The Industrial Revolution was one of the greatest discontinuities in history. It still generates lively debate. Why did it begin in Britain when it did? How quickly and decisively did it transform industrial technology, class relations and living standards? These are the questions tackled in the special feature on the Industrial Revolution this month and next.

COTTAGE INDUSTRY AND THE FACTORY SYSTEM

The spinning process: At home using a Jersey wheel...

Duncan Bythell

At the centre of most people’s picture of Britain’s industrial revolution in the nineteenth century stands the dark, satanic mill, where an exploited and dispirited army of men, women and children is engaged for starvation wages in a seemingly endless round of drudgery: the pace of their labour is determined by the persistent pulse of the steam engine and accompanied by the ceaseless clanking of machines; and the sole beneficiary of their efforts is the grasping, tyrannical, licentious factory master, pilloried by Charles Dickens in that loud-mouthed hypocrite and philistine, Mr. Bounderby. Crude and exaggerated though this image is, it depicts very clearly the main features of the pattern of production which became widespread in the manufacturing industries, not only of Britain, but also of the other advanced countries, by the end of the nineteenth century. For it highlights the emergence of the factory, where hundreds labour together under one roof and one direction, as the normal type of work-unit; it stresses the new importance of complex machine-technology in the process of production; and it emphasises that, because ownership of these machines, of the building which houses them and the engine which drives them, rests with the private capitalist, there exists an unbridgeable gulf between him and his property-less wage-
earning employees.

This system of production, which is usually assumed to have been pioneered and rapidly adopted in Britain’s textile industries around the end of the eighteenth century, did not, of course, emerge in a wholly non-industrial world. The popular picture suggests that it replaced — or rather, brutally displaced — an earlier type of organisation, variously referred to as ‘the domestic system’, the ‘outwork system’, or simply as ‘cottage industry’, which differed totally from the factory system. Whereas the latter concentrates workers under one roof in an increasingly urban environment, the former disperses employment into the homes of the workers, most of whom live in the countryside. Although the modern mill is filled with the factory master’s costly machinery, the domestic workshop houses simple and traditional hand-tools — the spinner’s wheel, the weaver’s loom, the cordwainer’s bench, the nail-maker’s forge, and the seamstress’ humble pins and needles — which actually belong to the worker. And whilst the factory system implies clear class division, with the wage-earner firmly subordinated to, and perpetually at odds with, his employer, the domestic system gives the head of the household an independent, quasi-managerial status, which enables him to control his own time and to direct, in a ‘natural’ fatherly way, the efforts of his family team.

The unspoken assumption is that, in the undisciplined, fulfilling, and relatively classless world of cottage industry, the common man was certainly happier, even if he was materially worse off, than his grandson. Only in the last desperate phase, when the dwindling band of domestic handworkers found themselves competing hopelessly against the new generation of factory machine-minders, is the idyllic image tarnished; and the haunting picture of the doomed handloom weaver, striding in his cellar to match the output of his wife and children who have been forced into the factory, reinforces the notion that, between old and new systems, there is nothing but contrast, conflict, and competition.

Any concept of historical change based on snapshots taken on separate occasions tends to emphasise differences and discontinuities. In the caricature of the domestic and factory systems just presented, they appear to be completely antithetical. Yet on closer examination, the story of most industries which ‘modernised’ in the course of the nineteenth century is full of important elements of continuity and complementarity between the factory and the pre-factory stages of their development; and it is on these two dimensions, rather than on the stark contrasts suggested by the traditional stereotype, that I want to focus attention.

Let us consider continuity first. A number of historians have recently suggested that the existence of the domestic system of production in such industries as textiles was one of the main features distinguishing the pre-industrial economies of Europe from the Third World countries of today; and although they prefer the abstract concept of ‘proto industrialisation’ to the well-established and perfectly adequate term ‘domestic system’, they are essentially claiming that the industrial revolutions of the nineteenth century could not have taken place without the prior development of a form of production which, in their view, was to provide both the capital and the labour needed for finished products. The pay roll of some of these merchant-manufacturers could run into many hundreds; in the late 1830s, for example, Dixons of Carlisle, cotton manufacturers, employed 3,500 handloom weavers scattered over the border counties of England and Scotland and in Ulster; a decade or so later, Wards of Belper, hosiers, provided work for some 4,000 knitting frames in the counties of Derbyshire, Nottinghamshire, and Leicestershire; and as late as the 1870s, Eliza Tinsley and Co. put out work to 2,000 domestic nail- and chain-makers in the west Midlands.

To service and coordinate such large and scattered forces required an elaborate system of communication and control in which the key figures were the agents — variously known as ‘putters-out’, ‘bagmen’, and ‘foggers’ — who were the equivalents of the modern supervisor.

Children on their way to work in the factory in Yorkshire; from a lithograph after George Walker published in 1814.

In making this claim, proponents of the theory of ‘proto industry’ are drawing attention to one of the most important, but often misunderstood, features of the classic domestic system — the fact that it already showed a clear distinction between the capitalists who controlled it and the wage-earners who depended upon it for their livelihood. For the domestic system, no less than the factory system which replaced it, was a method of mass-production which enabled wealthy merchant-manufacturers to supply not only textile fabrics, but also items as diverse as ready-made clothes, hosiery, boots and shoes, and hardware, to distant markets at home and abroad. In order to do so, they, like the factory masters who followed them, bought the appropriate raw materials and hired wage-labour to convert them into modern industrial development.

In this, the workers whom these great men employed generally owned their own tools, although in the case of an elaborate piece of machinery like the knitting frame they often had to hire it; and most of them worked on their own premises — although, again, it was by no means rare for the individual weaver, knitter, or nail-maker to rent space and tools in another man’s shop. But except in a few minor rural trades like straw-plaiting and lace-making in the south and east Midlands, they neither provided their own raw materials, nor had they any interest in marketing the goods they helped to make. They were, in short, wage-earners who happened to own some of the tools of their trade. But the trade in which they worked was organised by capitalists; and far from making goods to sell to local customers, they...
were often, all unknowing, supplying the wants of West Indian slaves and North American frontiersmen.

The crux of the argument about continuity between domestic and factory systems of mass-production turns on whether it was actually the case that the firms which set up the first modern factories in a particular industry were already active in it on a putting-out basis, and whether the last generation of domestic workers transformed themselves into the new race of factory hands. Of course, no one is maintaining that continuity was direct and complete in every single industry or region where such a transition occurred: indeed, there were areas such as East Anglia or the Cotswolds where the change-over simply did not take place, and where a once important industry gradually vanished as the old domestic system dwindled and died. But where 'modernisation' did happen in traditional outwork industries in the course of the nineteenth century, as it did in the textile industries of Lancashire and Yorkshire and in the hosiery trade of the east Midlands, historians seem to be agreed that it was existing firms which played a leading role, albeit cautiously and belatedly in some instances, in setting-up the factory system and in embodying some of their capital in buildings and machines; in other words the fortunes made, and the expertise in marketing and managing acquired, in the old system of production were important in enabling the new system to develop.

There is less agreement, however, as to how far the existing hand-workers in any particular industry really did shift over to the factory. The theory of 'proto-industry' suggests that the domestic system had created a country-dwelling but landless proletariat in many ways at odds with the traditional rural society around them: they had only a minimal involvement in the agrarian economy, and were therefore rootless and prone to migration; they possessed manual skills irrelevant to farming activities; and as wage-earners, they were obliged to respond to the pressures and the opportunities of a market economy in which the price of survival was adaptability. In terms of both work-skills and mental outlook, that is to say, they were already well-equipped to form the first generation of the modern industrial labour force.

But did this actually happen? The traditional picture suggests not, because it depicts a stubborn refusal to come to terms with changed circumstances and, indeed, a downright hostility to "machinery" which, in the Luddite movement of 1811-16 in the Midlands and the various outbreaks of loom-smashing in Lancashire and elsewhere, sometimes erupted in violence. Clearly, the worker's readiness to change with the times depended partly on age, and partly on opportunity. Case studies based on census returns for Lancashire weaving villages during the crucial phase of transition in the middle of the nineteenth century suggest that, once a powerloom shed had been started locally, the younger married men were ready enough to take work in it, but that the elderly were either reluctant to do so, or were debarred by the employer, and therefore stuck to the handloom. But until there was a mill virtually on the spot, most of these villagers believed they had little option but to stick to the handloom, and for want of other opportunity they continued to bring their children up to it. Probably the most important strand of continuity in the labour force was in fact provided by the children of the last generation of hand-workers: by and large, a trade dies out because it stopped recruiting sometime before; and the demise of occupations like handloom weaving was finally assured when families were willing and able to put their offspring into something different, instead of forcing them to follow automatically in father's footsteps.

By highlighting the division between capital and labour which characterised the domestic no less than the factory system of production, and by considering the continuity which this engendered, the new theory of 'proto-industry' has pinpointed certain popular misconceptions about the nature of cottage industry. First of all, it must be clear that when economic historians refer to 'outwork' or 'cottage industry' they are not talking about a world where each family simply makes manufactured goods for its own use - although in even the most advanced societies elements of the home-made and the do-it-yourself survive. Nor are they discussing the self-employed craftsman or genuine artisan - the village shoe-maker and tailor, or the more sophisticated urban wig-maker or cabinet-maker - who produced and sold 'one-off' goods directly to the order of their local customers, and whose successors are still to be found in some parts of the modern economy. Indeed - and this is a second error which needs to be corrected - in the strict sense they are not dealing with 'skill' or 'craft' at all. As a method of mass-production, the greater part of cottage industry involved the making of plain, simple, inexpensive goods by hands which, although they became more nimble and adept with
experience, had neither needed nor received much initial training. Weaving heavy woollens and hammering nails and chains required a certain strength; but weaving plain calico, knitting coarse stockings, sewing buttons on shirts, plaiting straw, and sticking matchboxes together with glue called for neither brain nor brawn. A seven-year apprenticeship to learn the 'mysteries' of most domestic industries was unnecessary, when the work merely involved the monotonous repetition of a few simple movements of the fingers; and because the work was unskilled and undemanding it was considered particularly suitable for women and children. Domestic industry, like factory industry, involved the worker in much mindless drudgery; the chief difference was that, in working at home with hand-tools, the wage-earner could go at his or her own pace, instead of having to keep up with the steam engine.

Thirdly, just as we need to abandon the notion that the domestic system was all about skilled craftsmen, so we must reject the idea that it was predominantly about 'men' at all. One of the advantages which the old terms 'domestic system' and 'cottage industry' have over 'proto industry' is that they suggest an important feature which old-style mass-production shared with the early textile mills: a domestic or cottage workshop called on the efforts of housewife, grandparents, and children of both sexes, as well as those of the household's head. Thus the average weaving or knitting family would run two or three looms or frames, and in addition would operate any ancillary machinery needed to prepare or finish the work. Because it worked as a team, the domestic work unit could also practice division of labour, so that each member could specialise on just one stage in the sequence of production. Like any other family business, a workshop involved in the domestic system was a collective enterprise to which all contributed who could; and only when the household included no children old enough to do even the simplest tasks did it depend for its income on what a man could earn by his own unaided efforts. Because the capitalist-controlled outwork industries made particular use of women's and children's labour in this way, female workers were generally in a clear majority in the work force; and in the mass-production section of the needlework trades, where outwork remained particularly important until late in the nineteenth century, and which included men's tailoring and shirt-making as well.
as dress-making and lace stitching, the preponderance of women was especially striking.

Fourthly, we must not imagine that, in a capitalist-controlled industrial system such as outwork was, relations between masters and operatives were marked by much sweetness and light. Since the main tie between them was the cash nexus, disputes about wages could be frequent and bitter. Most employers in the industries which used the domestic system operated in a tough competitive environment, and their likely reaction to a spell of bad trading conditions would be to cut the piece-rates they paid their workers. Most of the scattered rural outworkers were disorganised and docile, and could offer little, if any, resistance; and in any case, for women and children a pitance was deemed better than no work at all. But the adult men — especially those who lived in the towns, and did the better-class work which needed more strength or skill — were another matter. They had a clear conception of the work and wages proper for a man, and they were better able to take collective action against underpaying masters and weak-willed blacklegs who broke the conventional rules.

As a result, at different times in the late eighteenth and early nineteenth centuries, fierce strikes broke out in such towns as Manchester, Coventry, Barnsley and Norwich, major centres of handloom weaving; among the urban framework knitters of Nottingham and Leicester; and among the nail-makers of the Black Country. At a time when formal trade unionism was a shadowy affair, and in difficult political and economic circumstances, some at least of Britain’s industrial outworkers played their part in sustaining patterns of collective bargaining which, faute de mieux, sometimes involved great violence; whilst the support these disgruntled men gave to the various campaigns for parliamentary reform between the 1790s and the 1850s has been frequently noted by historians.

Once we have abandoned such misconceptions about the nature of the domestic system as it had come to exist by the end of the eighteenth century, it is easier to see the similarities and the points of continuity between it and the factory system which was eventually and gradually to supersede it. And when we realise that the domestic system, far from being some prehistoric monster which expired when the first cotton factory was built, actually expanded and persisted in many industries and regions until well into the second half of the nineteenth century, we become aware, not only that the two types of mass-production overlapped in time, but also that they complemented each other, rather than competed. The textile industries usually occupy the foreground of any discussion of the domestic and factory systems; and in view of their wide geographic dispersal, their rapid expansion, and the hundreds of thousands they had to employ by the late eighteenth century, this is entirely appropriate. But because, starting with the spinning branch of the British cotton industry in the 1770s, it was in these industries that the complete triumph of the factory system was achieved earliest, attention has been deflected from the many other trades — particularly shoe-making, clothing, and some branches of hardware — where the domestic system actually became more, rather than less, important. For although the first half of the nineteenth century saw the disappearance into the factory first of spinning and south of England, and, above all, in what were to become known as the 'sweated trades' of London. Why was this?

The pioneering experience of the textile industries suggests some of the answers. Contrary to popular belief, even in the cotton industry, the transition from the domestic to the factory system was a slow, piecemeal affair, which took three generations; and in wool, linen and silk, the process was even more protracted. The reason was simple: the first power-driven machines of the 1770s revolutionised spinning only; and by making it possible to produce thread on a scale and at a price which would have been inconceivable in the days of the spinning wheel, they simply created a good deal more work for a great many more workers — in this case, the weavers — at the next stage in the production process. And so long as enough extra weavers could be found at wages the employers

then of weaving in Lancashire and Yorkshire, it also witnessed the expansion of mass-production by outwork methods in the ready-made clothing trades and in the boot and shoe industries. And apart from the fact that these growing industries increased output by traditional rather than modern methods, there were other, less expansionary trades — such as Midlands hosiery and Black Country nail-making — which remained fossilised at the 'domestic' stage of development until well after 1850. In addition, the latter part of the nineteenth century actually saw a number of new, small-scale manufactures, such as paperbag and cardboard-box making, establish themselves as cottage industries. Thus, if outwork had more or less disappeared from the staple textile industries by the 1850s, it was more firmly entrenched than ever in and around many of the industrial towns of the Midlands and the

were prepared to pay, there was no need to think of replacing the handloom with some labour-saving device, as yet uninvented. Thus between 1780 and 1820, the growth of spinning factories marched pari passu with a vast increase in the number of handloom weavers' shops; and technical progress in one section of the industry merely led to the multiplication of traditional handwork in associated sections.

The same thing was to happen in other industries later: when lace-making was mechanised in Nottingham from the 1820s, there was a consequent increase in the amount of stitching, finishing and mending for hand-sewers in their homes; when machines were first used to cut out the components of a stock-sized shoe or coat, they made more unskilled assembly work for domestic workers; and even when the sewing machine had transformed the traditional needlework
trades, it did not necessarily drive them out of the home into the factory, because, as a compact, hand-powered, and relatively inexpensive tool, it could be used in a domestic workshop as effectively as in a large factory. In all these ways, factory and domestic systems often co-existed and complemented each other in a given industry. Since it was rarely either possible or necessary for new techniques to be introduced simultaneously at every stage in the process of manufacture, flexible combinations of centralised factory work at one stage, and cottage industry at the next, were perfectly practicable.

There was often a regional dimension to the co-existence of these two types of mass-production, and it was here that elements of competition emerged between them. In the classic case of cotton weaving, for example, the handloom survived as the dominant machine in some parts of Lancashire for almost a generation after it had largely given way to the powerloom in others: in large towns such as Stockport, Oldham and Blackburn, factory production was taken up in the 1820s by manufacturers who already operated spinning mills; but it made little progress in the small towns and villages of north-east Lancashire, such as Padiham, Colne and Haggate before the 1840s. In part, this reflected local differences in the availability of labour and capital, for the more remote rural areas were richer in the former than in the latter. But independent of such regional differences, there was also a qualitative side to this 'staggered' adoption of the powerloom, because the early, clumsy factory looms could cope better with the plain types of cloth than with fancy or patterned goods. Other industries were later to show similar disparities in the rate at which different districts and sections adopted new techniques: for example, the boot and shoe industry of Leicester seems to have relied more on factory production and less on outwork than did that of Northampton in the second half of the nineteenth century; whilst in the 1890s, cottage industry was more apparent in the ready-made clothing trade of London than in that of Leeds.

In short, the domestic system of mass-production in British industry took a long time to die during the nineteenth century. It might expand in one trade at the very time that it was contracting in another; in some industries, it could enjoy a harmonious coexistence with factory production for many years, whilst elsewhere it might struggle on in arduous competition for a generation or more. Why was this? How could this technically primitive form of large-scale production remain viable for so long in important parts of the world’s first industrial economy?

To find the answer, we must try to fathom the minds of the entrepreneurs in the different industries, as they calculated how best, in a complex and competitive world, to get their goods to market with least cost and least trouble to themselves. A manufacturer who had grown up with the domestic system as the dominant mode of production in his trade would need strong inducements to abandon it, because under normal circumstances it offered him many advantages. If he employees provided their own tools and workshops, he himself was spared the need to tie up his own capital in bricks and mortar and in machinery; and in times of periodic trade depression or slack seasonal demand — and most of these industries were subject to one or other of these risks, if not, indeed, to both of them — it was the worker, not his employer, who suffered when plant and equipment were standing idle. It was not that these great merchant-manufacturers lacked capital — indeed it required remarkably little fixed capital in most of these industries to build or rent a small factory and fill it with new or second-hand machinery; nor was it generally the case that appropriate new techniques were not available — the time-lag between invention and adoption of a new machine is a recurrent feature in many of these trades; it was rather the case that their capital under the domestic system was embodied in unused raw materials, goods ‘in the make’, and stocks in the warehouse.

Nevertheless, because it involved more sophisticated machinery, the application of power, and the construction of large, purpose-built work premises, the factory system of production was capital-intensive, rather than labour-intensive. By contrast, what an employer had to rely on to keep cottage industry viable was an abundance of cheap, unskilled, and unorganised labour. So long as he could find enough workers who had no choice but to take his work at the wages he was prepared to offer — no matter how low these might be — he could meet his production targets and reap his expected profits. From the late eighteenth to the late nineteenth centuries, there were many regions of Britain which could provide just such supplies of labour: a high and sustained rate of population increase, together with the greater commercialisation of agriculture, tended to create pools of unemployed or under-employed workers in many rural areas; and in so far as these impoverished country people moved off to the towns in search of more work and better wages, they often merely added to the chaos and confusion in the unskilled urban labour markets.

But what kept the domestic system alive after the mid-nineteenth century more than anything else was the continued availability — long after most adult men had deserted these low paid, dead-end jobs — of female and child labour: incapable of collective self-defence, and often deliberately ignored by their better organised menfolk; accustomed to regarding any earnings, however minute, as a worthwhile contribution to family income; and often only able to work on a part-time or casual basis — they were ideal for many employers’ purposes. And in a perverse way,
because it thrived on family labour, the domestic system actually helped to perpetuate its own labour force: because cottage industry, by enabling the whole household to earn, acted as a great inducement to early marriages and large families, and thus contributed to the 'population explosion' which was so important a feature of Britain's industrial revolution.

Because labour could be much cheaper in one part of the country than in another, an old-fashioned employer who stuck to outwork could still hope to compete with his more ambitious and enterprising fellows elsewhere who had switched over to factory production. Only in the last quarter of the nineteenth century did a combination of new circumstances – including rural depopulation, compulsory schooling (which kept young children out of the labour market and widened their horizons), rising real incomes (which made small supplementary earnings less essential to a family), and more 'chivalrous' male attitudes towards women as workers – help gradually to eliminate some of the sources of cheap labour and thus undermine one of the domestic system's chief props.

Changes in market conditions, as well as the increasing difficulty of finding suitable labour, could also be instrumental in persuading entrepreneurs to abandon old-style mass-production in favour of the factory. When, for example, attractive new export markets opened up for the English cotton industry in Latin America in the early 1820s, Lancashire manufacturers knew that they would be better able to increase output by introducing powerlooms than by seeking out more handloom weavers at higher wages; and when, more than two generations later, British boot and shoe manufacturers were faced with an 'invasion' of their own home market by cheap mass-produced, factory-made American imports, they recognised that they could only stay in business if they themselves adopted American methods of production. Both the cotton manufacturers of the 1820s and the boot and shoe manufacturers of the 1890s had to overcome strong opposition from workers still suspicious of machinery and still attached (in spite of the precarious economic position in which it left them) to the domestic system: but once the entrepreneurs in any industry had concluded, for whatever reasons, that the disadvantages of cottage industry outweighed the benefits, its days were numbered.

From the worker's point of view, even if we forget the caricature, the dark satanic mill offered an uninviting prospect; but it is hard to escape the conclusion that the domestic system was in many ways even less agreeable. Even where cottage workers were not directly competing with factory workers – and I have suggested that it would be wrong to put too much emphasis on this side of the story – most of them were poorly paid, and likely to be alternately overworked and under-employed. Worst of all, they were subject to all kinds of abuses, not only from employers and their agents, but often from heads of households and fathers of families who connived, however reluctantly, in the exploitation of their own wives and children. Men may have been unwilling to accept the separation of home and workplace which the gradual replacement of the domestic system by the factory system involved; but in its long-term implications for family life, it was probably one of the most beneficial, as well as one of the most fundamental, of all the changes brought about by the industrial revolution.

For further reading: