INDUSTRIAL ARCHAEOLOGY

An Introduction

Kenneth Hudson

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KENNETH HUDSON

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An Introduction by

Kenneth Hudson

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FOREWORD

THIS book has had a curious history, which reflects Industrial Archaeology's struggle to get official recognition as a reputable study.

Five years ago, the Council for British Archaeology decided to sponsor a Handbook of Industrial Archaeology, in view of the urgent need to get important monuments recognised, listed, documented and, where possible, preserved. Dr Peter Eden, of the Royal Commission on Historical Monuments, undertook the Editorship of this Handbook and over a period of two years he collected a good deal of material from authoritative sources, although several important gaps remained.

In the summer of 1961, Dr Eden felt obliged, in view of the pressure of his other duties, to give up this work and I was eventually appointed his successor. At about the same time, the C.B.A. reached the end of its attempts to obtain any kind of grant or subsidy to enable it to publish the Handbook and since it had no funds of its own which could be devoted to this purpose, it looked as if the project would have to be abandoned.

Fortunately, however, a compromise solution presented itself. A publisher with a strong personal interest in archaeology, Mr John Baker, then of Phoenix House and now of John Baker Ltd., invited me to write a book on Industrial Archaeology, in which it would be possible to incorporate a great deal of the material accumulated for the C.B.A. Handbook. The present book is the result of Mr Baker's enlightened and public-spirited suggestion.

It does not set out to be an encyclopaedia of Industrial Archaeology. Its aim is the more modest one of attempting to draw attention to the surviving memorials of our industrial past and to help to create a public opinion which is sufficiently well informed to approve of money being spent on recording and preserving tangible evidence of some of the most remarkable achievements of a country which was, in its time, the leading industrial nation in the world.

THIS essay is a foray into the debatable borderland between history, technology and economics. Anyone who sets up as a middleman is likely to provoke the traditional mistrust of brokers and bodgers.

H. J. Habakkuk:
American and British Technology in the Nineteenth Century.

1

WHAT IS INDUSTRIAL ARCHAEOLOGY?

THE TERM 'Industrial Archaeology' is little more than ten years old. It was almost certainly invented early in the nineteen-fifties by Mr Donald Dudley, now Professor of Latin in the University of Birmingham and at that time Director of its Extra-Mural Department.

Mr Dudley did no more than throw this very useful phrase into conversation. Its first appearance in print appears to have occurred in the autumn of 1955, in an article written by Mr Michael Rix for *The Amateur Historian*. In this article Mr Rix implied, rather than stated, a definition of the new term. 'Great Britain', he said, 'as the birthplace of the Industrial Revolution is full of monuments left by this remarkable series of events. Any other country would have set up machinery for the scheduling and preservation of these memorials that symbolise the movement which is changing the face of the globe, but we are so oblivious of our national heritage that, apart from a few museum pieces, the majority of these landmarks are neglected or unwittingly destroyed'.

Mr Rix went on to instance the kind of monuments he had in mind—eighteenth and early nineteenth century factories, 'the steam engines and locomotives that made possible the provision of power, the first metal-framed buildings, cast-iron aqueducts and bridges, the pioneering attempts at railways, locks and canals'. All these things, he believed, 'represent a fascinating interlocking field of study, whole tracts of which are still virtually unexplored'.

Since Mr Rix gave the phrase 'Industrial Archaeology' to the world in this way it has been much disliked and strongly criticised, although nobody has yet been able to suggest a more acceptable alternative. To the objectors,

'Industrial Archaeology' is an impossible mongrel, the ugly offspring of two parents who should never have been allowed to breed. 'Industry', they say, is by common agreement, a recent growth, a phenomenon no more than two hundred years old. 'Archaeology', also by common agreement, deals with the more distant past. How then, they demand, is it reasonable or decent to speak of industry and archaeology in the same breath? When Mr Rix declares, after seven years of reflexion and further study and still apparently without any sense of heresy, that 'industrial archaeology is the study of early remains produced by the Industrial Revolution',[1] the Puritan faction among British archaeologists must begin to wonder if such opponents are worth fighting. Even the Council for British Archaeology—a not markedly revolutionary body—has itself been using the term without even a hint of inverted commas since 1959, although among some archaeologists those industrial sites which demand excavation have a noticeably higher prestige than those where the remains are above ground.

The main cause of the difficulty is the regrettable, but not unalterable, fact that during the past thirty years the word archaeology has been quietly taken over and narrowed in meaning by the most active and most spectacular section of archaeologists, the excavators, and more especially by those concerned with pre-history, with the result that nowadays some of them appear to be getting very close to the position of claiming patent rights on it. Archaeology, they rightly claim, is concerned with things that are old. Certainly, one may reply, but how old is old? Everything has its birth and its old age and each industry has to be seen and studied against its own time-scale. In the case of the petroleum industry, for instance, the old and rare monuments date from the second half of the nineteenth century. For atomic energy and for a number of plastics and synthetic fibres it is the nineteen-forties that we have to consider. For iron bridges it is the middle of the eighteenth century. It is pointless and ridiculous to try to establish an arbitrary date which can be used to divide the old from the recent, the archaeologically approved from the archaeologically disreputable.

In this respect our grandfathers thought and wrote in a more tolerant age. In 1878, for example, the Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society included a very useful and well-documented paper called *The Archaeology of the West Cumberland Coal Trade*. The author, Mr Isaac Fletcher, was an astronomer by profession and sufficiently eminent and scholarly to have become a Fellow of the Royal Society. He was writing in a period when it was still possible for an astronomer to write about economics, about history and about technology without being laughed at as a charlatan and when the word archaeology could still be used without difficulty or offence in the broad sense of a study of the past based on tangible remains. Mr Fletcher's paper covered only the eighteenth and nineteenth centuries and it drew its facts from manuscripts, from personal visits to mines, from drawings of old machinery and from conversations with men who had spent a lifetime in the industry. 'I have had an opportunity', he tells us, 'of examining a number of the weekly pay bills for the year 1709, still preserved in Whitehaven Castle, which throw much light on the state of mining operations at that period', and he reports on the 1795 Heslop winding engine at Low Wreak Pit in the same personal, observant way: 'She is at work to this day, and is well worth seeing by all who are interested in the archaeology of the steam engine. She is the last of her race and I believe it is the intention of her noble owner, after the exhaustion of Low Wreak Pit, that she shall be carefully preserved either at the South Kensington Museum or elsewhere.'[1a]

It is impossible to know whether Mr Fletcher would have felt inclined to describe himself as an archaeologist. What is quite clear is that he saw no reason why he should not refer to 'the archaeology of the coal trade' or to 'the archaeology of the steam engine' and in this sense he is the ancestor of Mr Dudley and Mr Rix.

'The history of the coal trade' or 'the history of the steam engine' would not have had quite the same meaning or the same flavour. 'Archaeology' was the right word for describing the investigations of a practical, inquisitive man who

saw the necessity of collecting a great deal of his own evidence on the spot, the man who was as happy out in the field as behind a desk or in a library. 'History' might well have suggested a more book-centred, more sedentary approach.

But since 1878, as we have already noticed, the word 'archaeology' has narrowed its meaning very considerably, mainly as a result of being appropriated by scholars whose principal evidence is normally to be found buried under several feet of soil and rubbish. This process has gone so far that in the minds of most people now living archaeology is almost a synonym for the excavation of prehistoric remains. This is a great pity for two reasons, first, because it deprives students of later periods of civilisation of a very useful word and, second, because it denies the essential continuity of both scholarship and civilisation.

No one has protested against this state of affairs more strongly and more wisely than the founder and editor of *Antiquity*, the late O. G. S. Crawford[2]. 'Archaeology', he writes, 'is merely the past tense of anthropology.' It is concerned with 'past phases of human culture'. And the basis of culture, he insists, is technology. A good archaeologist must be interested in every aspect of the culture he has chosen to study—its technology, its social organisation, its political system. Otherwise, he cannot interpret what he finds, he cannot talk sense.

It is impossible, in Crawford's opinion, to draw a timeline across the subject, to declare, in effect, that 'archaeology ends here'. 'We are allowed', he says, 'to use archaeological technique in dealing with a well-documented "historical" period like the Dark Ages, or one that is less well documented, such as ancient Egypt or Mesopotamia. Future archaeologists will perhaps excavate the ruined factories of the nineteenth and twentieth centuries, when the radiation effects of atom bombs have died away. These technological matters will then be legitimate. Why are they not so when they are so much better known?'

Crawford's campaign to widen and liberalise the meaning of archaeology coincided with a very similar battle on behalf of local history, in which one of the leading figures

has been Dr W. G. Hoskins. Like Crawford, Hoskins sees no point at all in the mere discovery and accumulation of facts. One must have an attitude to the facts in order to perceive any sense and cohesion in them. Discovering and recording evidence is a sterile activity, unless one has some idea as to what it is evidence of. On the one hand, says Hoskins, we have an abundance of local historians who are 'pre-occupied with facts and correspondingly unaware of problems', and, on the other, we are faced with a group of people who refuse to submit their theories to the test of field work. 'Some of the best documented local histories', he notes, 'betray not the slightest sign that the author has looked over the hedges of his chosen place, or walked its boundaries, or explored its streets, or noticed its buildings and what they mean in terms of the history he is trying to write'.[3]

Isaac Fletcher, whose paper on the West Cumberland Coal Trade has been referred to earlier, appears to meet the requirements of both Dr Crawford and Dr Hoskins. He was certainly a local historian who, in Hoskins' phrase, was not afraid to get his feet wet and whose interest in the theme of technological progress allowed him to sift and discipline his facts. And he was equally an archaeologist who discovered much of his information in the only place where it existed, in the field. So far as he was concerned, any evidence was valuable, provided it could 'shed light on mining operations'. Whether his field of activity is best described as archaeology or local history or industrial history is surely beside the point. What matters is that he went to a lot of trouble to get his facts right and to link them together in a meaningful, and therefore interesting way. He belonged to an age in which it was comparatively easy and reputable for one man to develop interests which straddled several academic disciplines, to move, for example, from engineering to economic history and from economic history to geology and geography, in order to produce an intelligible and rounded study of the subject in hand.

Nowadays, this is much more difficult to achieve. A necessarily hybrid subject, such as Industrial Archaeology, is bound to be regarded with great suspicion, if not outright

hostility, by those specialists who prefer to see firm and clear dividing lines between different fields of study. The label 'Industrial Archaeology' has come under equally heavy fire from economists, historians and archaeologists, partly for reasons of sheer conservatism, partly from resentment against an upstart and partly because of serious and genuine doubts that industrial archaeology can be made into a satisfactory academic discipline.

Mr Rix, as we have seen, appears to have committed himself to saying that, 'Industrial Archaeology is the study of early remains produced by the Industrial Revolution'. Quite a number of people who are professionally concerned with industrial archaeology would find this definition too constricting. 'The Industrial Revolution' is not a precise term and for this reason many historians have become rather chary of using it. There are those who distinguish between the first and second stages of the Industrial Revolution, the first, beginning in the sixteenth century and characterised by the increased use of coal and iron and by the increasing concentration of workers, first into workshops and then into factories, and the second, the period of electricity, scientific method and man-made materials, which began about 1850 and is still in progress. Others again, quarrel about the real meaning of 'Industrial' and either deny that anything truly 'industrial' occurred before the second half of the eighteenth century or make a distinction, not always easy to defend, between an industry and a rural craft. 'We in the Welsh Folk Museum', declares its Curator, 'are concerned with rural crafts, whereas industry is dealt with by the Department of Industry in the National Museum of Wales. The small woollen mills, the rural tannery, the blacksmith's shop, etc., are examples of rural crafts in our sense. The rural woollen mill was never a factory employing a labour team from outside; it was generally a family affair with possibly one or two assistants. I cannot believe that these rural crafts have any relevance for any form of archaeology'.[4] This fairly rigid division between an industry—a manufacturing unit employing outside workers—and a craft—a manufacturing unit employing almost exclusively family labour—has a

I. A graveyard of Industrial Archaeology. Destroying old cotton machinery to earn Government subsidy

II. A graveyard of Industrial Archaeology, Machinery scrapheap, Southampton

III. Derelict spelter works near Swansea

great deal to commend it and it is no doubt useful administratively, as a means of preventing the Welsh Folk Museum and the National Museum of Wales from treading on one another's toes, but a thoroughgoing attempt to observe it would almost certainly produce craft archaeology, technological archaeology, architectural archaeology and other not very helpful sub-categories of Industrial Archaeology. I doubt very much if Dr Peate's clear-cut distinction would be generally accepted at present either by historians or by archaeologists, although it certainly appears to receive support from the 1962 Prospectus of the University of Liverpool's Department of Extra-Mural Studies. This announces a course in Industrial Archaeology and defines the subject as 'the study of the early days of industrialism in terms of its machinery, buildings, the housing of workers, and so on'. A study of industrialism is clearly not a study of crafts and it is unlikely that the members of this particular class in Industrial Archaeology will be much, if at all concerned, with the type of material that finds its way to the Welsh Folk Museum.

The Liverpool prospectus emphasises the academic respectability of Industrial Archaeology. This, it says, is 'a growing field of activity among social and economic historians, architects and engineers'. There is an interesting implication here that one indulges in Industrial Archaeology only after previous training as an historian, architect or engineer. It is, in other words, a 'field of activity', rather than a subject in its own right, an academic bran-tub into which a variety of specialists may usefully dip, a kind of mighty post-graduate seminar. This is an ingenious and not unreasonable way of forestalling charges of dilettante behaviour. By what might be called the Liverpool definition, Industrial Archaeology is essentially a federation of self-governing subjects, in which the individual specialists can safely retain their identity, their prestige and their amour-propre.

The Director of the Ulster Museum sees industrial archaeology from a point of view which appears to differ very considerably from that of his colleague at the Welsh Folk Museum. 'To me', he says[5] 'it is basically a study or