

What is Industrial Archaeology?

R. H. CAMPBELL, M.A., PH.D.

Professor of Economic History, University of East Anglia.

Industrial archaeology is best defined as the study of the physical remains of industrial development. It must, therefore, be distinguished from industrial history, which relies primarily on documentary evidence. Both, however, are closely related, since the use of archaeological methods and techniques in areas of early industrial development, such as parts of Ayrshire, may contribute to a wider knowledge of our industrial and economic history in at least three distinct ways.

First, it may supplement such documentary evidence as we already possess, though, since the industrial archaeologist begins with a comparative wealth of literary evidence, his work is unlikely to yield the same fruit as that of practitioners in other branches of archaeology, which are continually trying to throw light on the relatively unknown. Industrial archaeology is unlikely, therefore, to add much to what is already known about the general pattern of the industrial revolution, except in relatively rare instances, where developments were never fully recorded and so cannot be explained by traditional documentary research. Examples are to be found in the evolution of certain machines or of building methods, fields in which improvements were often achieved simply by dint of trial and error. The gradual adoption of fireproof materials in the construction of new large industrial buildings, especially cotton mills, in the late eighteenth and early nineteenth centuries, has been demonstrated by applying archaeological techniques to the dating of the different materials in surviving mills¹, and so general knowledge of the development of building methods has been increased. Such additions to general knowledge are exceptional. Industrial archaeology is normally more concerned with the particular, and, since every industrial event is not recorded, it can often provide new information essential to the elucidation of the history of a locality. Even where documentary evidence does exist, industrial remains frequently indicate important facets of its history more quickly. Industrial archaeology should, therefore, be the concern of local historians and of archaeological societies, especially in industrial areas.

¹ H. Johnson and A. W. Skempton: 'William Strutt's Cotton Mills, 1793-1812'. *Transactions of the Newcomen Society*, Vol. XXX (1955-57).

Second, industrial archaeology can provide the means of obtaining a record of industrial development, sufficiently well-known at present, before the evidence, and all memory of it, are completely obliterated. Here the industrial archaeologist faces a peculiar problem. Industrial monuments are frequently found in quite different environments. They may be in a developing area, where preservation can be achieved only with great effort, and where recording is a matter of urgency before destruction are complete. By contrast, they may be in an area where, apart from the dangers of neglect, they may remain intact for some time, and so may be much easier to preserve, and where even recording may not be an immediate necessity. Ironically, therefore, the possibilities for the study of industrial archaeology are greatest in what are in effect depressed areas, though the need for action, especially in recording remains, is most pressing in areas of cumulative industrialisation. Because of such continuous development North Lanarkshire is a less satisfactory field of study than North Ayrshire, while within North Ayrshire it is easier to trace the legacy of the iron industry at Dalry, where its development ceased almost a century ago, than at Glengarnock, where it has continued to the present. Some of the best examples of early industrial enterprise are, therefore, in rural districts. The lack of any incentive to destroy them to make way for new development or to use the materials for other buildings has resulted in their preservation, as with the ruins of the lead mines at Woodhead between Carsphairn and Dalmellington, and the remains of the iron industry at Furnace and Bonawe, near Taynuilt, in Argyllshire.

What attitude should the industrial archaeologist adopt to these different situations? Many people are most attracted by the likelihood of preserving the relatively intact industrial monuments, as at Bonawe or New Lanark, or what used to be at Catrine, but such a policy gives rise to two problems. The first, and more important, is the simple, but frequently neglected, difficulty of the cost of any policy of preservation, particularly if preservation forces some new development, a factory or road, to a location less suitable for its particular purposes. One danger in advocating the cause of industrial archaeology is that, in the first burst of enthusiasm for the subject, its adherents may advocate the preservation of some legacy of the industrial past even though the cost, particularly in preventing new developments from taking place, may be high. Even when local enthusiasm can be roused over such monuments, it is rare that pecuniary assistance towards their preservation is forthcoming. Preservation is, of course, a much more practicable policy if an alternative use can be found, but this is not easy, and may, in any case, so transform the monument that it would be more realistic to permit its destruction. By its very

nature preservation usually leads to a perverted use and so to a false impression of what a site was like originally. Squalor usually accompanied the early industrial sites. It is not easy, or even desirable, to retain it.

The second problem of a policy of preservation is that it is difficult to estimate the relative importance of different sites, especially since local interests will sway many decisions. When, as is mostly the case, financial considerations produce the problem of which of a number of cotton mills should be preserved, how is a decision to be determined? What would have been the relative merits of Catrine against New Lanark? Perhaps it is too soon to make any such judgment rationally, so long as most sites still remain unrecorded, but even now certain criteria, which must be satisfied before a site would be acceptable for preservation, should be formulated. In such formulation local societies must take care not simply to advance the local claimant.

Such criticisms against a policy of preservation do not, of course, apply to any policy of recording sites (including extensive photographic records), and it is in this field that action is most urgently required. Preservation should be left to a few cases (though it is important, and urgent, to decide what they are) while attention is concentrated on the easier task of recording. A register of sites, both national and local, should be compiled at once. Only then will it be possible to determine the priorities for preservation and excavation with some degree of accuracy.

The third contribution of industrial archaeology is on a different level from the first and second, both of which are concerned primarily with supplementing the documentary evidence to give additional or wider knowledge. No matter how much new information they provide, they do not add any new dimension to the knowledge of the economic historian. They provide supplementation of the same degree, but without any difference in kind. If that were its only contribution, an extremist might think the subject hardly merited the effort which must be directed towards it. But the third contribution of industrial archaeology is a unique addition to the knowledge of the economic historian. The economic historian can easily become so absorbed in documentary evidence that he gains a distorted picture of his subject, a fault particularly damaging to him, since it may easily be remedied. Even when many of the events he studies are not fully recorded, they may yet be more adequately understood, and a new interpretation or insight into his study gained, by visits to any physical remains which still exist. An example is in most of the older mining areas in Ayrshire, where it is still possible to see the remains of the miners' rows in

their primitive isolation and squalor; the larger houses of the managers, usually but not always standing apart from the rows; the owner's house, then in the midst of his industrial activities, with obvious social repercussions; the minute office accommodation, indicative of different forms of industrial administration; the criss-cross of mineral lines and the small bing, the reflection of the frequent sinkings. These features, and especially the social structure they imply, are not always easily extracted from documentary evidence.

If these reasons justify the study of industrial archaeology, what methods should be used in the subject. They are various, but in the main centre round two approaches: the first, a specialised approach, is by examining how an industry, invention or requirement (such as the need for water-supplies) has affected a particular region; the second, and more general, approach is by studying an area in detail to record any evidence (of buildings, machinery, or simply marks on the ground) which remain from the industrial changes of the last two hundred years or so. The first, and more specialised approach will interest those who want to add to their knowledge of an industry or device, such as water-wheels or wind-mills, but local historians and local archaeological societies will normally adopt the second, or more general, approach.

Ayrshire has a wide variety of industrial remains. There is little legacy of the early pre-industrial settlements still in use, though in some towns there is a small cluster of houses, or what is left of them, round the site of the parish church; the survival, though often heavily renovated, from 1750 or earlier, of the days before agricultural improvement or rapid industrial innovation. It is only from the eighteenth century that industrial remains become generally evident in the county, from the time when to this old agrarian and ecclesiastical nucleus came the push of agricultural improvement in the countryside and the pull of the new textile industries in the towns.

The new cotton spinning mills were the most lasting legacy of industrial development. The best known are the large enterprises, which represented the most drastic departure from the old methods, and of which Catrine was a striking example, but concentration on such new creations, and on attempts to preserve some of them, should not lead to any neglect of recording the way in which the advent of the cotton industry in the late eighteenth century affected the older settlements. In spite of the construction of new textile centres, such as Catrine, numerous small establishments, and, even more important, domestic, though not necessarily part-time, work continued to grow, certainly in weaving (where the application of power came later), but also for a time in spinning. During this

period, as the *Old Statistical Account* demonstrates, weavers' cottages were added to the old nucleus around the parish church in many towns in Ayrshire and other parts of the south-west of Scotland, and many of these towns began to acquire a few larger buildings, later converted to other uses, in which spinning and weaving were carried on. The remnants of such towns remain, though, with the decline of the cotton industry from the middle of the nineteenth century, the structure began to change, especially in those parts of Ayrshire where the decline of cotton manufacture was accompanied by the rise of heavy industries. The mills remain in the overwhelming majority of cases only where they have switched to other manufactures, but traces of most, notably the mill lades, remain. So it was with the weavers' cottages, most of which began to be changed from their original use even earlier than the mills, though some continued to be used as such, even after power was applied to weaving, by returning to weave silk, mostly for Paisley manufacturers.

The heavy industries, when they came, left their mark not only in the towns and villages, of which, with their miners' rows, they created many more new ones than cotton ever did; they also left an indelible mark on parts of the countryside, as the increasing use of steam and the large consumption of coal in the ironworks took industry in the nineteenth century to the coal measures. So came the transformation of many parts of Ayrshire, notably in the east and south, until then largely unaffected by industrial growth, and their acquisition of many of the disfiguring features which they still possess. Here clearly the need for recording is most evident, for few would advocate the preservation of some of these more ugly aspects of industrialization.

Such physical legacies of our industrial past do not have the attraction of ancient times and beautiful things, but, more than anything, they are the factors which have determined the way of life of most of Ayrshire's present population. Their importance should be recognised by recording, and by occasional preservation. Thus posterity will not resent the destruction of valuable evidence without a full record having been made of its location and character.
