



University of
Salford
MANCHESTER

The 2005 Rolt memorial lecture. Industrial archaeology or the archaeology of the industrial period? Models, methodology and the future of industrial archaeology

Nevell, MD

<http://dx.doi.org/10.1179/174581906X106570>

Title	The 2005 Rolt memorial lecture. Industrial archaeology or the archaeology of the industrial period? Models, methodology and the future of industrial archaeology
Authors	Nevell, MD
Publication title	Industrial Archaeology Review
Publisher	Association for Industrial Archaeology
Type	Article
USIR URL	This version is available at: http://usir.salford.ac.uk/id/eprint/10811/
Published Date	2006

USIR is a digital collection of the research output of the University of Salford. Where copyright permits, full text material held in the repository is made freely available online and can be read, downloaded and copied for non-commercial private study or research purposes. Please check the manuscript for any further copyright restrictions.

For more information, including our policy and submission procedure, please contact the Repository Team at: library-research@salford.ac.uk.

The 2005 Rolt Memorial Lecture Industrial Archaeology or the Archaeology of the Industrial Period? Models, Methodology and the Future of Industrial Archaeology

MICHAEL NEVELL

This paper outlines in brief the development of Industrial Archaeology in Britain as a mainstream branch of archaeology over the last 50 years, before then reviewing some of the recent methodological developments in IA. The author argues that whilst Industrial Archaeology embraces both the archaeology of technology and the archaeology of industrialisation, it is the latter strand that is the defining feature of much modern IA work. A wide range of techniques emphasising both landscape and social change, linked to technological development, have been developed by those studying the phenomenon of British industrialisation since 1991. It is argued that the radical changes to the production, consumption, and urban nature of this newly industrialised society is best studied archaeologically through the medium of this new Industrial Archaeology. Furthermore, this social and landscape approach, coupled with the study of technological change, could be used to compare the different rates and geographical location of industrialisation around the globe from a distinctive archaeological perspective.

INTRODUCTION

This paper is a contribution to the debate on the nature and future of Industrial Archaeology that has emerged since the Association for Industrial Archaeology set out an agenda for the discipline in 1991.¹ This debate has taken two distinctive forms.

First, what might be termed an inward-looking, reflexive, approach that has doubted the very validity of industrial archaeology in the context of archaeological studies in the early 21st century. This is best exemplified in the doubts about industrial archaeology's future by the first-generation industrial archaeologists Sir Neil Cossons and the late Kenneth Hudson, and most recently by David Cranstone.²

Secondly, there has emerged from the second and third generation of industrial archaeologists a more progressive approach that seeks to place industrial archaeology within the wider social and landscape methodological traditions of archaeology, whilst acknowledging the primacy of industrialisation as a concept.³ Recent studies along these lines include Marilyn Palmer and Peter Neave's work on the textile industry of the south-west of England, Jim Symond's work on the cutlery industry in Sheffield, and the author's own work with John Walker on the industrialisation and urbanisation of Tameside and our subsequent development of the Manchester Methodology as a way of looking at the Industrial Revolution from a different archaeological viewpoint.⁴

What both strands of thought have in common is the recognition, articulated by Marilyn Palmer in 1991 and by Kate Clark in 1999,⁵ that industrial archaeology needs to engage more fully, firstly with the wider archaeological discipline in terms of methodological and theoretical approaches, and secondly and more immediately, with the overlapping but complimentary branches of post-medieval and historical archaeology.

The purpose of this paper is therefore threefold; briefly to review industrial archaeology's development; to provide an overview of its relationship with economic history and post-medieval archaeology, and the current theoretical and methodological approaches of industrial archaeologists; and finally, to outline some possible future directions of the discipline. Unlike some commentators,⁶ I do not see the need to abandon the term industrial archaeology. What is needed, however, is a clearer focus on what that term means in the context of the early 21st century. In 2006, according to the United Nations, for the first time more than half of the world's population will be living in towns and cities as a direct result of the industrialisation of countries such as Brazil, China, and India. Understanding archaeologically how this dramatic change to our lifestyles has occurred involves understanding the process of industrialisation in the world's first industrial society; Britain. I hope to show that modern industrial archaeology, with its growing emphasis on landscape and social context, is



Figure 1.
An iconic symbol of
'first generation'
industrial archaeology
— Darby's furnace at
Ironbridge.

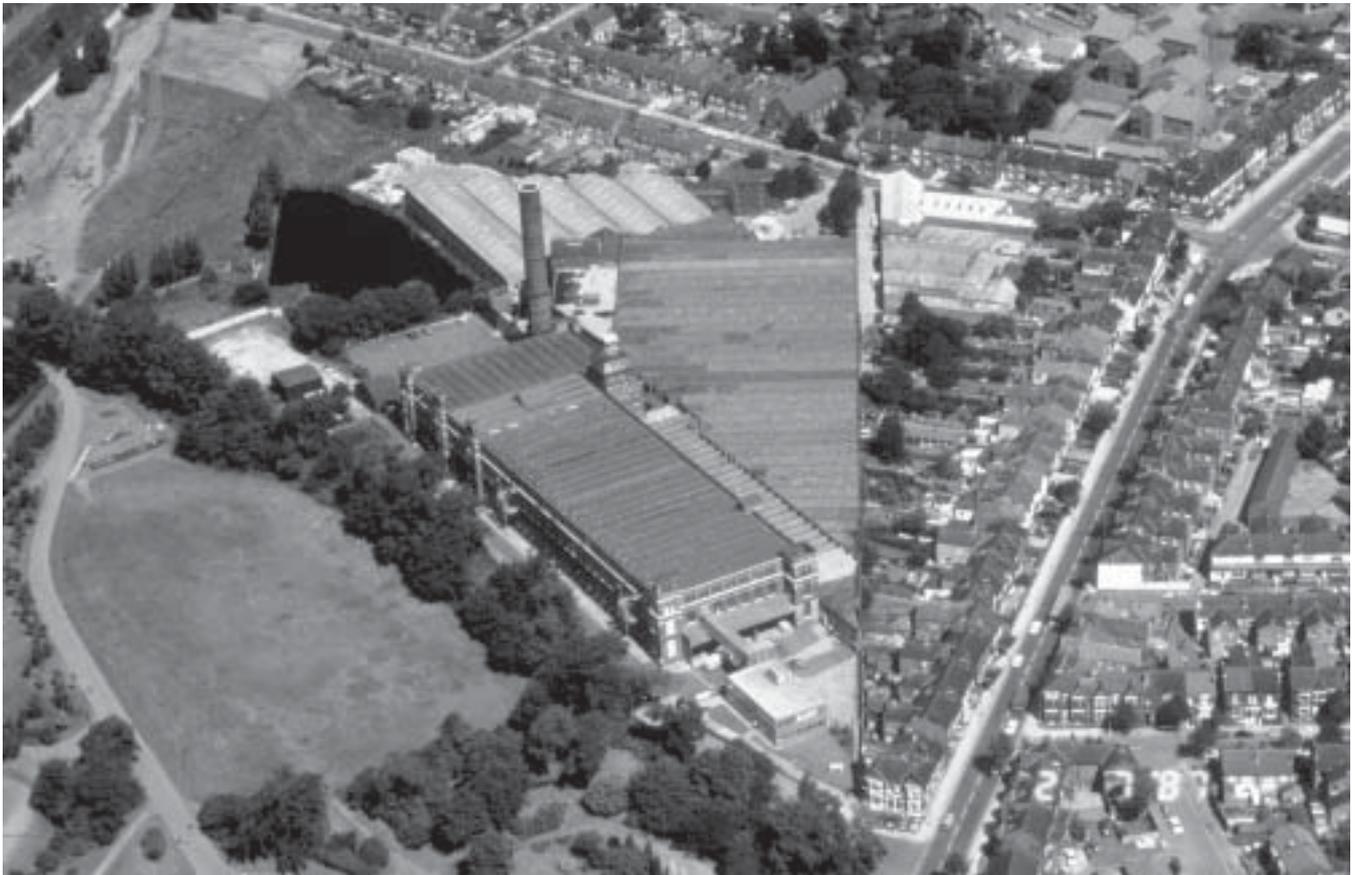
best placed to provide a framework for just such an understanding.

THE DEVELOPMENT OF INDUSTRIAL ARCHAEOLOGY

It is 50 years since the term industrial archaeology was first used in a modern sense. This was in a 1955 article entitled 'Industrial Archaeology' in *The Amateur Historian* by Michael Rix, then teaching with the Workers' Educational Association at Birmingham University; but the term had probably been coined a few years early by his colleague Donald Dudley.⁷ The term was quickly adopted by amateur and professional museum-based archaeologists; the Council for British Archaeology (CBA) set up an industrial archaeology research committee in 1959, the first book on the subject was published by Kenneth Hudson in 1963, the first national journal was founded in 1964, supported by the Newcomen Society, and in 1965 the National Record of Industrial Monuments was transferred from the CBA to the Centre for the Study of the History of Technology at the University of Bath. By the early 1970s formal training in industrial archaeology was being provided by the Ironbridge Institute in collaboration with the University of Birmingham, and in 1973 the Association for Industrial Archaeology (AIA) was created. Therefore, as a branch of academic

archaeology the discipline has existed since the late 1950s, making it slightly older but broadly contemporary with its sister discipline post-medieval archaeology (the Post-Medieval Society was founded in 1967 from the earlier Post-Medieval Ceramic Research Group), and older by a decade than the academic study of historical archaeology which was developed in the USA in the late 1960s.⁸ From the very beginning the term industrial archaeology was applied to the physical remains of the Industrial Revolution (Figure 1), although there was, and continues to be, a recognition that the industrial archaeology of the manufacturing process applies as much to Neolithic hand axes as to steam engine production.⁹ The early decades of the discipline were spent arguing as to which of these two intellectual strands would predominate. However, the decline of many of the classic 18th- and 19th-century industries in mid-20th century, and the growing recognition of the historic value of textile mills, ironworks, transport networks, and the wider industrial landscape of these centuries, led to a general acceptance that industrial archaeology meant the *Archaeology of the Industrial Revolution*.¹⁰

During the 1980s the study of industrial archaeology in Britain diverged from the study in north America, where a strong tradition of social archaeology was applied to the investigation of society during the 18th and



19th centuries under the broad heading of historical archaeology.¹¹ In contrast, British industrial archaeology remained focused on manufacturing processes.¹² The discipline was, however, far from stagnant for during this decade there was a significant shift towards the thematic studies of monument types. This was led by the Royal Commissions on the Historical Monuments, but particularly that for of England, and key figures such as Keith Falconer, and resulted in the founding of three textile mills surveys in Greater Manchester, Yorkshire and eastern Cheshire (Figure 2).¹³ Their thematic work continued into the 1990s with subjects ranging from planned farmsteads to hospitals and workhouses, and this methodological approach was continued by English Heritage after its merger with the RCHME in 1999, as well as by the Scottish and Welsh Commissions.¹⁴

Nevertheless, it was not until the 1990s that serious thought was given in Britain to industrial archaeology's potential wider role in providing a distinctive archaeological perspective on the Industrial Revolution (Palmer 1991; Gould 1995). This culminated with the publication of Marilyn Palmer and Peter Neave's academic study *Industrial Archaeology. Principles and Practice*,¹⁵ which set out an intellectual and methodological framework for the discipline firmly focused on the industrial transition and the changes

that this process wrought on society, the landscape, and above all the archaeological record. Since 1998 the central role played by industrialisation during the 18th and 19th and into the 20th centuries, and its social consequences (in particular urbanisation and the consequent changes in living and working conditions), is a theme that has been enthusiastically followed by a number of researchers, in particular Garry Campion, Shane Gould, David Gwyn, Colin Rynne, and Jim Symonds.

INDUSTRIALISATION AND ARCHAEOLOGICAL THEORY AND MODELLING

The impact of industrialisation has been studied by historians since the French coined the term 'the Industrial Revolution' in the 1820s. Only more recently have industrial archaeologists focused on this theme as a key issue for the industrial transition.

The contributions to the debate made by archaeologists in Britain in the late 20th century lean towards studies of the mechanics, or physical character, of individual industries or structures, what we might term a technocentric approach, with a consequent lack of synthesis. This trend amongst British archaeologists was understandable given the volume of the available archaeological database, historical record, and the depth of the theories of economic and social historians. Yet, as

Figure 2.
The Gidlow mill in Wigan — the monument-based thematic survey developed in the 1980s by the Royal Commissions.

both the Association for Industrial Archaeology and English Heritage observed in the 1990s, this trend may have meant that the contribution of archaeologists to the debate on the validity and origins of the Industrial Revolution as a concept has not been until recently as great as it could have been.¹⁶ In particular there was a lack of debate about one of the key features of the phenomenon of industrialisation; the rapid shift from a rural to an urban-based society with a consequent change in working and living patterns.

We can contrast this techno-centric approach to industrial archaeology prior to 1991 with the many ways in which economic historians have debated the industrial transition during the late 20th century, all of which address, to some extent, the key questions — what do we mean by an Industrial Revolution? And how can we identify its time and place?¹⁷

The idea that there was one period which saw a take-off in industrialisation has been debated since the 1820s when French commentators coined the term the Industrial Revolution to describe what they saw as the economic transformation of England.¹⁸ In the late 20th century economic historians attempted to refine the empirical database¹⁹ in order to address the view that major sectoral, regional, and institutional changes, represented by an overall discontinuity in the economic database, marked the take-off period for the Industrial Revolution as occurring in the years c. 1780 to c. 1800.

The lead sector hypothesis was proposed by Rostow in the mid-20th century who argued that the main momentum for economic growth in 18th-century England came from a few manufacturing sectors (cotton and iron) which were the motors of growth for industrial take-off.²⁰ This theory has been superseded by later studies which showed that in Britain there was a widely diffused pattern of growth with many sources of momentum.²¹

The 'long view', or proto-industrialisation theory, was revived by Franklin Mendels in 1972, who argued that much of the industrial expansion in Britain before 1800 came from handicraft industries using enhanced artisan technology (in domestic textiles, small metal wares and even coal mining);²² it is a concept which has been explored by economic historians ever since.²³

Finally, amongst the latest of the many theoretical strands studied by economic and social historians is the concept of marginality, the view that industrialisation and growth first took off in the marginal zones of Europe. Professor Sidney Pollard demonstrated the impact upon growth of two main types of marginality during the industrial transition: political and economic.²⁴ Firstly, political marginality saw a tension between the centre

which sought to open up, subject, and colonise the fringe, and the fringe which might come to dominate the system of which it was a notional periphery. Secondly, in pre-industrial, non-urbanised societies, economic marginality was the result of having poor agricultural land. Many of the marginal lands of Europe with their mountains (Scandinavia), forests (France and Belgium), fen or marshland (Holland) were to take the lead in developing an industrial base. Thus, many of the chief centres of industrialisation in Britain (the Glasgow region, North-East England, North-West England, Yorkshire, and southern Wales), were in terms of agricultural productivity just such marginal zones prior to industrialisation.

Since 1990 there has emerged amongst the latest generation of British archaeologists a more theoretical approach to the industrial transition from an agrarian, rural-based, society, to an industrial, urban-based, society. Initially this was led by historical and post-medieval archaeologists, giving rise to a split between the study of the archaeology of consumption (post-medieval archaeology) and the archaeology of production (industrial archaeology), and an absence of discussion on the issue of urbanisation. But since 1998 a new generation of industrial archaeologists have started to reclaim the debate as their own by attempting to re-unite the two sides of this argument, whilst putting the changes in living and working practices represented by urbanisation at the forefront of their research (Figure 3).

This renewed interest in the industrial transition began in 1990 with the publication of *Post-Medieval Archaeology in Britain* by David Crossley (1990) which brought together the results of large numbers of individual archaeological studies conducted on remains dating from 1500 to 1800. Whilst looking at the development of early industry, crafts, and technology, this work demonstrated that local variations were often significant in promoting proto-industrialisation, whilst various types of archaeological remains seldom figured in the historical record, meaning that the lives of the majority of the population living in 16th-, 17th-, and early 18th-century England were barely touched upon by the written word (Figure 4).²⁵

An Archaeology of Capitalism published in 1996 by Matthew Johnson (1996) is the most explicitly theoretical of the 1990s post-medieval archaeology volumes and appears to echo a wider trend in archaeology in explaining how the rise of the concept of the individual, seen by some as crucial to industrialisation, can be demonstrated by changes in a wide range of physical remains. Johnson's works throughout the 1990s (*Housing Culture*



in 1993 and 'Rethinking historical archaeology' in 1999) drove forward the debate on the social origins of capitalism and its linkages with colonialism and the archaeology of consumption rather than the archaeology of production or urbanisation. *An Archaeology of Capitalism* never really addressed the wider issue of industrialisation in Britain, and thereby demonstrated that capitalism and industrialisation are related but separate phenomenon.

A major conference between the Post-Medieval Society of Britain and the Historical Archaeology Society of the USA in 1997 continued the theoretical development of ideas about the industrial transition. The conference reflected the approach of North American Historical Archaeology, with the emphasis on craft production and material culture, the social use of space and expressions of authority, and the role and survival of ethnicity. The resulting publication, *Old and New Worlds*, contained only two papers on industry and its link to social and landscape change,²⁶ with the other papers focusing largely upon the material remains of consumption and none on the issue of urbanisation.

In a similar way to the *Old and New Worlds* conference, the volume *The Familiar Past?*,

edited by Tarlow and West and published in 1999, brought together contributions by some of the most active British post-medieval and historical archaeologists during the 1990s.²⁷ As with the *Old and New Worlds* monograph, most of the individual studies dealt with particular aspects of the material culture of the industrial transition in great depth, rather than focusing on more explicit industrial archaeology sites or landscapes, which was touched upon in only two papers. Some contributions explored aspects of the relationship between the material culture of the period and its social structure; others demonstrated the relationship between structures (their layout and planning) and contemporary social issues. This technique of access analysis has been picked up by several researchers studying industrial-era buildings from Shane Gould and Garry Campion, to most recently Jim Symonds, and Marilyn Palmer and Peter Neaverson. Also in this volume Sarah Tarlow drew attention to two areas where archaeologists were at the time trying to make a contribution to the debate. Great attention was being paid to how individuals in the past established and demonstrated their identity in various material ways such as building plans or funerary monuments. This interest in

Figure 3. Excavating the 18th-/19th-century social landscape, in this case housing, a soda works and a hatting works at Hardman Street, Manchester.



Figure 4.
An emphasis on social archaeology does not require us to neglect the archaeology of technology, as in this engine base at Portwood Mill, Stockport.

issues of identity was moving archaeologists towards a more subtle notion of social structure beyond seeing the recent historic past as consisting merely of large contending classes, and crucially was starting to address the social changes engendered by rapid urbanisation. Tarlow also emphasised that an archaeological approach demanded, by the very nature of the discipline, the use of long timescales and broad concepts of a type that are not usually found in historical studies. It is thus ironic that this volume only addressed the issue of social change, virtually ignoring the chief motor for change; the rise of mass production and the industrialisation process.

By the end of the 1990s Charles Orser, in reviewing the progress of historic archaeology in Britain and America, could argue that post-medieval archaeology was now part of a wider historical archaeology which itself had become centred upon four main concepts: a global view, an emphasis upon past social relations, the study of social relationships across space and through time, and a willingness to comment upon today by drawing from the recent past. As far as the industrial archaeologist is concerned, however, such concepts seemed to avoid the crucial issue of why and how industrialisation occurred and whether this was a regional, national, or international phenomenon represented by a rise in mass production and a rapid growth in urbanism.

The publication in 2004 of a set of papers from a joint conference held in 1999 by the Society for Post-Medieval Archaeology and the Association for Industrial Archaeology entitled *The Archaeology of Industrialization* arguably embodies a statement of post-medieval archaeology's view on the issue of industrialisation as developed since Crossley's 1990 work, *Post-Medieval Archaeology*. Yet this monograph marks an opportunity missed in terms of uniting both the post-medieval archaeology and industrial archaeology intellectual traditions. Despite the promising title and many good individual papers, the volume fails to debate the archaeology of industrialisation even in historical archaeology terms. Too many papers deal exclusively either with the archaeology of consumption through material culture or with management and conservation issues without any direct reference to production, social change, or landscape development. Moreover, of the 23 papers in the volume, four were written for publication as part of an earlier conference and so do not address the issue of industrialisation at all. Nor is there any coherent discussion by the editors of what was meant by the concept of industrialisation. There are, nevertheless, a few articles which show methodological and theoretical development of the utmost importance for all

industrial archaeologists. Anna Badcock's and Brian Malaws' paper in particular provides an approach that allows researchers unfamiliar with the manufacturing process to record such activities in an informed and fully understood way and as a partner to the buildings archaeology of manufacturing industry. This can be done through oral and pictorial history allied to traditional recording techniques which allowed the work practices to be related to the evolving layout of factory, both in terms of its technological and social development. Paul Courtney's article, whilst reminding us how the ceramic industry can be seen as a marker of industrial, technological, and social change, is most notable for its study of one industry over several centuries, thus introducing into industrial archaeology the 20th-century French concept of the *longue durée* and the wave or cyclical pattern of historical, economic, and archaeological development. Finally, David Gwyn's article deals directly with the issue of landownership and social identity during industrialisation through the authorship of the new monument types of the industrial period.²⁸

In my opinion, this volume indicates that the intellectual vibrancy of post-medieval archaeology seen in the 1990s has starting to run out of steam, at least as regards the debate on the industrial transition. Ironically, this is just at the time when industrial archaeologists, spurred by the historical archaeology debate, have been developing a more explicitly theoretical approach to the industrial transition. The unifying themes of this approach are an emphasis on the industrial transition and its transformation of British society during the 18th, 19th and 20th centuries as seen through the archaeology of mass production, consumption, and urbanisation.

This shift began with the publication of the Association for Industrial Archaeology's research agenda in 1991.²⁹ This set out the scope and priorities for industrial archaeology from training, preservation, and conservation to recording and research. The subject was approached as a period discipline running from the early 18th century up to the late 20th century with the theme of industrialisation at its heart and key research issues focused upon conservation of sites and monuments, understanding technological innovation, and recording landscape change.

It was not until the end of the 1990s that the next major step forward occurred with the publication of *Industrial Archaeology, Principles and Practices* by Marilyn Palmer and Peter Neaverson.³⁰ This volume, a work that has had the greatest methodological impact on industrial archaeology so far, widened the horizons of the industrial archaeologist through its emphasis on the social relations of production and consumption. This was



Figure 5.
Late 18th-century
workers' houses
at Deansgate,
Manchester.

done by relating industries to their associated housing, transport networks, and wider landscape context, and by placing aspects of the material culture of industrial production in its social context. The authors introduced ideas about the social controls which are both explicit and implicit in the architecture and spatial organisation of industrial buildings, and the way in which social relations were both constructed and expressed in the housing built to accommodate those involved in industrial production.

The author's own work on the Tameside Archaeology Survey, particularly as published in two volumes entitled *Lands and Lordships in Tameside* and *Tameside in Transition*, was arguably the first to take an explicitly theoretical archaeology approach to industrialisation on a regional basis, in this case North-West England. The focus in these two related works was on landscape change and social archaeology in the period 1348 to 1870. The rate of archaeological change was studied through the temporal occurrence of sites as defined in English Heritage's *Thesaurus of Archaeological Monument Types*. This was taken a step further, however, by putting each of these monument types in their social context through assigning

their ownership or authorship to one of three contemporary social groupings; lords, freeholders, or tenants, an approach that has been termed the 'Manchester Methodology'.³¹ One of the consequences of using this methodology is that it allows a greater understanding of the nature and causes of urbanisation in specific localities and the linkage of that phenomenon to mass production. This can be done by breaking down the archaeological database of any given urban area into these separate monument types and then looking at their spatial and social distribution. In this way the chronology and nature of this urbanisation phenomenon can be traced in the new industrial hamlets, villages and towns of the industrial transition.

Also worthy of mention at this point is an, as yet, largely untapped source of landscape archaeological research for industrial archaeology. The twin techniques of Historic Landscape Characterisation and Extensive Urban Survey were developed by English Heritage in the 1990s primarily as conservation tools.³² However, they provide archaeologists with a powerful landscape research tool that can be used to study the industrial transition and in particular the nature of urbanisation. When allied to the Manchester Methodology,



by linking spatial ordering and hierarchy in the urban and rural landscape to individual monument types and their chronological spread, it should be possible to chart the physical changes of the industrialisation process in immense detail and on a highly local basis, whilst setting them in their social context. The use of both the Manchester Methodology and Historic Landscape Characterisation may also serve to highlight how during the industrial transition some existing towns and cities reflected but were by no means entirely dependent upon the process of industrialisation for their continued existence. This kind of study has been hinted at by Colin Rynne's recent work on the limited urbanisation of nucleated centres in Ireland during the 18th and 19th centuries.³³

The most recent explicit attempts to marry industrial and historical archaeology to a theoretical view of the industrial transition can be found in three volumes published in the last five years with varying success. First, in Richard Newman, David Cranstone and Christine Howard-Davis's impressive survey of *The Historical Archaeology of Britain, c 1540–1900*,³⁴ although within this

impressive volume there is a contradiction between Cranstone's approach, which follows Tom Rolt's dogmatic assertion that industrial archaeology can only ever be about the manufacturing process, and the rest of the volume which tries, largely successfully, to integrate landscape, historical, and industrial archaeological approaches.

Secondly, a volume of papers entitled *From Farmer to Factory Owner: Models, Methodology and the Archaeology of Industrialisation* published in 2003 provide a focused approach to the issues of landownership, monument authorship, and the development of industry. Whilst the Manchester Methodology features prominently and includes a study of the industrial development of the historic urban centre of Manchester, this monograph also encompasses studies exploring the themes of industrial marginality, social change, and the archaeology of urban work in the 19th and early 20th centuries.³⁵

Thirdly, a volume entitled *Industrial Archaeology. Future Directions*, edited by Eleanor Casella and James Symonds, published early in 2005, deals explicitly with the linkages between historical archaeology and

Figure 6. Sacred relic rather than icon — in its own reliquary. The construction of the shelter over the Darby furnace at Ironbridge.

industrial archaeology.³⁶ Sixteen papers are divided into three sections which deal with current theories on industrial archaeology, the conservation of monuments and landscapes, and the archaeology of factories and mines. All three works are united by an interest in social archaeology, the landscape transformation of the industrialisation process (both urban and rural), and the issues of consumption and production as revealed through the archaeological database.

Three other recent publications also demonstrate the landscape and social development of recent industrial archaeology studies. First, by Michael Bailey and John Glithero, is a study of the engineering history, archaeological integrity, and conservation of Stephenson's *Rocket*.³⁷ This is an exemplar of how a piece of machinery should be studied as an archaeological artefact, bringing together two characteristic strands of industrial archaeology research; artefact recording and analysis, and setting that record against the context derived from the contemporary documents. Secondly, Trinder's study of the spatial and social archaeology of 18th- and 19th-century market towns allows us to explore what was common place and what was new in the context of social archaeology and industrialisation amongst the lesser market towns of this period.³⁸ Thirdly, the growing research into the linear monuments of the industrial period is typified by the recently published comprehensive survey of the Welsh section of Thomas Telford's London to Holyhead turnpike road, which provides a framework for the future study of such monuments in their landscape setting.³⁹

REVOLUTION OR EVOLUTION? FUTURE RESEARCH DIRECTIONS FOR INDUSTRIAL ARCHAEOLOGY

Since Marilyn Palmer and Peter Neaverson published *Industrial Archaeology. Principles and Practices* in 1998 a variety of studies have marked the emergence of a new industrial archaeology focused upon the concept of industrialisation; the processes of the industrial transition which in Britain turned a rural, agrarian, community, into an urban, manufacturing-based, society. This fresh approach is characterised by an ability to develop new methodologies or to adapt and use existing models and methodologies from other branches of archaeology, without compromising the traditional emphasis on the detailed recording and analysis of manufacturing industry. There is now a growing consensus that the key issue for industrial archaeologists looking at the industrial transition is the long-term impact, and ultimate

destination, of the industrialisation process.⁴⁰ The theme of industrialisation is not exclusively concerned with changes in technology and consumption, but also with the new social relations of the period as expressed through buildings and the use of space, landscape change both in the countryside and through urbanisation, and the control and ownership (two different things) of monuments and landscapes and how this might reflect the movement of capital. As it is rooted in the survey and excavation techniques of British archaeology this new way of looking at industrial archaeology emphasises the primary nature of archaeological evidence drawn from monument types and material culture, whilst relating these back to the contemporary documentary, photographic, and oral evidence, thereby reuniting the production, consumption, and urbanisation aspects of post-1500 archaeology in Britain. This is an archaeological concept of Industrialisation which is not chronologically constrained but is culturally specific, and can thus be applied to any industrialising society around the world. It is what we might call the archaeology of the industrial period, and as such a summary of some of the more specific research topics related to the theme of industrialisation might be as follows:

- the role of the weak central or lordly control in allowing industrialisation on a local level;
- the role of religious freedom and independence of thought in industrial and technical innovation;
- the rise to dominance of new manufacturing urban centres such as Birmingham, Glasgow and Manchester;
- the lack of industrial development in traditional urban centres such as Chester or Winchester;
- the role of London as an economic and social centre of industrialisation;
- linear transport monuments as corridors of industrialisation;
- rural change, dislocation, and social stress;
- craft production and proto-industrialisation;
- social control and authority on manufacturing sites;
- changes in domestic and working life as revealed through material culture;
- and finally the ownership or authorship of new monument types in this period and how this might reflect the movement of capital.

There are clearly many other areas that can and should be explored over the next decade by industrial archaeologists, but the

research topics outlined above are all linked by the social and landscape archaeology impact of industrialisation in a way that has not always been addressed by archaeologists working in this period.

As can be seen from this paper, industrial archaeology is far from being a dead or dying subset of mainstream archaeology that should be subsumed by post-medieval archaeology or historical archaeology, as has recently been portrayed by some older practitioners.⁴¹ Nor is it true to argue industrial archaeology does not have a coherent intellectual and methodological base as a period discipline because of the less active involvement of academics compared with the activities of individual enthusiasts and amateur societies.⁴²

As we have seen since 1991, some of the key figures of what have been called the second and third generations of industrial archaeologists have been moving away from the techno-centric approach of early industrial archaeology to focus on the era of industrialisation from a more holistic perspective. Just as post-medieval archaeologists have argued strongly for a decisive change in the archaeological record of the mid-16th century, both in the material cultural remains of the period and in its monument types, so industrial archaeologists, using the approaches outlined above, can now show an even greater change in both the material culture remains and the range of monument and landscape types associated with the industrial transition from the early 18th century onwards, if not before.⁴³ Furthermore, industrial archaeologists now have a range of methodologies and theories which allow them to chart and explain the different rates of change in specific localities and regions across Britain. These changes reflect the industrialisation process, the switch from a rural, agrarian-based, culture to an urban, manufacturing-based, society. This transition ranks as one of the major changes in human evolution alongside the development of language, agriculture, and urbanism. It is a process that is still working its way around the globe and can currently be seen in operation in Brazil, China, and India. The landscape and social processes involved in this transition demand a coherent period approach from archaeologists and are best articulated by those archaeologists dealing directly with these issues; in other words the industrial archaeologist.

Such a view is not an attack on those versed in the traditions of post-medieval archaeology. Indeed many of the theoretical and methodological issues touched upon in this paper reflect a coming together of the two

subject areas in terms of approach, and show a measure of agreement on the key research issues. Nevertheless, a logical conclusion to this approach would be to call the period of industrialisation the 'Archaeology of the Industrial Period', as hinted at above. This would have a number of advantages, not least the recognition that the industrialisation process happens at different rates in different places, but is characterised in radical changes to the production, consumption, and urban nature of these new societies as expressed through their archaeology. It would also allow us to begin analysing the archaeology of the 20th century from this perspective, for although in Britain most of the classic industries of the Industrial Revolution have gone, or are greatly reduced in scale, using the definition of Industrialisation set out above we are still living and consuming in the new society this process has created. Whilst we may ultimately come to see both post-medieval archaeology and industrial archaeology, or the archaeology of the industrial period, as distinctive stages within the emerging concept of global historical archaeology, industrial archaeology is a period discipline within its own right, with its own methodologies, theoretical framework, and research agenda. Those who deny this are denying the centrality of Industrialisation in Britain, and around the globe, as a social and landscape-changing force over the last 300 years.

ACKNOWLEDGEMENTS

Thanks to David Gwyn, Professor Marilyn Palmer, Professor Ray Riley, Jim Symonds, and John Walker, who have allowed me to bounce ideas off them over the last few years.

NOTES AND REFERENCES

¹ Palmer, M., 'Industrial Archaeology: Working for the Future', *Industrial Archaeology Review*, XVI (1991), 17–32.

² Cossons, N., 'Perspectives on Industrial Archaeology', in Cossons, N., *Perspectives on Industrial Archaeology* (London: Science Museum, 2000), 9–17; Hudson, K., 'Has Industrial Archaeology lost its way?', *Industrial Archaeology Review*, XXIII:1 (2001); Cranstone, D., 'The Archaeology of Industrialization — New Directions', in Barker, D. & D. Cranstone (eds), *The Archaeology of Industrialization. Papers given at the Archaeology of Industrialization Conference, October 1999, hosted jointly by Association for Industrial Archaeology and Society for Post-Medieval Archaeology* (Leeds: Maney Publishing, 2004), 313–20; 'After Industrial Archaeology?', in Casella, E.C. & J. Symonds, *Industrial Archaeology. Future Directions* (New York: Springer Science and Business Media Inc., 2005), 77–95.

³ Palmer, M. & P. Neaverson, *Industrial Archaeology, Principles and Practice* (London and New York: Routledge, 1998).

⁴ Palmer, M. & P. Neaverson, *The Textile Industry of South-West England: A Social Archaeology*

(Stroud: Tempus, 2005); Symonds, J. (ed.), *The Historical Archaeology of the Sheffield Cutlery and Tableware Industry 1750–1900* (Arcus Studies in Historical Archaeology 1, Sheffield University, 2001); Nevell, M. & J. Walker, *A History and Archaeology of Tameside. Volume 6. Lands and Lordships in Tameside: Tameside in Transition 1348–1642* (Tameside Metropolitan Borough Council with the University of Manchester Archaeological Unit, 1998), *A History and Archaeology of Tameside. Volume 7. Tameside in Transition 1642–1870* (Tameside Metropolitan Borough Council with the University of Manchester Archaeological Unit, 1999), 'Industrialization in the Countryside: The Roles of the Lord, Freeholder and Tenant in the Manchester Area, 1600–1900', in Barker & Cranstone, ref. 2, 53–78.

⁵ Palmer, ref. 1 and Clark, K., 1999, 'The Workshop of the World: the Industrial Revolution', in Hunter, J. & I. Ralston (eds), *The Archaeology of Britain. An Introduction from the Upper Palaeolithic to the Industrial Revolution* (Routledge, 1999).

⁶ Hudson, K., 'Has Industrial Archaeology Lost its Way?', *Industrial Archaeology Review*, XXIII:1 (2001), 6–9; Cranstone, D., 'After Industrial Archaeology?', in Casella & Symonds, ref. 2, 77–95.

⁷ Rix, M., 'Industrial Archaeology', *The Amateur Historian*, 2:8 (1955), 225–9; Hudson, ref. 6, 7. The term had been used on a few occasions prior to 1955. Sousa Viterbo used the term to describe Portuguese Mills in 1896 and in 1950 a Belgian, R. Evrard, used the term to describe a blast furnace site in 1950. See also Ray Riley's book review in 1991 (*IAR*, XIII:2, 197–8). Nevertheless, this was the first use of the term in a modern sense.

⁸ Palmer and Neaverson, ref. 3, 1–3.

⁹ Cossons, ref. 2; Cranstone, ref. 2; Hudson, ref. 6.

¹⁰ Buchanan, R.A., *Industrial Archaeology in Britain* (Harmondsworth: Penguin Books, 1972); Cossons, N., *The BP Book of Industrial Archaeology* (Newton Abbot: David and Charles, 1975); Hudson, K., *Industrial Archaeology. An Introduction* (Methuen, 1963); Raistrick, A., *Industrial Archaeology* (Eyre Methuen Ltd, 1972).

¹¹ Orser, C.E., 'Negotiating Our "Familiar" Past', in Tarlow, S. & S. West, *The Familiar Past?* (London and New York: Routledge, 1999), 273–85.

¹² Hudson, ref. 6.

¹³ Williams, M. with D. Farnie, *Cotton Mills in Greater Manchester* (Preston: Carnegie Press, 1992); Giles, C. & I.H. Goodall, *Yorkshire Textile Mills. The Buildings of the Yorkshire Textile Industry 1770–1930* (Royal Commission on the Historical Monuments of England, 1992); Calladine, A. & J. Fricker, *East Cheshire Textile Mills* (Royal Commission on the Historical Monuments of England, 1993).

¹⁴ Barnwell, C. & C. Giles, *English Farmsteads 1750–1914* (Royal Commission on the Historical Monuments of England, 1997); Morrison, K., *The Workhouse. A Study of Poor-Law Buildings in England* (English Heritage, 2000); Richardson, H., *English Hospitals 1660–1948. A Survey of their Architectural Design* (English Heritage, 1998).

¹⁵ Palmer & Neaverson, ref. 3.

¹⁶ Palmer, ref. 1; English Heritage, *English Heritage Research Agenda* (English Heritage, 1997), 45.

¹⁷ Berg, M. & P. Hudson, 'Rehabilitating the Industrial Revolution', *Economic History Review*, 45:1 (1992), 24–50; Crafts, N.F.R., 'British Economic Growth During the Industrial Revolution', in O'Brien, P. & R. Quinault (eds), *The Industrial Revolution and British Society* (Cambridge University Press, 1985); Courtney, P., 'The Tyranny of Constructs', in Gaimster, D. & P. Stamper, *The Age of Transition* (Oxford: Oxbow, 1997), 10–12; Courtney 'Pathways of Change: Towards a Long-Term Analysis of the Ceramic Industry', in Barker & Cranstone, 181–2.

¹⁸ Mathias, P., 'The Industrial Revolution: Concept and Reality', in Mathias, P. & J.A. Davis (eds), *The First Industrial Revolutions* (Cambridge: Blackwell, 1989), 1–2.

¹⁹ Crafts, N.F.R., 'English Economic Growth in the Eighteenth Century: a Re-Examination of Deane and Cole's Estimates', *Economic History Review*, 29 (1976), 226–35; and 'The New Economic History and the Industrial Revolution', in Mathias & Davis, ref. 18, 25–43; Feinstein, C.H., 'Capital Formation in Great Britain', in Mathias, P. & M.M. Postan (eds), *Cambridge Economic History of Europe*, 7:1 (Cambridge, 1978), 28–96; Harley, C.K., 'British Industrialisation before 1841: Evidence of Slower Growth during the Industrial Revolution', *Journal of Economic History*, 42 (1982), 267–89.

²⁰ Rostow, W.W., *The Stages of Economic Growth. A Non-communist Manifesto* (Cambridge, 1960).

²¹ Mathias, P., 'The Industrial Revolution: Concept and Reality', in Mathias & Davis, ref. 18, 19–22.

²² Mendels, F.F., 'Proto-Industrialisation: the First Phase of the Industrialisation Process', *Journal of Economic History*, 32 (1972), 241–61.

²³ de Vries, J., 'The Industrial Revolution and the Industrious Revolution', *Journal of Economic History*, 54 (1995), 249–70; Mathias, ref. 18, 10–13.

²⁴ Pollard, S., *Marginal Europe. The Contribution of Marginal Lands Since the Middle Ages* (Oxford: Clarendon Press, 1997), 10–17.

²⁵ Crossley, D., *Post-Medieval Archaeology in Britain* (Leicester: Leicester University Press, 1990), 2.

²⁶ Barker, D., 1999, 'The Ceramic Revolution 1650–1850', in Egan & Michael, 226–34; Cranstone, D., 'Cherishing the Cradle of Industry: Protection of Industrial Monuments in England', in Egan, G. & R.L. Michael (eds), *Old and New Worlds*, (Oxford: Oxbow Books, 1999), 203–7.

²⁷ Tarlow, S. & S. West, *The Familiar Past? Archaeologies of Later Historical Britain* (London and New York: Routledge, 1999).

²⁸ Barker & Cranstone, ref. 2; Badcock, A. & B. Malaws, 'Recording People and Processes at Large Industrial Settlements', 269–89; Courtney, P., 'Pathways of Change: Towards a Long-Term Analysis of the Ceramic Industry', 181–201; Gwyn, D., 'Landscape, Economy and Identity: A Study in the Archaeology of Industrialisation', 35–52.

²⁹ Palmer, ref. 1.

³⁰ Palmer & Neaverson, ref. 3.

³¹ Nevell, M. & J. Walker, *A History and Archaeology of Tameside. Volume 6. Lands and Lordships in Tameside: Tameside in Transition 1348–1642* (Tameside Metropolitan Borough Council with the University of Manchester Archaeological Unit, 1998); *A History and Archaeology of Tameside. Volume 7. Tameside in Transition 1642–1870* (Tameside Metropolitan Borough Council with the University of Manchester Archaeological Unit, 1999); 'Industrialization in the Countryside: The Roles of the Lord, Freeholder and Tenant in the Manchester Area, 1600–1900', in Barker & Cranstone, ref. 2, 53–78; Nevell, M., 'The Social Archaeology of Industrialisation: The Example of Manchester During the 17th and 18th Centuries', in Casella & Symonds, ref. 2, 177–204.

³² Rippon, S., *Historic Landscape Analysis: Deciphering the Countryside* (CBA Practical Handbooks in Archaeology 16, 2004).

³³ Rynne, C., *The Industrial Archaeology of Cork City and its Environs* (Dublin: The Stationary Office, 1999).

³⁴ Newman, R. with D. Cranstone & C. Howard-Davis, *The Historical Archaeology of Britain, c 1540–1900* (Stroud: Sutton, 2001).

³⁵ Nevell, M., *From Farmer to Factory Owner: Models, Methodology and the Archaeology of*

Industrialisation (CBA, University of Manchester Archaeological Unit and Chester Archaeology, 2003).

³⁶ Casella & Symonds, ref. 2.

³⁷ Bailey, M.R. & J.P. Glithero, *The Engineering and History of Rocket* (York: National Railway Museum, 2000).

³⁸ Trinder, B., '18th- and 19th- Century Market Town Industry: An analytical model', *Industrial Archaeology Review*, XXIV:2 (2002), 75–90.

³⁹ Quartermaine, J., B. Trinder & R. Turner, *Thomas Telford's Holyhead Road* (CBA Research Report, 2003), 135.

⁴⁰ Nevell, M., 'A Major Change in Human Evolution', *British Archaeology*, 86 (January/February 2006), 30–3.

⁴¹ Cossons, ref. 2; Cranstone, ref. 2a, b.

⁴² Cranstone, ref. 2b.

⁴³ Nevell, ref. 40.

Dr Michael Nevell is Director of the University of Manchester Archaeology Unit. Address for correspondence: School of Arts, Histories and Cultures, University of Manchester, Oxford Road, Manchester M13 9PL.