most had been erroneously attributed. The following discussion has therefore excluded them. Finally, the period was given only cursory treatment in the Manby volume (Manby 2003a). Thus his Table 2 lists only four sites for this period where flint industries have been identified, all Upper Palaeolithic in date: Deadman’s Cave, Gransmoor, Seamer Carr (Site K) and Flixton (Site 2). Such limited discussion may be unsurprising, given the paucity of available material. However, as a result, no explicit research directions emerge, despite the overall potential of the region being recognised both here, and in Innes and Blackford’s account (2003) of palaeoenvironmental resources.

Of the entries which remained in the *Resource Assessment* database after removal of misleading information, those of the Lower and Middle Palaeolithic comprise a small group of cave sites, mammal remains and a single stone tool from the Foulness valley (Halkon 2003, 266). The latter find suggests that other pre-Devensian sediments protected from later glaciation should also deliver further material (Innes and Blackford 2003, 26). Further mapping of the palaeoenvironment might identify such ‘niches’, for example on the fringes of the Vale of York. Finally, re-deposited artefacts could always be recovered from glacial tills elsewhere, although the implications of their spatial context may not be so obvious.

The Upper Palaeolithic flint artefacts listed in our *Resource Assessment* have a sparse distribution across the eastern and south-western margins of the region, this patterning being a function of concerted collection policies associated with projects concerned with other periods (e.g. in relation to Star Carr or Creswell Crags). These finds form part of a wider distribution extending from the Pennine uplands and Lancashire to the Peak District and Trent Valley, part of the re-colonisation of Britain which took place from the North Sea into Yorkshire around the resource-rich margins of Lake Humber. Given this distribution, the sands and gravels of the ‘25-foot drift’ around the margins of the Vale of York, representing beach deposits on the shores of that lake, may be a

fruitful zone to look for further Palaeolithic activity. The recovery of more material would obviously elucidate Upper Palaeolithic subsistence strategies and settlement patterns, and may eventually allow us to test Smith's (1992) view of the process of post-Devensian re-colonisation.

2.2 The Mesolithic period

The *Resource Assessment* shows that material provably of Mesolithic date is concentrated in the uplands of the North York Moors and the east-central Pennines, the latter distribution becoming less dense in the northern Dales. Most patterning within the region is purely a product of collection factors but the finds from the Moors, in marked contrast to the sparse numbers on the Wolds scarp, seems likely to be 'real'. Elsewhere, finds concentrated on the fringes of the Vale of Pickering reflect work around Starr Carr and other, single find spots are located along the river corridors and associated terraces. When possibly Mesolithic finds are considered, four concentrations become evident: on The Moors but away from the central watershed; in the Pennines between the Wharfe and Nidd; on the ridges of the Howardian Hills and Wolds; and in a band of the Vale of Mowbray.

As with the Palaeolithic, the Mesolithic period was also treated fairly briefly in the Manby volume (Manby 2003a). However, at least there are a rather greater number of production sites to work with, based, of course, on the findings at Star Carr but also augmented by evidence from other projects. Thus the east of the region has seen work in the Foulness Valley (Halkon 2003), West Heslerton (Powlesland 2003) and the Humber Wetlands (van de Noort 2003). Further west, work in the inter-war years has been augmented recently by a variety of other projects, notably that by Laurie (2003) in Wensleydale, Swaledale and Teesdale, and by Spikins as part of the West Yorkshire Mesolithic Project focussed on the National Trust's Marsden Estate at March Hill, where a 5th millennium BC date is proposed for the latest microlith assemblage (Spikins 2002).

The last-mentioned work has allowed Spikins to develop a model of Mesolithic social development (1999). She proposes initial, seasonal movement of communities from coastal lowlands into Pennine uplands along river corridors, followed by activity concentrated in more restricted upland zones. This change is linked, not to simple population expansion, but rather to the altered character of tree cover, and thus game resources, across the lowland zone. Given the pivotal role allocated here to river corridors as routeways and resource-rich environments, sediments within modern river courses represent vital potential sources of further archaeological and palaeoenvironmental information. Indeed, such contexts have already been exploited in the associated Trent Valley, where finds assemblages suggest blade core preparation for use at upland 'hunting camps'. In addition, these artefacts imply the development of distinct local 'traditions', though whether this trend is to be explained in chronological, functional or cultural terms remains unclear.

Beyond suggesting areas for further fieldwork, Spikins model, although provisional in nature and contested by other experts of the period, also provides one context in which the region's Mesolithic evidence might be usefully deployed. Laurie has suggested

(2003, 225) that there is some support for it in his study area. Unfortunately, little of Yorkshire's data beyond these particular Dales has the chronological resolution to help test or elaborate the model further.

One way forward suggested in the Resource Assessment was to consider 'provable' and 'possible' Mesolithic find spots, which have clearly different distributions. It might be reasonably assumed that the latter lack the chronological resolution to allocate them to either the Mesolithic or the Neolithic period simply because they relate to a transition between the two. If so, their different patterning should have chronological implications: 'provable' finds would tend to be early, 'possible' ones later, and perhaps after the Mesolithic. Looking at the maps from this point of view, the sites now defined as later appear to suggest expansion into lower-lying areas, including zones which later became Neolithic 'heartlands' (this correlation between 'later' material and 'provably Neolithic' distributions giving still more support for the former material falling on a Mesolithic/Neolithic interface). Equally, sites in West Yorkshire, the area for which the model was built, seem to exhibit little change. If so, this process of development would run against Spikins' expected interpretations.

Clearly, further detailed analysis of the chronology of this material, in particular of assemblages held in key museums, is needed to take interpretation forward. In some localised areas, for example within the Pennines and on the North York Moors, the distinction between early and late material is relatively straightforward (though between the latter and early Neolithic artefacts less so – see further below on the questionable distinction between Mesolithic and later social dynamics). In such cases it should be fairly easy to obtain greater dating resolution. In addition, there are indications that early and late sites occupy different parts of the landscape, with a final group of sites (defined by the presence of 'rod' microliths) seemingly to represent a 'terminally late Mesolithic' period in a third landscape niche.

What remains largely unclear is whether these distinctions, and the spatial patterns which result, are reproduced in other parts of the region. To take things forward here, we require first a more balanced distribution of assemblages, whether by searching for material in a seemingly blank 'upland' area such as the Wolds or, more critically, by endeavouring to investigate the low-lying Vale of York (cf. the issue of the margins of Lake Humber here, as noted under the discussion of the Palaeolithic period). Here, for example, it is notable that excavation and fieldwalking around Thornborough, although centrally concerned with later periods, has produced a relatively large collection of Mesolithic flints. Only with the collection of corresponding assemblages from other underrepresented zones will it be possible to decide whether chronological distinctions can be made, and to see if they correlate significantly with different environmental and landscape settings. If such differences can be defined, it will then be critical to look in detail at transitional areas between such zones.

Whether we are endeavouring to acquire more material from or to give more chronological resolution to what we already have, it will be vital to research the functional and chronological aspects of the data in unison. This principle has been fundamental to the construction and analysis of the Resource Assessment database, and remains essential if we are to approach questions of differences in chronology, subsistence strategy, site functions or 'cultural' grouping in a systematic way.

2.3 The Neolithic period

Distribution of that material in the *Resource Assessment* securely dated to the Neolithic period considered is more widespread than its Mesolithic counterpart, extending into Hambleton and Tabular Hills, along northern scarp of Wolds, across parts of the Vale of York/Mowbray, and away from Pennine watersheds and river corridors and into interfluves downstream. When ‘possibly Neolithic’ find spots are added, the density of distribution increases markedly in the above areas, and a concentration emerges in West Yorkshire along the Magnesian limestone outcrop (though see further below under Iron Age). Distinctions between functional categories within the period appear to add little to this patterning beyond showing, unsurprisingly, how dependent all these distribution plots are on finds of flint artefacts.

The recent statement concerning the region’s Neolithic and Bronze Age development by Manby et al. (2003b) noted the way in which the 19th century emphasis in the region on artefact collecting and barrow digging had only been significantly transcended in the last 50 years. These authors then went on to interpret the Yorkshire data in relation to a tri-partite chronological division, with each element characterised by distinctive artefact assemblages and monument types. This was followed by a discussion of landscape, settlements and monuments in the eastern Yorkshire (with sub-regional accounts to illustrate more local variations, split between the Wolds, Holderness, the Vale of Pickering, the Howardian Hills and North York Moors); the central lowlands (Cleveland Plain, the Vale of Mowbray, the Vale of York, the Humberhead Levels and the Magnesian Limestone Belt); and the Pennine Uplands (Coal Measures, Millstone Grit Uplands, Craven and the Northern Dales). Concluding sections discuss broader trends in the subsistence economy, and wider relations between Yorkshire and regions beyond.

The opening sections of the above account are important in showing the diversity of responses across the area, and of the different timings of such developments. However, investigating these relationships and variations in corresponding detail elsewhere is hampered by the lack of chronological resolution in much of the material in the database of the *Resource Assessment*. In addition, the work undertaken by Laurie (2003) in the west of the region may have demonstrated the value of dedicated landscape work incorporating different types of archaeological evidence (here, lithics, rock art and burnt mounds). Equally, Powlesland (2003) in the north, in moving from rescue archaeology imperatives to a multi-period research orientation, has been able to consider the way in which different geological settings, from Wolds top and scarp to wet and dry Vale via Aeolian sand, have impacted on both site visibility and also past human activity. Finally Halkon (2003), in the east, has proven the value of integrating archaeological and palaeoenvironmental techniques. Yet it is difficult to take the lessons of these projects into the region as a whole until we have a sufficiently wide-ranging, yet appropriately detailed, vegetational synthesis, underpinned by an associated gazetteer of C14 determinations (although see now Hall and Huntley forthcoming for a little light at the end of that tunnel).

The concluding parts of Manby *et al.*’s (2003b) account have attempted to mould the preceding diverse fragments into some general trends. They suggest a move from long barrows to cursus monuments, as seen on the Wolds, followed by the henges clustered in the Vales of York and Mowbray (and eventually, beyond the Neolithic, to round

barrows, surviving best on the Wolds but arguably widely distributed across the region as a whole). That said, such proposed trends may not be as soundly based as is often assumed. Few Neolithic or Bronze monuments have been dated on scientific grounds. Thus, for example, we have clear of when, during the third millennium, the henges noted above were built and used (Jan Harding *pers. comm.*)

Beyond this, the contrast between developments in the west and east of the region is reinforced, with faunal evidence and boundary features suggesting the development of cattle and sheep husbandry on the Wolds by the end of the period, alongside managed woodland (the start of a development coming to fruition later in the Foulness valley with the provision of timber for furnace fuel: Halkon 2003). Indeed, the authors are even prepared, at this time, to see the landscapes of the Wolds, Tabular and Howardian Hills, together with their adjacent lowlands, as a core area contrasting with more peripheral areas to the west. However, there must be some doubt as to whether these differences are genuine or a product differential survival and research energy and, even if 'real', whether they can be adequately seen as a more advanced eastern focus exploiting less developed societies to the west.

A final trend concerns the pivotal position that Yorkshire as a whole plays in articulating relationships between the north and south of the country. The latter is seen in the material culture brought into the region, for example the stone axes from the Lake District found in East Yorkshire (a 'trading' system which is linked here with the development of the henges in Mowbray), and that exported, for example 'till' flint from the Wolds found to the west in the late Neolithic, perhaps related to the tradition of high quality flint working in Yorkshire compared to the scarcity of corresponding specialist work in Wessex. However, even here, complex mechanisms are at work. For example, coastal flint, primary-worked near its source, may indeed have moved westwards. Yet finishing seems to have taken place elsewhere, for example in the vicinity of the Thornborough monument complex ((Jan Harding *pers. comm.*)).

Looking at the relationship between Yorkshire and other regions more generally, one could argue for a concrete link between East Yorkshire and the corresponding regions to north and south, most obviously East Anglia. Many accounts of British prehistory portray social dynamics in terms of a south-north core/periphery. Yet this apparent division may be mainly a product of the amount of energy which has gone into data-gathering in the south, the profusion of material which has been generated as a result, and the areas of interest of those writing such syntheses. Our work suggests that social and economic relationships might be better 'read' from east to west, not north to south, with the Yorkshire region at the centre of the former zone and thus pivotal in articulating relationships up that side of the country (although one might, again, choose not to see this in terms of simple core-periphery relations – see above)

The trends identified above are useful indicators of a variety of possible relationships, and more, better-dated material from a wider range of landscape settings would, no doubt, help to confirm or deny their validity. However, the need for more accurate dating is not the only, and arguably not the biggest, barrier to moving towards the interpretation of social dynamics in this period. The character of 'the Neolithic' and its relationship with the preceding period is currently a subject of intense debate (compare Spikins' work, mentioned above, with Vyner 2003 for example). Many commentators now argue that the conventional notion of a 'new' Stone Age, comprising integrated

land clearance, agriculture and stock-rearing, should be replaced by a greater emphasis on population mobility and subsistence practices in the early Neolithic, social dynamics which continued from the Mesolithic.

In this respect, it is important to note the previously-mentioned similarity between late-Mesolithic and early-Neolithic flint assemblages in the Pennines. In addition, Manby *et al.* (2003b) have remarked on the seemingly slow take up of agriculture across the region, and suggest that the preponderance of arrowheads on provably Neolithic sites imply a continuing emphasis on hunting at this time. Detailed investigations of the characteristics of assemblages from the apparently different periods, set beside the changing locations of such activities in the landscape, will allow us describe the nature of this transition (or lack of transition) with greater accuracy. Beyond artefact studies, however, it will be essential to also generate better dating for the sequences of monument development and their associated landscape settings, with which the lithics are associated.

Yorkshire evidence falling more definitely within the Neolithic period suggests that the development of ceramic production was broadly contemporary with the adoption of monumental burial practices and other large feats of construction such as creating cursus monuments. Both trends can be usefully interpreted in terms of sustaining social cohesion or the maintenance of structures of authority. Yet it remains entirely unclear whether this is taking place in the context of greater sedentism amongst a growing population turning increasingly to agriculture, or whether earlier lifestyles are essentially unchanged.

Here the palaeoenvironmental evidence (Hall and Huntley forthcoming) is quite striking in relation to the economic context in which ceramic production and monumental construction took place. Whilst there are clear indications of agricultural activity in Yorkshire within the Neolithic period as conventionally defined, true diversification and intensification of crops – i.e. the point at which a new form of economic organisation impacted *significantly* on the landscape – is deferred until the late Bronze Age, or even into the Iron Age (note that van der Veen's (1992) wide-ranging synthesis of such evidence from Northern Britain also runs from the late Bronze Age forward, in her case continuing until the end of the Roman period). There is a range of evidence that the completion of an 'agricultural revolution' was deferred until at least the Bronze Age.

A second issue concerns how the role of long distance trade, most obviously that in axes from the Cumbrian Fells, is conceived in relation to the above trends. This debate is vital for Yorkshire, situated at an important geographical nexus between the stone sources and distinctive regional landscape and settlement complexes. It has been assumed, conventionally, that movement of these artefacts relates to forms of gift exchange, their movement being designed to ameliorate tensions between different social groups. What is insufficiently discussed is the source of such tensions – do they simply emerge within incipient social hierarchies of settled agricultural communities? Or are they, rather, a product of increasingly fraught relationships between static groups, conventionally seen as 'Neolithic', and still mobile 'Mesolithic' elements? Equally, this is only one model for the movement of goods during the Neolithic. A number of other mechanisms may be at play.

To make progress in each of the above spheres, we need to move beyond the assumption that a coherent ‘Neolithic package’ came into existence at some point in different parts of the landscape, and that the region’s archaeological evidence should simply be used to say where this occurred and when. Yet if we wish to break down, or even do away with, existing divisions within early prehistory, for the reasons suggested above, what should replace them, if anything? Here, the key need is to construct models utilising both chronological *and* the functional elements, as expressed in the structure of the *Resource Assessment* database. In this way, a new series of categories could be allowed to emerge.

One such model might suggest: initial human mobility, its development often dictated by changing environmental circumstances; then greater regularity of movement, articulated through monumental statements in the landscape and with the social tensions thus created catered for by transmission of ‘prestige goods’, including perhaps with ceramic vessels; to, finally, increasingly widespread pastoral practices and intensive agricultural regimes, ushering in a fundamental change to social and economic dynamics. Yorkshire can make a contribution of national importance to studying transitions across conventional periods, and equally within them (note, for example, the striking distribution of henge monuments in the region, with their implications for the adoption of a ‘later Neolithic package’).

2.4 The Bronze Age

Resource Assessment data entries for this period are greater in number than for any other, dominated by funerary monuments due to round barrows of mostly Early Bronze Age date, visible as upstanding monuments, and thus focussed on by early, antiquarian research; or seen clearly in the crop marks and soil marks recognised by aerial photography. In both cases, these features are readily and unambiguously identified, as demonstrated by the close correspondence between the distributions of proven and possible Bronze Age funerary evidence. Indeed, this class of evidence has an importance well beyond Yorkshire, finds from round barrows providing 25-30% of the national total of such material.

Landscape enclosure, on the other hand, is much more patchily represented and less chronologically certain. Some of the gaps here must be due to certain data sources listing morphologically distinct features as ‘Iron Age’ which others see as merely ‘late prehistoric’. Importantly, the distribution of *provably* Bronze Age ‘land enclosures’ differs significantly from that of the *possibles*. Unsurprisingly, clusters in the latter category show increased density over the former, but also have an additional concentration on the Magnesian Limestone belt in West Yorkshire. This might suggest that field systems there originated in the Bronze Age, although recent research suggests that most are later (see further discussion under Iron Age). Finally, the distribution of evidence for production is closely similar for Neolithic and Bronze Age. Though in part a product of how expertise in identifying lithics in the field is distributed, this once again seems to reinforce the continuing importance of mobile hunter-gatherer strategies into later prehistory.

Turning to the question of interpreting social dynamics in this period, the synthesis by Manby *et al.* (2003b), covering both Neolithic and Bronze Age periods, shows that the

trends in the preceding period continue here. Hence the aforementioned round barrows come at the end of a long process of development in mortuary practices. Equally, the material circulating in the Pennines at this time remains different from that found further east, for example in the form of collared urns. However, diagnostic Late Bronze Age metal work of good quality found in the west shows that core-periphery interpretations should not be related simplistically with exploiter-exploited, still less with rich-poor, dichotomies – social and cultural dynamics in the east are different, not superior. Finally, exchange systems with other regions continued to flourish, for example in the form of gold, copper and copper alloy artefacts being imported into the area, and jet and ‘Yorkshire-type’ socketed axes leaving it.

Correspondingly, some of the problems which arise when attempting to interpret underlying social processes, flagged up previously in the discussion of the Neolithic period, are again evident. Of particular importance is the point that conventional chronological divisions may obscure more than they show. Thus, obviously, the invention of metal production represents an important step forward. Yet it is funerary practices initially, in the form of round barrows, then pottery types in the form of beakers (linking Yorkshire with a specific continental process of development, perhaps for the first time) which are far more archaeologically diagnostic of the Bronze Age in the region.

Research dating back to the 1970s in Yorkshire has noted the considerable variations which exist beneath the barrows, suggesting that these monuments and associated funerary practices comprise far more than individual high-status burials. This area of interest deserves to be continued in its own right. Beyond it, however, the relationship between such developments and landscape exploitation remains obscure, in part because the question is not posed frequently enough in such terms. The creation of linear boundaries, classically on the Wolds, and the indications of more permanent settlement in many parts of the region imply more intensive exploitation in general, and perhaps an increased population. Suggestions above that some new field systems, for example on the Magnesian Limestone belt in West Yorkshire, may have their origins in this period, adds further weight to the picture.

In these various ways, this period in general, and the Late Bronze Age in particular, aligns itself quite closely with the patterning of the early Iron Age (a conclusion which, as noted previously, gets further backing from palaeoenvironmental evidence). The fact that this connection is not more readily recognised seems due to two, mutually reinforcing, factors. Firstly, for certain HERs, the Iron Age is the ‘default’ attribution for many undated enclosures. Next, conventional wisdom in much writing on prehistory is anchored in models constructed on the basis of changes first identified and interpreted in relation to the south of England, especially the Wessex downlands. We need to be more cautious about the assumption that such paradigms are automatically relevant to very different settings elsewhere in the country (see earlier discussion of the Neolithic period).

Finally, this failure to link late Bronze Age and early Iron Age dynamics can be seen as part of a wider problem. Bradley (2002) has noted the incongruence between landscape change, as established by palaeo-environmental studies and underpinned by radiometric dates; and cultural change, as purportedly indicated by artefact-based schema. At the very least, we need to accept that production and surplus articulation may move along

very different lines, and to different timescales, to cultural, and especially sacral, dynamics. However, ultimately, what is at stake here is the need to understand, in the round, the material context in which people drank, ate and lived, before they died and were buried with diagnostic ceramics.

2.5 The Iron Age

The Iron Age evidence generated by the *Resource Assessment* provides a more chronologically-refined picture than for any of the previous periods, with a marked contrast between the distributions of ‘provable’ and ‘possible’ data points. The former are dense in the Wolds and the north-western Pennine uplands, the concentrations here perhaps allowing detailed local trajectories to be charted. In contrast, the latter add further concentrations across the North York Moors and much of West and South Yorkshire.

Land enclosure follows this general pattern, although the concentration of evidence along the Magnesian Limestone is now evident in South, as well as West, Yorkshire. As noted previously, these differences seem likely, in part, to be a product of how each HER classifies its aerial photographic evidence. Although the data, as stored, allows the possible development of such landscape features in the Bronze Age (see above), it seems that most have later origins. In particular, recent work in the form of extensive excavations related to the construction of the A1-M1 link road (Roberts *et al* 2001) argues that field systems appeared no earlier than the Middle Iron Age and continued to develop thereafter, with large rectangular fields appearing sometime within the Roman period.

Iron Age funerary evidence, as is well known, is mostly restricted to the Wolds and the uplands immediately north of the Vale of Pickering (although recent evidence suggests that ‘Arras-style’ inhumations may appear further to the west on occasion, with important implications across the region for the hegemony of the élites which these diagnostic burials are assumed to commemorate). This prominence of burial evidence in the east of the region has tended to mean that histories of the period have been written with a focus on the Wolds, continuing the antiquarian tradition of concentrating on monumental burial. However, recent evidence from West Yorkshire (Roberts 2005, Ian Sanderson *pers. comm.*) shows just how wide-ranging approaches to body disposal might be, including not only the recently investigated ‘cart burial’ at Ferry Fryston, but contracted skeletons in pits associated with settlements at Ledston and Micklefield and partially articulated limb fragments associated with pits, at South Elmsall, and within an earlier ditch, at Colton.

Unfortunately, those cases where burial can be related to settlement are all too rare and, where settlement evidence is examined in archaeological syntheses, it involves in the main a discussion of the role of proposed hillforts as central places (though even here identification can be doubted, for example in the case of Ingleborough) and of the seemingly unique site of Stanwick. There are all too few attempts to examine habitation sites in relation to the evidence of landscape enclosure and to the more general development of the agricultural and pastoral economies.

The east-west split, whether real or imagined, continues to dominate commentaries on the Iron Age in the region as a whole. Thus Mackey (2003) discusses the east, and Manby (2003b) the west. The former account stresses, surely correctly, the need to move beyond burial evidence to concentrate on landscape boundaries, droveways and settlements. In the first instance, this might involve investigation of intersections between features to provide stratigraphic evidence and to generate groups of stratified pottery, the latter allowing us to follow up Rigby's (1998) work on such ceramic assemblages. Linking the latter to dates generated by C14 or thermoluminescence would further enhance their utility, and perhaps start to get over the problems noted previously of circular arguments on the timing of cultural change.

Manby's (2003b) discussion of western and central areas, although split between early middle and late elements, also acknowledges the importance of obtaining absolute dates, arguing for the need to use thermoluminescent determinations to fill the gap created by the 800-400 cal BC radiocarbon calibration plateau. He notes the importance of the Stanwick site for the region as a whole, and of metalwork and coinage finds towards the end of the period. Whether the apparent differences between east and west of the region in the Iron Age are real or a product of differential fieldwork and site visibility could be debated. However, Manby's overall conclusions of what is needed to take research forward here have considerable resonances with Mackey – the need to refine chronology and, in the process, to consider more carefully the relationship between the start of the Iron Age and its predecessor; and the requirement to relate settlement to landscape development on a more systematic basis.

Some of these recommendations are now being tackled, at least implicitly, by means of more recent evidence from both commercial excavation and aerial photographic coverage. This is allowing new aspects of Iron Age society to emerge. Concerning links between this period and changes at the end of the Bronze Age, for example, 'type sites' of the latter such as Staple Howe have been shown to continue well into the first millennium bc. More generally, the process of agricultural intensification can be better charted via the creation of field systems and in patterning in palaeoecological evidence. Conventionally, Yorkshire has tended to relate these developments to a climatic deterioration which pushed people into expanding onto more marginal areas, and there may be an element of truth in this. Yet it should also be remembered that there is significant evidence of increased social hierarchies at this time. Greater social complexity can create change in its own right due to internal pressures and possibilities, independent of the impact of extra-systemic factors such as environmental change.

Part of the problem in deciding between different causal factors relates to the underlying problem of chronological resolution. In addition, two big issues need to be theorised. First is to think through the relationship between the pastoral and agricultural elements of the rural economy. We may be well past the time when the landscapes north of the Humber, especially Brigantian territory, were seen as occupied solely by extensive ranching systems. Yet the relationship between the development of field systems, evident from aerial photography, and needs of extensive cattle and sheep farming is not sufficiently discussed.

Secondly, the emergence of elite groups is clear, but the basis of their social power needs more careful consideration. Halkon and Millett (2000) have suggested that control of iron production in the Foulness Valley may have been pivotal to the

consolidation of aristocratic power in that area. Yet even this relationship must have been predicated on more general control of the landscape. This was essential for the transport facilities and food resources which it embodied, together articulating the latter surpluses being vital if central authority was to reproduce itself in the long term.

In discussions of the emergence of social hierarchies, it is often assumed that such higher-order groups were sedentary. However, the possibility of itinerant authority, indeed its probability at a formative stage, needs to be allowed for. The Iron Age could be the period which sees a long-term process of social consolidation coming to fruition, the point when once-mobile aristocratic authority moved beyond the use of gathering places to the permanent sites. Does this explain the change from an initial proliferation of small 'hill forts' to the occupation of fewer, larger places such as Stanwick? And is such success based on its escalating control of large swathes of landscape, for example in the form of the increasingly common 'ladder settlements' on the Wolds? Questions such as these, and the models which might be built out of them, may provide a more useful context for structuring our archaeological evidence than discussion of whether a particular patterning can be allocated to the formally-defined Iron Age period or to an earlier (or, indeed, a later) one.

2.6 The Romano-British Period

The distributions recorded in the *Resource Assessment* have a wealth of evidence for this period (though rarely with sufficient chronological resolution to be useful to questions derived from documentary frameworks – see further below). In some places, comparisons between Iron Age and Roman maps suggest complementary distributions. Thus, on the northern scarp of the Wolds, Roman points form two very marked, east-west, linear alignments and Iron Age data fills the space between them, as well as occurring to the south – a possible instance of the growth of Romano-British settlements along the communication network, with the countryside in between retaining its earlier organisation. Elsewhere, there are significant changes. Thus the sudden increase in Roman sites along the Howardian Hills, if genuine rather than a question of classification, seems significant. Equally, comparison of Roman and Iron Age land enclosure suggests a shift in focus from the Wolds to the Vale, with the aforementioned development of large rectangular fields sometime within this period on the Magnesian limestone (Roberts *et al.*, 2001).

Ottaway (2003) describes the various stages during which the data embodied in the above patterning was generated: before 1945, the post war decades, and then a qualitative change from 1972. His account then discusses military imperatives, roads and civilian settlements, noting *inter alia* the tendency for provably 'Roman' sites to cluster beside thoroughfares (see also Halkon 2003 on the evidence in the Foulness valley for the impact of the Roman road system there, though with pre-existing, riverine factors still influencing where and how settlement then developed beside the roads). All of this is very much in the traditional of Romano-British studies. Yet Ottaway then goes on to note how, in coming to terms more generally with patterning in Yorkshire's Roman data, recent commentators have begun to move beyond the interpretative frameworks derived from classical sources which emphasised only military and political dynamics in the region.

Part of the reason for this change relates to empirical issues. In places, the sheer weight of archaeological evidence which we now have is clearly relevant to spheres well beyond those concerned with a simple process of conquest and consolidation. Thus, Ottaway's account discusses urbanism, religious practices and mortuary behaviour in the conventional way, and interprets the concentration of villas in the east of the region in terms of 'cultural dynamics' i.e. a greater appetite for 'Romanisation' there (although this need may, in turn, still be underpinned by the need to develop particular forms of agrarian exploitation). To this could be added the growing amount of data related to Roman burial practices, notably around York itself, where the foundations for such studies within Britain as a whole were laid with the work at Trentholme Drive (Wenham 1968). This gives us the ability to investigate populations at this time in ways which step well beyond anything which might be derived from contemporary documents.

On the spatial side, data distributions point up particular pockets showing either more speedy development or marked delay. These trends do not fit so easily within traditional frameworks, but demand a consideration of wider changes (Ottaway 2003 suggests a link to a move from pastoral to arable regimes in the region, for example). By the same token, evidence which could be generated by analysing ceramic assemblages (Evans and Willis 1997) would offer insights into social interaction. In addition, we now have a wide range of archaeological material indicating a significant transformation in the character of occupation across most of the region from around AD200 (Roskams 1999).

A second component which has impinged on interpretation of Roman Yorkshire relates not to new discoveries and exploiting the potential of better-quality data, but rather to general developments in archaeological theory. These have taken us beyond culture-historical narratives, for example those which base interpretations on military events, usually underpinned by the personal motives of individual emperors or of Iron Age tribal leaders, towards functionalist forms of interpretation. In their place, a different sets of questions has emerged, for example concerning urban hinterland relations (Perring 2002, Roskams 2003, 375) - an aspect which might be tackled here by using environmental archaeology to define settlement 'fingerprints' for comparing York and Castleford.

Yet, too often, the impact of 'New Archaeology' and its interest in economic matters has been to reinforce the idea of the Roman introduction of 'the market' to oil the wheels of commerce in order to accommodate indigenous demand. Such approaches are often linked to the assumption that the processes of production in landscape, generating the surpluses exchanged in that market, were based on Iron Age systems. Neither the notion of market economics, nor of simple continuity of landscape exploitation, does much justice to the chronological and geographical variations in the process of development seen in the archaeological record. To 'explain' all of this in terms of native (in)ability to grasp new opportunities seems very superficial (and certainly helps little in coming to terms with what may have happened in the region into the fifth century AD and beyond - see below).

In conclusion, the preceding discussion demonstrates that we need to fill important gaps in the database for this period, notably in the not-so-obviously 'Romanised' parts of its settlement systems, and to increase the quality of that data. For example, in order to

elucidate the rural context in which the more well-known Roman *foci* of fort, town and villa subsisted and developed (or failed to develop), it will be necessary to undertake consistent quantification of artefactual and ecofactual assemblage data from the whole range of site and landscape contexts. Only in this way can the relationship between settlement development and the production of agricultural surplus be directly appreciated. In addition we need to generate interpretative frameworks which allow the possibility of a range of economic structures to be considered, rather than seeing all as some sort of precursor to the modern, capitalist system.

By using skeletal analysis to throw light on the actual people of Roman Yorkshire, understanding diverse reactions to imperial rule in the landscape, deploying assemblage data to investigate how Roman and native identities were established or rejected, and explaining systemic change within the time period, we will begin to establish a properly *archaeological* research focus for this epoch. These themes will be pivotal aspects of any such agenda.

2.7 The Early Medieval Period

Early medieval *Resource Assessment* distributions, even when plotted as a single category, are sparser than almost all their earlier counterparts, especially in relation to the rural landscape which sustained that society. In particular, the large numbers of ditched enclosures, fields and other landscape features attributed to the Iron Age and Romano-British periods are seemingly lacking here. This may be more a product of our understanding of dating than a reflection of reality: settlement of this date may be concealed in Roman sites which continued into later centuries, or those of high medieval date whose earlier origins remain unrecognised. Even so, such situations simply serve to demonstrate the scale of work which is still required on chronological resolution. In addition, few data sources distinguish between the three traditional subdivisions of 'Dark Age', 'Anglian' and 'Anglo-Scandinavian' data points. Finally, even where this is possible, a functional category such as the sacral/funerary runs together both 5th/6th century cemeteries and ecclesiastical sculpture of the later 7th and 8th. It is difficult to derive any meaningful interpretations from such 'raw' data.

Frameworks provided by documentary sources (for example Bede's account of the development of Deira and Northumbria), writings which become increasingly detailed as the period progresses, have fundamentally influenced the interpretation of archaeological evidence from the early medieval period in Yorkshire. This factor continues to be important, often leading commentators to distinguish developments into 'British' and 'Anglo-Saxon' spheres. Explanations of early development thus tend to take the form of the impact of intrusive, ethnically-defined groups. For later periods when, we assume, such identities have been subsumed beneath the overarching political structure of what became Northumbria, emphasis moves to the effect of religious, essentially Christian, practices which are seen as percolating down through society.

What the purely archaeological evidence demonstrates quite clearly, whether in terms of burial practice, or changes in trading centres and monastic institutions, is the development of greater social stratification through this period. Archaeological identification of the settlement structures which underpin this progression (as opposed to simply matching sites with place name evidence and documentary references),

remains problematic, however, especially in the west of the region. Further, as already noted, the landscape context for these changes is even more opaque.

Recent syntheses of the early medieval period demonstrate many of these trends. Thus, after a brief attempt to characterise Yorkshire at the turn of the 5th century, Loveluck's (2003) commentary structures his discussion of settlement, funerary and economic elements in terms of a divide between an Anglo-Saxon east and an initially British west. The former's more voluminous and diagnostic material culture and more arable economy allows a more detailed account to emerge than in the relatively 'impoverished' west, where only more general trends can be distinguished.

His conclusion for the east is that the well-known cemetery evidence now needs to be integrated with settlement, economy and landscape components, to aid the search for diverse forms of settlement types and landscape relationships. This, he suggests, might be based on the output from existing large scale projects, both those dedicated to this period (Flixborough, Whitby, West Heslerton, in its initial guise), and those concerned with longer timescales but with significant early medieval findings (Hayton, Wharram Percy, Thwing). A concerted campaign of fabric characterisation for Anglo-Saxon pottery, along the lines undertaken by Vince and Young in the East Midlands, might help to provide more accurate chronologies and elucidate economic and social links across this zone. To the west, for the reasons given above, Loveluck argues for structuring research around broader changes in land-use, structured around earthwork topographical survey, geophysical prospection, palynological sampling and selected C14 dates, all perhaps initially targeted on the better agricultural land, for example at the west edge of the Vale of York.

For the 8th to 11th centuries, Hall's account (2003) explicitly stresses the role which documentary history might play in aiding the construction of viable archaeological research objectives, following this with a description of what is known of York, then other 'power centres', mostly based around a consideration of cemeteries, monastic houses and churches. His rather depressing, but perhaps realistic, conclusion is that archaeological data for these centuries are sparse, and that our understanding of their implications is minimal. Thus our ability to even estimate the relative potential of different sites after evaluative fieldwork is extremely limited.

Loveluck's suggested way forward, based on integrated research projects combining landscape, settlement and material aspects of the archaeological record, may have some appeal. Yet Hall is keen to emphasise how intractable the making of convincing interpretations can be, and how difficult it might well remain to get access to new information, given the unpredictability of the timescale for academic output from even large research projects. Thus, rather than concentrating simply on the gathering of Loveluck's better quality, integrated datasets, it may be more important to construct better models of transition, centred on the change from group identities to more complex social hierarchies. Better chronological definition is clearly essential to this process of theorisation. Yet it could be argued that, in producing such models, the three phases which have dominated interpretation of the early medieval period – 5th-7th ethnicity, 7th - 9th Christianity and 9th - 11th Vikings – should be set aside, as should, in the first instance, the notion of there being a fundamental divide between east and west. Having done so, the substantive changes in landscape, settlement, mortuary practice

and material culture might emerge more clearly, and could be considered more fully in their own right.

2.8 The High Medieval Period

Our study of this period in the *Resource Assessment* incorporated three strands of evidence: data distributions along the lines of preceding sections; a sample of six of Yorkshire's larger towns; and a dedicated study of a wider range of West Yorkshire's urban settlement hierarchy. To set beside these themes, Moorhouse's consideration of medieval Yorkshire (2003a) concentrates on its rural landscape, an element followed up by his detailed and extended consideration of the anatomy of the Yorkshire Dales as a case study (2003b) and, with a rather different approach, by Wrathmell on rural settlement (2003). For the towns, Hall's previously-noted discussion of Viking-Age York (2003), plus Roskams' (2003) commentary on the region's urban archaeology as a whole, go some way to correct the purely countryside emphasis. Both are essential if we are to fully understand the interdependence of the two spheres (Moorhouse 2003a, 208).

Data patterning seen in the *Resource Assessment* shows, as with previous periods, that gaps and concentrations in its distribution are mostly a product of past collection processes, current curatorial or land-use practices, and geomorphologically-determined, site visibility. Only programmes of concerted data gathering will provide a more balanced sample. That said, considerable continuity is suggested for certain areas (perhaps the most long term being Halkon's suggestion (2003, 274) that the ridges of Aeolian sands in his Holme-on-Spalding-Moor study area have influenced human settlement from Mesolithic to medieval periods). Yet some changes clearly happen within the Middle Ages. Thus the evidence for only limited activity at this time on the North York Moors and on the Wolds seems to be real aspect of that society, whilst the concentrations of data-points in the Howardian Hills also seem to be significant in the opposite direction.

When individual functional categories are considered, water-related sites imply that small rivers were exploited as much as larger ones. However, the most striking pattern is the dearth of sites concerned with non-agrarian production, storage/exchange, elite construction and military activity across the west of the region in general, and in the Dales in particular. One interpretation sees this as older and larger institutions, in particular monastic ones, retaining their dominant position in the west, with smaller, secular powers developing control elsewhere. If true, this would have important implications for nature of the region's transition into the modern period, given that the west was pivotal to the 'industrial revolution' (see, for example, Moorhouse (2003b, 336ff) on the central position monasteries seem to have played in exploitation of mineral resources).

Next, turning to our case studies of Doncaster, Leeds, Pontefract, Ripon, Scarborough and York, it is clear that, cumulatively, modern threats are having a significant impact at various levels of the urban hierarchy. However, with ingenuity and planning of research objectives, this impact can be managed in such a way that the data generated by modern development can provide real research dividends. Three particular ways forward suggest themselves. Urban deposit modelling, using a combination of desk-top

studies, borehole data and environmental evidence, might be productively pursued even in smaller places. Secondly, artefact assemblages, even when lacking detailed contextual information, can provide broad indications of levels and types of economic activity, whilst ecofacts could be used to characterise a town's 'footprint' on the landscape, especially if material from the settlement margins, and from beyond the formal area, was to be incorporated. Finally, controlled excavation can provide information on the spatial dimension of urban functions, especially if linked to the study of standing buildings. Throughout, any chance survivals of horizontal stratigraphy within any of Yorkshire's medieval towns must be given the highest priority.

Thirdly, our study of WYAS archives suggests that additional datasets may be available for many of the smaller medieval towns across our region, often lodged in less obviously 'archaeological' publications such as conservation plan summaries or reports researching documentary sources. Thus Sheeran (1998) lists 43 places in West Yorkshire as medieval towns. 17 have detailed reports of some form or another, and only 7 lack any form of collated information. West Yorkshire may be better placed than some in this respect, but East Yorkshire suggests a corresponding level of information, and HERs from other counties could be checked to tabulate what might be available there.

Turning to the recently published commentaries on the countryside, Moorhouse's (2003a) consideration of the rural landscape strongly advocates an all-inclusive approach to survey, led in the first instance by documentary evidence, including name studies, and articulated around the documented unit of 'the township'. His argument is that we need to be inter-disciplinary, landscape historians, not archaeologists per se, and to work inductively from a detailed and long-term consideration of particular parcels of land, with the aim of reintegrating settlement and landscape histories. Finally, in carrying out this work, it will be important to avoid a misleading distinction between sophisticated arable regimes in the east, and more simple non-arable ones in other places. We should expect pastoral systems in upland Pennine zones to be just as complex as landscape exploitation of lowlands elsewhere.

The work which Moorhouse has undertaken in the Dales (2003b) shows what this means in practice, allowing us to move from buildings to settlements to fields to routes through the landscape to woodland in all-encompassing fashion. Seeing the manorial structure of corn mills, sheep-houses, parks and gardens, horse-studs and quarries in the round, in this subtle way, could never be grasped from brief aerial photographic survey and limited sketch plans on the ground. However, carrying out such work will require methodological development and academic training. It also involves better communication between researcher and curator than hitherto, if we are to ensure convincing and academically respectable reactions to the various modern factors degrading medieval landscapes.

Wrathmell (2003) approaches the subject in a different way, arguing that we should develop priorities by the application of national agendas to the region, not work inductively up from detailed studies, in part because the latter approach will take too long to publish the required studies and assemble the data held outside HERs. He also maintains that, in turning our attention to less-investigated dispersed settlements, we should ensure that their more nucleated counterparts are not entirely forgotten.

Yet Wrathmell and Moorhouse also have much in common. Each stresses the need to look beyond settlement to territory and, for particular purposes, to matters such as transhumance and the elite power structures beyond. Each has a common emphasis on the requirement for interdisciplinary studies, and to be prepared to step beyond constraining period categories when the need arises. More importantly, both also agree that Yorkshire should be particularly well placed to take this agenda forward, at both the general landscape level and in relation to particular types of feature such as routeways, quarries, and craft and industry. There are two reasons for this. First, it is a region of contrasting landscapes (Moorhouse 2003a, 181), for example covering all of the different levels of settlement density mapped by Roberts and Wrathmell (2000), and crossing the boundary between ‘central province’ and northern and western province’ thus defined. Wrathmell thus suggests (2003, 366) that investigating a transect across the latter interface would have an output with national significance.

Secondly, there is the added bonus that much work has already been carried out on the period here, notably in relation to monastic complexes, in part because our documentary sources are especially rich. Moorhouse (2003a, 182ff) describes the history of landscape studies in relation to the region, even claiming that the modern era of medieval archaeology, not just in Yorkshire or Britain, but across Europe, began on the day in 1948 when Morris Beresford began his interest in the deserted medieval village at Wharram Percy. Certainly, as Wrathmell makes clear (2003, 364), the research objectives of the Medieval Settlement Research Group (offspring of the Deserted Medieval Village Research Group formed by the collaboration of Beresford with John Hurst at Wharram Percy) remain pivotal to how landscape research for this period might be taken forward. Yorkshire has been a leader in matters medieval, and should continue to be so.

Yet, if the above data sources and perspectives are to be deployed effectively, whether in protecting Yorkshire’s medieval remains or in exploiting their research potential, we will need to establish a more coherent intellectual framework for their articulation and integration than currently exists. Such a framework will have to confront a series of vexed issues, some of which are listed below.

The first concerns our approach to the concept of landscape archaeology in general, and to the relationship between archaeological and documentary evidence in particular. The commentators discussed above suggest that frameworks derived from the documents should structure medieval research, and that the work of the landscape historian, based on the township/vill rather than the modern civil parish, must remain central to this exercise (although it is acknowledged that other major organisations – seigneurial manor, ecclesiastical parish, monastic estate – also imposed themselves on the landscape). Each of these components could be mapped from documentary sources, as has been approached in the Yorkshire Dales (Moorhouse 2003b), and linked on a dedicated database, as done for corresponding work in Northamptonshire.

Such multi-disciplinary work usually portrays archaeology as playing a secondary role (and one within which, indeed, the archaeological holdings of HERs will always be of marginal importance, given the random and haphazard ways in which material has arrived in their systems, and its being classification by site or monument, when each of these can only be understood as part of a larger landscape). However, it may still be

useful to consider how a more 'archaeological' approach might be productive of new insights. For example, the administrative unit of 'the township', with its known limits and constituent parts, could be set beside purely archaeological distributions derived from plotting functional categories. This would raise important, and interesting, questions where the latter, when based on a profusion of evidence and demonstrating clear patterning, do not correlate with the township units,. In what ways, and to what extent, did the vill structure *all* activities of rural producers? And what explains those spheres in which, based on archaeological findings, it did not - for example, because township boundaries were transcended by considerations of access to landscape resources such as minerals, pasture and transport infrastructure?

Secondly, moving from rural to urban spheres, we need to consider more deeply issues concerning the role of large and small towns in medieval society: are the former just the same as the latter but writ large? Or do they embody additional functions? Fingerprints derived from artefactual and ecofactual material would go far in exploring this issue, and elucidate the potentially diverse relationships between towns and their hinterlands (Roskams 2003).

Finally, how should we characterise the social and economic relations which define the period, and underpin both rural and urban spheres? One approach is to start with a totalising concept of feudalism, whether defined in cultural and ideological terms with Postan (1972), or in materialist terms with Hilton (1992) – see Roskams (2003, 374) for further discussion. And if, in postmodernist vein, such an overarching concept is rejected, then how else is social analysis to proceed?

2.9 The Early Modern period

The work which the Resource Assessment commissioned analysing the West Yorkshire's HER holdings for industrial archaeology shows how much information is currently available there, and how much can be made of it by knowledgeable curatorial staff. However, this is not a common combination. Elsewhere it can be a struggle even to get the early modern period acknowledged as being archaeologically relevant to either development control decisions or research outcomes, despite a recent boost generated by MPP record enhancement initiatives. Yet considerable threats remain to the archaeological resources of that period: large urban projects developing brownfield sites; mineral extraction or the insidious drip-drip effect of agricultural exploitation in the countryside; and destruction of the 'hidden landscapes' of underground mining. Furthermore, data generated in response to these destructive agencies will always produce uneven coverage geographically, chronologically and functionally, which will limit social interpretation.

That said, research such as that of Martin Roe on mining in the Halifax area and the work pushed forward by the South Yorkshire Archaeology Service and undertaken by ARCUS on brownfield sites in Sheffield show how opportunities for investigation can be exploited. The former suggests that quantification of below-ground resources would be enhanced by commissioning surveys along the lines of the cave audit. The latter becomes particularly productive when integrating above- and below-ground work with artefact studies, documentary studies and oral materials. Such contextualised investigations can also allow more meaningful feedback of results to local communities

undergoing the demise of industrial practices in their areas, making the discipline of archaeology socially relevant.

To complete this virtuous circle, however, we also require intellectual development. Cranstone's commentary (2003) notes the way in which industrial archaeology has tended to concentrate on data collection, and then been content to interpret it in relation to increasingly outmoded, simplistic functionalist interpretations. We can identify some changes of attitude within the latter half of the 20th century towards what industrialisation means. These have moved from negative to positive aspects, portraying it as ushering in the birth of modernity in an evolutionary process driven forward by innovatory factory owners. This approach has promoted the notion of gradual change from cotton to today's pharmaceutical and petrochemical industries, with coal, steel, engineering and shipbuilding, cars and electrical goods in between.

Yet many problems remain with such conventional wisdom. Explaining past development in terms of a small number of particular industries can marginalise all others, and portraying change in unilinear sequences all-too-easily drops into the trap of seeing such development in terms of peculiarly 'British' aptitudes. In reality, detailed evidence shows how much is owed to continental advances. In addition, rather than technological progress, employing newly-mobile wage labour for its implementation, being mainstream, recent research suggests that inventors often occupied social lacunae and that the social structure of the workforce still owed much to pre-industrial formations.

The region's industrial archaeologists have been pivotal to pointing out the central issues here: the complex nature of industrialization; the intricate relationships between technological change and landscape exploitation; the difficult, sometimes fraught, relationship between technical development and labour organization; the interaction of the physical and mental worlds; and the social impacts of changes in production in others spheres of human activity, both thematic (for example in consumption) and geographical (for example in the colonies).

Cranstone's article (2003) encapsulates much of this, moving from an outline assessment structured in terms of conventional categories (ferrous and non-ferrous metals, coal, quarrying, glass alum, chemicals, textiles and utilities) towards the advocacy of a post-medieval, rather than purely industrial, agenda covering landscape setting and environmental impact, urbanisation, transport, and the archaeology of elite and religious power, of class, and of migration and culture contact. Thus many of the ideas needed to develop a new interpretative structure are in place, replacing the simplistic, narrow and 'top-down' ideas embodied in the work of earlier decades. Only when this completed and brought centre stage can the region's industrial archaeology become truly relevant to 21st century society.

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