Technology, Employment and the Industrial Revolution

Richard Giles

Part One: Progress and Reform
Part Two: Exploitation and Repression
Part Three: Conclusions

William Brooks
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Preface

The industrial revolution in Britain raises three important problems:

1. What conditions were important for the development of industry in the nineteenth century in Britain?
2. Did living standards improve during the industrial revolution or not?
3. How far is the industrial revolution responsible for important political movements in nineteenth century Britain?

The aim of this booklet is to answer these questions. In answering these questions we have certain limitations to overcome. The first is the prejudice that the industrial revolution was a "bad thing". This presumably means that, by comparison with earlier times, conditions during the industrial revolution were somehow worse. Now, since it is obvious that the overall effect of the industrial revolution since it began has been to make the lot of even the poor materially better, this prejudice leads to confusion. The common way to relieve this confusion is to believe that the intervention of the government made all the difference. Things were bad until the government improved them. This is the "standard view". One aim of our study is to put this standard view into a truer perspective.

Answers to these three questions often fall into vague and exaggerated generalities. Factories are filled with children who are whipped and made to work eighteen hours a day. Another aim of our study must be to overcome this second limitation of detail; for example, by careful description of living and working conditions in factory towns.

A third limitation to overcome concerns the untested assumptions that guide the student. One assumption is that it

was the industrial revolution itself which caused everything else to happen; another, that in some way evil men, capitalists, exploited their fellows until government put a stop to them. A third assumption is that suffering came from the numbers of persons who happened to be born at the time. An important aim of our study is to take a more curious look at these "building blocks" out of which explanations are usually made.

Textbooks too infrequently point out the fact that the industrial revolution is a highly controversial subject. There is controversy between those who represent the industrial revolution as economic gain, the optimists, and those who see it as social loss, the pessimists. The optimists prefer to explore the conditions which were important for the growth of industry. Their story is of large and impersonal forces, such as population growth and technological change, which for a time disturbed society, and which had to be brought under control by governments later in the nineteenth century., They nonetheless stress how often the industrial revolution brought its own solutions to social problems. On the other hand, the pessimists prefer to tell the story of social loss which change involved. They place large importance upon the irresponsible power of capital, and the repressive laws of Parliament.

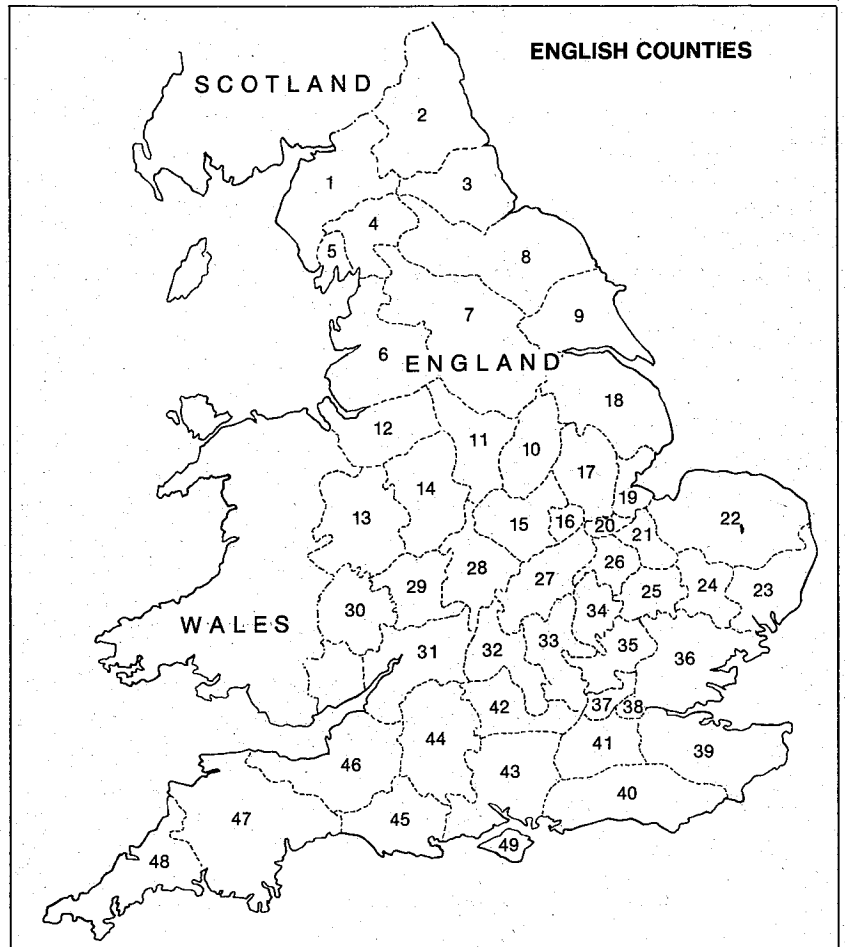
We can summarise the differences between the optimists and pessimists as follows:

PESSIMISTS	OPTIMISTS
emphasise social history	emphasise economic history
want to know more about the "shameful" way common people were treated	want to know how the "miracle" of the industrial revolution came about
see sudden, total collapse of living conditions	see slow, steady improvement in living standards
conclude that poverty was an institutional creation (man-made)	conclude that poverty was unavoidable (in the nature of things)
work most often from individual case histories	work most often from statistics

Each side presents a self-contained picture of the industrial revolution. The optimists' approach yields a picture of *Progress and Reform.* They provide an answer to the first question, but tend to assume that economic gains must have improved living standards. The pessimists' story is one of *Exploitation and Repression.* They answer the second question, but do not present anything much of economic gain, since this would undermine their argument. In fact, neither view should be seen without the perspective of the other. The remarkable thing about the industrial revolution is that there was economic gain; there was social loss. This paradox is examined in greater detail in *Conclusions.* Here the living standards controversy is analysed from both sides.

Both sides have something to say of political movements. The optimists deal with those political movements (of free trade and parliamentary reform for example) which fall under *The liberal tradition.* The pessimists deal sympathetically with working class movements (of trade unions, Chartism, etc.) which fall under *The radical tradition.* It is in these two places that the third question is answered.

One other question about the industrial revolution needs to be asked. Where did the working class (or proletariat) come from? The question is asked because it is assumed without inquiry that the working class was a social consequence of the industrial revolution. No sensible answer can be given to any question about the industrial revolution without first asking about the origins of the proletariat. A lengthy discussion of this puzzling question is given in *Part Two.*



1. CUMBERLAND
2. NORTHUMBERLAND
3. DURHAM
   Newcastle
4. WESTMORLAND
5. LANCS.
6. LANCASHIRE
   Liverpool, Rochdale, Manchester, Bolton, Oldham

YORKSHIRE

7. WEST RIDING
   Leeds, Sheffield
8. NORTH RIDING
9. EAST RIDING
10. NOTTINGHAMSHIRE
    Nottingham
11. DERBYSHIRE
    Derby
12. CHESHIRE
13. SHROPSHIRE
14. STAFFORDSHIRE
15. LEICESTERSHIRE
16. RUTLAND

LINCOLNSHIRE

17. KESTEVEN
18. LINDSEY
19. HOLLAND
20. SOKE OF PETERBOR'
21. ISLE OF ELY
22. NORFOLK

SUFFOLK

23. EAST SUFFOLK
24. WEST SUFFOLK
25. CAMBRIDGESHIRE
26. HUNTINGDONSHIRE
27. NORTHAMPTONSHIRE
28. WARWICKSHIRE
    Birmingham
29. WORCESTERSHIRE
30. HEREFORDSHIRE
31. GLOUCESTERSHIRE
    AVON — Bristol
32. OXFORDSHIRE
33. BUCKINGHAMSHIRE
34. BEDFORDSHIRE
35. HERTFORDSHIRE
36. ESSEX
37. MIDDLESEX
38. LONDON
39. KENT
40. SUSSEX
41. SURREY
42. BERKSHIRE
43. HAMPSHIRE
44. WILTSHIRE
45. DORSETSHIRE
46. SOMERSETSHIRE
47. DEVONSHIRE
48. CORNWALL
49. ISLE OF WIGHT

Part One:
Progress and Reform

Introduction

How rapid was change during the industrial revolution? How extensive was it? Contemporaries of the industrial revolution between 1780 and 1850 were struck by a sense of unprecedented and complete change. This sense is conveyed, for example, by Frederick Engels, who visited England and remained twenty-one months to manage his father's textile mill in Manchester. In 1844 he wrote:

> *"Sixty, eighty years ago, England was a country like every other, with small towns, few and simple industries, and a thin but proportionately large agricultural population. Today it is a country like no other, with a capital of two and a half million inhabitants; with vast manufacturing cities; with an industry that supplies the world, and produces almost everything by means of a most complex machinery, with an industrious, intelligent, dense population, of which two-thirds are employed in trade and commerce, and composed of classes wholly different; forming, in fact, with other customs and other needs, a different nation from the England of those days. The industrial revolution is of the same importance for England as the political revolution for France . . ." (p.50)**

Four years later Karl Marx wrote in the *Communist Manifesto:*

> *"The bourgeoisie . . . has been the first to show what man's activity can bring about. It has accomplished wonders far surpassing Egyptian pyramids, Roman Aqueducts, and Gothic Cathedrals; it has conducted expeditions that put in the shade all former Exoduses of nations and crusades."*

* Works are referred to in detail in the *References*, p.98.

Some years after Arnold Toynbee had established the idea, in 1883, of unprecedented and complete change in the term "Industrial Revolution", a new generation of historians began to call the idea into question. They pointed out that "industrial" was far from wide enough to encompass all the aspects of growth. It degraded other important changes, in population, agriculture and transport for example, into ancillary aspects of industrial growth. These changes needed a wider description than "industrial" and they suggested "economic". "Revolution", on the other hand, made the changes seem too sudden, too once-and-for-all. As against discontinuity the later historians stressed continuity. As Lipson emphasised for example "The Industrial Revolution" was the outcome of a long effort by English society over centuries; the industrial revolution lay somehow in the logic of this development. Industrial changes, moreover, were "changes in slow motion". Imitation was difficult and slow. For example, mechanization in the wool, linen and silk trades were far from complete in 1850. Inventions also often created more problems than they solved — as the many patents upon some aspects of engineering suggest. Problems were passed on from one industry to another; for example, from the textile to the iron and coal industries. Further, later historians noted that even in the context of their own times, the developments which had taken place were diminutive. For instance, it was pointed out that there were never more than 5 per cent of the workforce employed in textiles at any one time. Even in 1851, there were still 1¾ million employed in agriculture when only 80,000 were employed in the iron industry. At the time there were also twice as many female domestic servants (nearly one million) as there were female operatives in textiles. Finally, these historians argued that, if sudden changes had occurred, it would be easy to say when the industrial revolution has started; in fact, dates varied considerably about the beginning of the industrial revolution. Certainly no spectacular growth had occurred around the favourite textbook date of 1760.

Upon this last point T. S. Ashton argued that, upon the evidence of important inventions, the spread of power-driven machinery, the sharp upward turn in production and all the

indices of trade, that important economic developments had been set in motion in the mid-1780s.* Even more important this growth had been sustained at between 1 and 1½ per cent per annum between 1780 and 1850. Although this may not sound a revolutionary change it was revolutionary for the time and, indeed, increased output per head fourfold over the course of the nineteenth century. (Some slighter growth leading to the industrial revolution had been evident after 1660 and was clear to people about 1700.)

*Inventions included the puddling process for the production of iron, the rotary motion steam engine, the perfection of cotton-spinning machinery; there had been a marked increase in the production of textiles and iron; and, whereas the tonnage of commercial vessels using English ports had been falling in 1777, in 1781 it had made sudden and dramatic progress so that by 1787 it had doubled.

The "Industrial Revolution"

It is apparent that industry was at the centre of this growth and, given that all labels have their limitations, the term "Industrial Revolution" is at worst a handy name for the period 1780-1850. This industrial ferment had, by 1850, produced not only higher and more sustained growth than at any other time in man's history, it had produced as well unprecedented structural change. Britain had been transformed from an agrarian into an industrial society: one that was more urbanised; where industry engaged a larger proportion of people than agriculture; and one which was more involved in national and international trade (by the "division of labour") than any other nation in history. This increased rate of economic growth, together with structural change in both economy and society, is the industrial revolution. These considerations lead to the following definition of the industrial revolution: Changes in British industry leading to a sharp and sustained increase in production and trade between 1780 and 1850 as well as to profound social changes.

Invention

The immediate cause as it were of the industrial revolution was invention in the cotton, iron and coal industries.

The cotton industry

This industrial revolution began in South Lancashire which was the home of a small English cotton industry. (South Lancashire met all the requirements for the location of a cotton industry: a wet, humid climate, for the easier working of cotton fibres; soft water; the presence of coal for the firing of steam engines; and the port of Liverpool.)

The first advance (1733) by John Kay, was the use of a mechanically operated, rather than hand-thrown shuttle in the loom — a device which sometimes amazed, sometimes enraged those who saw it demonstrated. (Kay appears to have been driven out of the country as its inventor because weavers considered that such an invention would cause them to lose their livelihood.) This labour-saving technique, when it had come into general use c. 1760, created a shortage of cotton

yarn. This shortfall was more than met by three spinning machines, all invented in Lancashire. A rough and clumsy machine invented by James Hargreaves in 1764 enabled one man to work 16-18, later, one hundred spindles at once. Although they could be worked by one man, capitalists in the 1770s collected these "spinning jennies" together in factories, supplied by water-power and located along the upper reaches of the many small streams which flowed down the western slopes of the Pennine hills. The crucial invention was the roller spinning frame of Richard Arkwright (1767) since it was intended from the start to replace human motive force by water-power. Large mills containing water frames were set up beside streams and produced the warp for cotton cloth. Samuel Crompton combined both the spinning jenny and water frame in the mule (1785) to produce a very fine and strong weft. It was now possible to combine this warp and weft into a fabric comparable in evenness, strength and fineness to the 'best Indian muslin.

The crowning achievement was added by the genius of James Watt who in 1785 adapted his steam engine to rotary motion to drive the sensitive textile machinery. This advance allowed the cotton mills to come down from the remote hills to centres of population in and around Manchester. In 1786 there was but one spinning mill in Manchester (Arkwright's); in 1800 there were about fifty. The great invention of the English cotton industry was the factory.

The lesser cost of this woven cloth, simply because of the saving of human effort required to produce the yarn, encouraged its wider use, to some extent at the cost of lighter woollens, and Manchester soon came to be the generic name for all cotton textiles. There had been for some time more yarn produced by these inventions that could be woven into cloth by the available weavers and this induced higher wages. Many left agriculture, which was less highly paid, to give their whole time to weaving. In fifteen years, between 1788 and 1803, cotton production trebled and the handloom weaver and his family earned weekly between 40s. and 120s. This situation led inevitably, but slowly due to its resistance, to the successful use of a power-loom by Edmund Cartwright in 1804. (The

power-loom may have been successful as early as 1785; the factory set up to test it, however, was burnt down by handloom weavers!) The manufacturer, Robert Owen, gives us a good idea of the overall change in the cotton industry by c. 1810: "mechanical powers and operations superintended by about two thousand young persons and adults (at New Lanark) . . . now completed as much work as sixty years before would have required the whole working population of Scotland".

Related industries

Such an immense increase in woven and knitted cloth (in the hosiery industry a stocking loom had recently been invented) produced a great scarcity of raw cotton by the end of the eighteenth century. By inventing the cotton gin, which separated the cotton from the seed, the American Eli Whitney in 1793 enabled British mills to use the otherwise inferior short, cotton staple. As a consequence American exports increased 600 fold between 1793 and 1833 and fell to less than a quarter of their former price. Meantime, it has been estimated that England's share about 1830 was just under two-thirds of total world production and its price to produce 1 lb of cotton yarn had fallen from 20s. to 1s 6d.

Other industries benefited from the growth of the cotton industry. "The adaptation of (cotton) machinery to the spinning of wool was most successfully accomplished" (Engels), saving the woollen industry from stagnation. The same might be said of other related (and to some extent competing) industries such as linen and silk, though as stated before, these found the adaptation more difficult. The advance in these clothing industries led to more sheep being bred and to more wool, flax and silk being imported; that is, to an extension of trade.

Iron and coal industries

Some unrelated industries progressed because they realised the importance, from the point of their competitiveness, of mechanical power and the minute division of labour that characterised the factory system in the textile industry. Nails, and screws, tools and other metal goods in the area of

Birmingham and Sheffield came in this way to be made by the factory system. To supply the factory system more coal was dug and improvements were made in the manufacture of iron which — after Henry Cort's discovery in 1784, could be smelted from coke rather than charcoal, and "puddled" to remove excess carbon. The cheaper production of iron eventually led to its wide use as a building material in the Victorian age, e.g. in pillars, rails and bridges.

Summary

This progress of industry is summarised in Table 1:

Table 1: THE GROWTH OF POPULATION AND INDUSTRY IN ENGLAND (1780-1850)

	1780	1800	1830	1850
Population (in millions)	7.5	9.1	13.9	18.
Proportion in Agriculture (as a percentage)	40-45	35	24	21
Cotton (raw cotton imported in millions of lbs.)	7.65	37.5	250	620
Iron (pig-iron in tons)	30,000 (in 1770)	250,000 (in 1805)	650,000	2,000,000
Coal (millions of tons)	6 (in 1770)	10	25	50

Transport improves

These developments in coal and iron, and in engineering in and around Birmingham, brought an extensive trade between the northern textile towns and the Midlands (which became the centre of the so-called "heavy industries"). In the Midlands the heavy, clayey soils made the transport of heavy loads impracticable even after the innovation c. 1730 of turnpike roads.

Turnpike roads

The aim of the turnpike system was to get an exceptionally bad piece of road out of the hands of the local parish and repaired or remade. Its means was to require travellers on the road to pay the turnpike Trust for the costs of its repair in proportion to the use they made of it. These Trusts after some initial activity, often lapsed, however, into a corrupt and mismanaged body that exacted arbitrary tolls from travellers to use the road without making effective repairs. Toll houses and gates were, as a consequence, often destroyed by angry rioters. Substantial improvement to roads began on the new frontier of English life: in the north of England.

Here, between 1760 and 1790, John Metcalf, a blind horsedealer, and later carrier, turned to the rebuilding of roads, including those which crossed the high, marshy moors of the Pennine range. Such improvements brought startling results. It was reported in 1767:

> *"There never was a more astonishing revolution accomplished in the internal system of any country than has been within the compass of a few years in that of (northern) England. The carriage of grain, coal, merchandise, etc., is in general conducted with little more than half the number of horses with which it formerly was. Journies of business are performed with more than double expedition. Improvements in agriculture keep pace with those of trade. Everything wears the face of dispatch, every article of our produce becomes more valuable . . ."*
>
> *(Qu. p.116, P. Mantoux.)*

Canals

But it was not long before canals displaced roads for the carrying of heavy or bulky articles. In the 1750s near Manchester a local coalowner, the Duke of Bridgewater, decided to connect the mines of his Worsley estate with Manchester by canal. In 1761, after the ingenious James Brindley had built the canal, the Duke was able to sell his coal in Manchester for less than 4d. per cwt. compared to the prevailing price of between 5½d. and 7d. per cwt. Now a canal enthusiast the Duke employed Brindley to extend the canal to the Mersey estuary. This canal cut the cost of goods between Liverpool and Manchester by half. This canal "galvanised into activity then unknown in both Manchester and Liverpool, and formed the starting point for a whole system of water communication by means of which the industrial revolution could be made effective" (Qu. p.18, Savage).

Almost immediately, Bridgewater and Brindley had a bigger project in mind: a canal from the Mersey to the Trent which would directly link the Irish to the North Sea. Josiah Wedgwood, the potter, could see the great utility of a canal passing through the pottery district of Staffordshire, at that time isolated by bad roads from both markets and the sources of its clay. Wedgwood helped carry the scheme through Parliament against the opposition of those who got business from the turnpike roads, and himself acquired land along the path of the canal for his factory. The canal was completed in 1767. It became the most important section of the Grand Trunk Canal linking the north and midlands. Great landowners were quick to rival the Duke of Bridgewater when they became aware of the dividends being paid by canal companies and of the way canals enhanced the value of their mines, quarries, forests and crops. Canal building spread rapidly between c. 1765 and 1795 — including three made across the Pennine ranges. It had been shown that canals reduced the cost of getting some goods to market and opened up fresh markets for others, not only inside the country but outside as well. Canal building had special advantages for the transport of heavy, bulky items such as grain, coal, building materials, iron and machinery.

Canals broke down local monopolies of carriers and suppliers, and by 1790 there was in England something like a national market. Wages as well as prices were tending to a general level. Some old river and coastal ports declined as traffic deserted them for other routes, e.g. Bewdley; while others such as Stourport on the Severn and Hull on the Trent, which were focal points for canals, became more important. Wherever "waterways formed a network round some privileged spot" such as Birmingham (which until then was landlocked) it was suddenly given access to, or an improved position in, distant markets. Following the extension of markets each manufacturer was stimulated to operate on a larger scale, and industry began to "sub-divide and improve itself". In other words, canals quickened commercial activity and specialisation and innovation resulted. In this context the so-called transport revolution brought about invention and innovation (including the factory system) as well as their rapid dispersion. At the same time canals and later also railways (when canals proved inadequate) gave a more regular and cheaper supply of food and fuel to towns — ending the periodic shortages and attendant food riots of the 1750s and 60s. Thus: the transport revolution encouraged the growth of northern factory towns (where canals were concentrated) and permitted their further development by providing cheap supplies of food and fuel. Roads which lagged behind became more important after c. 1790 through the efforts of Macadam — though regular mail and coach services between towns date from the 1760s.

Transport as an industry

Canals and roads, and later railways, became large industries in their own right. The size of these undertakings is reflected in their cost. For example, three quarters of a million pounds was spent on the Holyhead Road connecting London with the Irish Sea. This road was completed in 1830 and its impressive viaducts and tunnels may still be seen today. Railways which were originally built to carry coal were only an important feature at the very end of our period when they "appeared to solve virtually all the problems of the economy's growth at once" (Hobsbawm)*, and therefore led into the next phase of industrial expansion after 1850. Between 1840 and 1850 nearly 20,000 miles of line were constructed — much of this between 1844-1847 in the giant speculative boom. When Marx wrote about expeditions overshadowing all former exoduses and crusades he may have had in mind the armies of Irish "inland navigators" (navvies) concentrated on the tasks of road, canal, and railway building.

*These problems were basically those which canals had solved.

Population increases

Disproportionate growth of towns

These changes in industry and in internal trade were associated with a great increase in population (see Table 2).

Table 2: POPULATION INCREASE IN BRITAIN
(Adapted from p.119, J. D. Chambers).

	1801	1811	1821	1831	1841	1851
Population (in millions)	10.5	11.97	14.90	16.26	18.53	20.81
Percentage (increase)		13.98	17.73	15.39	13.98	12.31

How evenly spread was this growth of population?

While town and countryside were both growing, towns were growing far more quickly and, thus, constantly becoming a greater proportion of the population of the nation as a whole. Between 1801 and 1831 Manchester grew from 94,000 to 237,000 and Birmingham grew from 73,000 to 142,000 — each of them by most in the second decade of the nineteenth century. Liverpool, Leeds, Sheffield, and Glasgow (and of course London) grew only less slightly in the same period.

Internal migration

Despite the higher fertility rate in towns, the rapid increase in population of these industrial towns can only be satisfactorily explained by internal migration, which overshadowed natural increase. Higher wages in manufacturing towns attracted labourers from surrounding industrial and rural villages. As Arthur Redford first argued, "agrarian migration . . . was a short-distance centripetal movement . . ." (p.70). This is reflected in the diminishing population of outlying northern parishes of Lancashire between 1801 and 1831. Those people who came into Lancashire from outside came from the adjacent counties of Cheshire, Derbyshire and Staffordshire. This then opened up opportunities for

employment in these districts for those further south. The idea that the industrial north was peopled from the agrarian south and east (areas of low wages) is therefore misleading. Overall, migration to the less inhabited north was relatively slow. Redford explains this by pointing to the fact that magistrates subsidised wages in the south (prior to 1834), and to the uncertainty southern workers felt about their rights in the north under complicated settlement laws. Added to this there is the expensiveness of transport and rural workers' customary immobility "they do not migrate whenever it is to their economic interest, but only when they must" (p.95). A scheme of Home Colonisation begun in 1835 under the New Poor Law for internal migration from southern and eastern counties to the manufacturing districts in the north failed disastrously in 1837 with the onset of commercial depression. (London did rapidly grow from south-eastern counties, such as Norfolk and Suffolk; later the port of Southampton expanded as well.) Irish and Scottish migrants were, however, conspicuous' in Lancashire factory towns. In 1834-1835 there were 150,000 Irish in Lancashire alone.

Population as cause and effect of industry

What caused the growth of population? And how important was population growth to the industrial revolution?

Adam Smith thought "the reward of labour must necessarily encourage in such manner the marriage and multiplication of labourers" (Qu. p.115, Chambers); fertility was higher in towns. Similarly, changes in industry and trade which raised the standard of diet, dress, and housing could conceivably have led to the growth of population. Rev. Malthus constantly argued that "population was raised by bounties" of the old poor law. Chambers argues that the fall in the death rate, itself due to cheaper grain after c. 1730, allowed more to survive and then to marry, and thus led to a rise in the birth-rate. There does seem to have been a greater resistance to disease through inoculation against smallpox (after c. 1740) but this was the only notable medical advance of the time. The so-called "medical revolution" begun with Pasteur certainly belongs to the later period 1850-1914. Whatever the cause of this rapid rise in population, its appearance after c. 1740 was a significant

cause of the industrial revolution. This is because the industrial revolution is first and foremost a matter of large markets and the capacity for specialisation. Neither of these can occur without a substantial population.

Agriculture reorganised

Causes

Agricultural improvement has been described by Naomi Riches as "the application of new methods to farming for the purpose of making money" (p.15). Commercial agriculture came about in a countryside connected with a substantial market for food or agricultural products for industry (wool, timber, hides, horses, barley). The earliest seventeenth century developments took place on the light, sandy soil of Norfolk and Essex since these counties are both close to the Thames estuary and therefore within easy reach of London. Other early examples of improvement were also close to London. Oxfordshire with similar soil, and connected to London by barge down the Thames, met London's need for meat and tallow by breaking down its traditional arable farming. Here livestock along with legumes and temporary grasses were introduced as early as the sixteenth century on fallow grazing land. A similar example about 1670 in Northamptonshire is of switching to cattle and sheep to supply the livestock market of London.

Agricultural reorganisation and industry

It seems from these examples that c. 1650 improvements began on light, dry soils in areas near the expanding urban market of London. In these areas livestock were introduced, fed by new forage crops planted on fallow land. This practice raised the fertility of the soil and produced both larger grain harvests and a decrease in the area of fallow land. Two or three field (or rotation) systems were replaced by a four field system. This innovation of "convertible husbandry", combining animal and grain production by using fallow land for root crops and grasses, then passed on to the similarly lighter and drier soils of the north, which till then had been restricted in use to sheep farming. The rise of these new grain producing areas in the eighteenth century and especially after c. 1730 brought about

cheap grain (see Table 3) especially since the weather during the period was generally good. More employment probably led to a rise in wages both in absolute and real terms for the northern agriculturalists (see Table 4) as well as for poorer groups in the southern parts of England. Cheap food could have led for the first time to appreciably more being spent on industrial wares such as woollens, metal goods and earthenware (whose use was increasing at this time) as well as on meat and imported tea and sugar — not to mention gin. Because of this the "putting-out system" in textile manufacture may have become inadequate to satisfy demand. Combined with greater competition between industry and agriculture for workers in the midland and northern regions, this situation may have encouraged mechanisation in the textile industry. At this time many would have now left agriculture completely. Partial confirmation of this train of events comes from T. S. Ashton who, discussing the observable connection of bad harvests with social distress in 1709-1710 and 1739-1740, occasioned by high food prices, goes on to say:

> *"That (a bad harvest) must also have been followed by industrial depression is not, at first sight, clear; yet many contemporary observers — from the Lancashire rhymester Jim Boddin, to the Scottish economist Adam Smith — assert quite plainly that dearness of food led to falling wages and lack of work" (p.144).*

If this is true then the converse is also true: the cheapness of food led to rising wages and a shortage of industrial workers. Thus, progress in industry may well have arisen out of the more developed state of agriculture.

Table 3: WHEAT PRICES AND RENTS IN ENGLAND AND WALES (1771-1805)

Period	Average price for period (s)	Estimated rents per acre (s)
1771-75	51.55	n.a.
1776-80	40.25	n.a.
1781-85	48.6	n.a.
1786-90	47.2	12
1791-95	53.6	n.a.
1796-1800	73.7	15
1801-05	80.0	18

Partly adapted from p.30, Hobsbawm and Rude.

This might mean that agricultural improvement is the most significant cause of the industrial revolution we have so far looked at.

Table 4: WAGES IN NORTHERN ENGLAND AND LONDON IN THE EIGHTEENTH CENTURY

Area	Occupation	Daily median wage		
		1700	1760	1790
Northern England	Common labourer	9d	1s 6d	1s 9d
	Journeyman	1s 0d	2s 0d	2s 3d
London	Common labourer	1s 7d	n.a.	2s 0d
	Craftsman	2s 6d	n.a.	3s 2d

Reorganisation not invention

There were inventions in agriculture (thirty of them between 1751 and 1814) but except for the seed drill, the Rotherdam plough (that allowed deeper ploughing) early in the eighteenth century and the threshing machine after 1785, agricultural

machinery was not widespread until the mid-nineteenth century. Unlike industrial progress, progress in agriculture was not by the use of machinery. Development came from better organisation: by applying methods known for quite a time, e.g. in Holland but rarely tried. The signal for the application of these methods was usually enclosure.

Enclosure

Enclosure is often broadly used to signify any kind of change in land tenure which altered the traditional open village. The open village in its classic form consisted of two or three large arable (open) fields whose crops were rotated so that each field was left fallow every two or three years. Land was held individually but holdings were scattered in strips throughout the fields. Adjacent to the arable fields were meadows (for haymaking), commons for the pasture of sheep and cattle, geese and pigs, and waste (for timber, fuel, gravel, etc.). While holdings were separately owned their use was communally controlled, as was grazing, by commoners (i.e. those with rights to common). This control was exercised by the manor court and its officials. The Lord of the Manor would probably by the eighteenth century have consolidated his holdings into a compact and separate farm which he may have leased to several tenants upon a commercial basis.

Strictly, enclosure is the conversion of the common or public land to private ownership, with its attendant separation of holdings by fences, ditches, hedges, and so on. Most frequently enclosure is seen as synonymous with the eighteenth and nineteenth century parliamentary enclosures. Here, by private bills of enclosure (over 4,000 of them) Parliament, mainly between 1760 and 1815, ended open-field agriculture in England. These open fields, already divided into private strips, were consolidated or drawn together into separate farms; and common fields (or meadows), and wasteland (or woods) were apportioned among existing owners in proportion to their present holdings in the village. To initiate an enclosure it was necessary to have agreement among owners of three-fifths of the land. This generally meant agreement among the tithe-owner (usually the vicar), the Lord of the Manor, and

several large farmers. Thus, the owners of three-fifths (or more) of the land of the village got at least three-fifths of the common land to be enclosed. Enclosures were an expensive procedure to have passed by Parliament and to carry out in the village or villages where they were applied. Because tithes were foregone the costs of enclosure to the tithe-owner were passed on to the other villagers.

Enclosure — the basic reorganisation

How far had enclosure figured in agricultural improvement? It is reasonable to think of separate strips and communal control as limiting progress. First, forage crops such as roots and temporary grasses could not be planted in an open field after harvest; this was when the cattle were let in to eat the stubble. Thus anyone who grew them would have their crops trampled and eaten by their neighbours' grazing animals. As well as the inconvenience and loss of land involved in strip-farming, the use of forage crops and drainage depended on everyone adopting them; in an open village this agreement would have been difficult to obtain. Second, the rigidity of the open fields system made it highly improbable that specialised agriculture for a national market would develop there. The agricultural writers, particularly between 1793 and 1817, are monotonously clear: the wider application of agrarian innovations is being held up by the obstacle of village farms. "Get rid of that dronish, sleepy, and stupid indifference, that lazy negligence, which enchains men in the exact paths of their forefathers, without enquiry, without thought, and without ambition, and you are sure of doing good", said Arthur Young on one of his tours in England and Wales (Qu. p.8, Tames). Everywhere they existed these villages were said, by agricultural writers, to bring about a decline in agriculture. The reason is that, because neither forage crops nor drainage had been introduced there, the condition of the commons had declined, especially where unregulated use of the commons led to overstocking. On such bare and often badly-drained commons the animals did not thrive and became centres of disease. Finally, agriculture writers reported, overcrowded commons were the resort of idlers reluctant to labour on enclosed farms nearby, and of "poachers, deerstealers, thieves,

and pilferers of every kind" (1811) — a threat to the virtue of the young women of the village.

It is reasonable therefore to presume that, when his lands in the open fields were enlarged by his share of the common land (commuted from his common rights) and all was neatly enclosed by a hedge, that the enterprising farmer then might go ahead and improve his farm free from interference. We can presume, too, that for the large landowner enclosure was the indispensable step taken before he, first, made improvements that attracted to his estate the more enterprising tenants and, second, rearranged his rents so as to encourage his lesser tenants to imitate his more successful ones. John Middleton in 1798 expected that, "The benefits and advantages that would be derived from a general enclosure of commons (in Middlesex), are so numerous as far to exceed my powers of description or computation" (Qu. p.48, ibid).

The yeoman was regarded c. 1800 as a backward farmer better removed altogether from the scene. Proposals for enclosures to include allotments (or small plots) for labourers were therefore resisted; allotments transformed the labourer into a petty farmer ("from the most beneficial to the most useless of all applications of industry" Qu. pp.243-4, Thompson).

Limits to arguments for enclosure

Nonetheless, the evidence of Norfolk should not be pushed too far. Enclosures did not always lead to innovation. Landowners could be very cautious of change. Tenants might also be cautious, fearing that failure would lead to the loss of their tenancies. Also, the evidence about village farms given by later eighteenth century writers may not be representative of all unenclosed farming. It has been pointed out that common field agriculture, e.g. in Oxfordshire (above) was much more adaptable than previously thought. It had in fact shown a slow but steady evolution since the sixteenth century. The open villages in the midlands, which agricultural writers attacked, had been in decline since 1700 because their heavier, wet soils made root crops impracticable. They were also describing the last open village communities in England. These villages were suffering from increasing decay due to a number of reasons. Manor

Courts that directed them were falling into disuse; sometimes the overcrowding was occurring from encroaching outsiders (the landless from enclosed villages); and inside some proprietors were increasing their holdings by acquisition and consolidation.

While evidence on the issues of, first, progress in open villages and, second, landlords' promotion of improvements after enclosure is conspicuously lacking, the fact of agricultural progress after 1700 is nonetheless indisputable and refutes the conventional idea that it occurred after 1760, as a result of parliamentary enclosures. Improvement began c. 1650 contemporary with enclosures by agreement which are largely unrecorded. The threefold rise in rents after these enclosures, which are often described, could indicate rapid progress; it could merely indicate a rapid catching-up by landowners with market values for land. The rise in rents, however, may indirectly have forced tenants to produce more. Despite our gap in knowledge it is currently accepted by historians that enclosure allowed greater responsiveness to expanding markets to occur, so that agricultural areas came to specialise according to circumstances of the market and their soil, and to trade one region with another. For example, grain was cultivated in the south-east; cattle and horses bred in the midland; and dairy produce and vegetables produced in the Home Counties (near London).

Commerce expands

Agriculture diversified first around London c. 1650 where commerce was expanding. This "commercial revolution" between 1600 (or 1660) and 1780 has been viewed as the foremost cause of industrialisation. The great French historian of the industrial revolution, Paul Mantoux, wrote, "For it was . . . from trade and the trading spirit that the new industry was about to spring" (p.90). The germ of this idea is to be found in the first part of the *Communist Manifesto*.

The commercial revolution

In its final form this idea is that the discovery of the eastern sea routes, and especially the discovery and settlement of

America, brought about a revolution in the volume and character of commerce which in turn generated the reform of industry. Because of its situation and earlier experience in foreign trade, England played a prominent part in this revolution in commerce.

The change occurred when commerce ceased to consist of such luxuries as precious metals and spices and began to enlarge in scale or, as the Hammonds say, "to provide for the many; to depend on popular consumption; to enter into the daily life of the ordinary man" (p.21, *Rise of Modern Industry*). Besides the re-export trade (the business of collecting foreign goods and redistributing them, usually to European or colonial customers), England itself began to import tobacco, tea, coffee, sugar and pepper in large enough quantities, with new vegetables and fruits, to alter the nation's diet — a process which started in London and spread throughout the rest of the country in the eighteenth century. The prices of these commodities fell extraordinarily, especially between 1660 and 1720. Most dramatically and earliest, tobacco fell from something like 20-40 shillings a pound c. 1620 to a penny a pound c. 1630. Cotton and silk from India and China became fashionable after 1675, and were re-exported through Amsterdam and Hamburg to Europe.

Almost the only export for much of the pre-industrial period in England, i.e. before 1780, had been wool and woollen cloth. Even in 1750 woollen textiles (wool ceasing to be exported c. 1600) accounted for more than half of England's domestic exports. However, this situation ended when both the rising exports to North America and rising imports from tropical lands (see Table 5) led merchants to intervene in industry to enlarge it or to encourage other production.

Table 5: THE DISTRIBUTION OF ENGLISH TRADE IN THE EIGHTEENTH CENTURY

	As percentages of totals for England and Wales			As percentages of total for Great Britain
	1700-01	1750-51	1772-73	1797-98
Total imports from:				
Europe	66	55	45	43
North America	6	11	12	7
West Indies	14	19	25	25
East Indies and Africa	14	15	18	25
Re-exports to:				
Europe	85	79	82	88
North America	5	11	9	3
West Indies	6	4	3	4
East Indies and Africa	4	5	6	4
Domestic exports to:				
Europe	85	77	49	30
North America	6	11	25	32
West Indies	5	5	12	25
East Indies and Africa	4	7	14	13

Source: Phyllis Deane (p.56).

Merchant manufacturers

Merchants were surprisingly well-qualified to aid or to direct production. They had capital themselves to supply or they knew where to get it; alternatively, they were able to supply to small producers (outworkers) the instruments of production or expensive raw materials. The latter was called the "putting-out system". Typically, merchants supplied raw wool or cotton to spinners, and rented out looms to weavers, taking away the processed articles for "finishing" in their own workshops. Merchants also knew better than the manufacturers the needs and existence of markets at home or abroad. Furthermore, because they supplied their own goods to customers who, by the nature of their business, were slow to settle their accounts, merchants were prepared to arrange long term credit for manufacturers to engage in production for export. Finally,

trust was an all-important feature of merchanting, and fitted merchants to the task of investment in unfamiliar industries or the appointment of managers to their remote mining or manufacturing enterprises.

Re-exports and new industries

The early growth of new industries in England in and around London, Liverpool, Manchester and Birmingham, and in and about Glasgow, is associated with international trade and especially the re-export activities of merchants. This is obvious in the case of Glasgow where imported sugar was refined (and much of it re-exported). Here, spirits were distilled from molasses, and plaiding, silk and muslins were manufactured from imported raw materials. Around these towns both agriculture and transport developed. The first canal constructed in England (1757) was partly financed by Liverpool merchants to enable coal to be brought to the port from St. Helens.

The most remarkable instance of the influence of re-exports on industry is cotton. Its birth depended upon the fact that cotton goods were being re-exported from England after 1600; markets for this industry had already been found by merchants of Indian cottons.

Merchants and older industries

After 1700 the re-export of European metal goods to North America encouraged merchants to have similar wares made in Birmingham. The most important of these wares, nails, was re-organised under the putting-out system. Ironmongers gave out rods at their warehouses and the nailmakers brought back their finished products. Under merchants' encouragement Birmingham became a centre of innovations and invention by the end of the century. Much of the innovation consisted of the use of specialisation: Adam Smith reports that a smith with some experience of nailmaking could make upwards of 800-1,000 nails a day; but that young boys who specialised in making nails each produced upwards of 2,300. The early iron industry of South Wales, a great industrial area by 1830, was largely created by the tea-dealers and other traders of London

and Bristol. Tobacco merchants in Glasgow c. 1750 supplied much of the industrial equipment used in the Clyde Valley.

After 1700, therefore, the growth of commerce was leading to a diversification of exports from England. The widening of markets was also leading to the enlarging and re-organisation of older industries. Specialisation was occurring as one of the economies of scale in manufacture. One example, in nailmaking, has already been given. About 1750, in response to growing markets for cloth in Europe and North America, the putting-out system began to be applied to the woollen industry of the West Riding of Yorkshire, an area which till then had been wholly a domestic industry in the medieval fashion. There had already been a precedent for this kind of intervention by merchant clothiers in the wool industry dating from before the sixteenth century. At that time production had been re-organised also on the putting-out system by merchant capitalists for the purpose of international trade; and, in parts such as in and around Norwich, merchants had already gathered workmen into large workshops. This type of early reform of industry was widespread in East Anglia and the West Country by the middle of the sixteenth century.

"The trading spirit"

Contemporaneously, markets were growing in England and in Europe. Those of "middling life", both in town and country, had assumed a new importance. By 1758 one economic effect, according to Dean Tucker, was that: "Manufactures of the Kingdom accommodate themselves . . . to the constitution of it: That is that they are more adapted to the Demands of Peasants and Mechanics . . ."

The influence of commerce upon industry did not mean that merchants became industrialists — or agriculturists. Merchants did not often cross the boundary between merchanting and industry or farming. Their influence led rather to a diffusion of a "trading spirit". The successful entrepreneur, such as Josiah Wedgwood, showed as much commercial enterprise as industrial ingenuity; and the same could be said for the farmer — some of whom in the eighteenth century managed as many as a dozen farms.

What distinguished the great Captains of Industry in the later eighteenth century, men such as Arkwright, Boulton and Wedgwood, was their ability to organise, not simply the borrowing of money, but also the minute division of labour in their factories to meet the opportunity to supply a larger market. Clearly, their intention was that the cheapness of the product that resulted would allow it to reach the widest possible market. Providing for "the millions" set "all the Wheels of Trade" turning. Wedgwood's success may be judged from the note of a European traveller c. 1765. "In travelling from Paris to St. Petersburg, from Amsterdam to the farthest point of Sweden, from Dunkirk to the southern extremity of France, one is served at every inn from English earthenware. The same fine article adorns the tables of Spain, Portugal and Italy; it provides the cargoes of ships to the East Indies, the West Indies, and the American continent." This enlargement in scale by division of labour (given a classic description in Smith's example of the pin factory) was the necessary preparatory step to invention.

Cheap credit

Certainly merchants had "an abundance of loanable funds" in the eighteenth century to provide for the reorganisation of industry: so had landowners. Agricultural improvements might not always have led to an immediate increase in productivity. "Often their impact was on the shares of the proceeds of agriculture which different social classes received", (p. 13, E. L. Jones).

The Bank of England

The Bank of England played an important part in making these funds effective. The Bank had come about out of the need of William III to borrow to meet the cost of the wars with France. A National Debt was created, its interest charge was guaranteed by Parliament from the proceeds of a tonnage act. William got 1,200,000 pounds from a joint-stock company which was formed in 1692 to make the loan, and whose members were constituted Governors of the Bank.

For the first time a loan by private individuals to the government had been guaranteed by Parliament. More

importantly, the founders of the Bank had not loaned any cash to the government. For 100,000 pounds (or 8 per cent annually) they had put not cash but credit at the disposal of the government in the form of bank notes. They had invented a new institution.

Piety and credit

In 1672 Charles II repudiated his debts, an action that bred mistrust and a sharp rise in interest. What had given new substance to the promises of the government this time? In part, it had been the rise of puritanism which focussed religion sharply upon the practice of right action in one's "calling".

When puritan merchants and tradesmen in London and elsewhere put their religion to work they became more industrious, more honest, more thrifty and more sober. Puritanism also established more regular habits of work in society by replacing the hundred or so saints' days (holy-days) by more peaceful Sundays for rest and religious observance. In 1958 H. L. Beales wrote that, "the analysis of the industrial revolution is still made too much in economic terms" (p.73, Hartwell). Economics is a social activity that is especially sensitive to the level of trust and confidence in the community. In that religion made men more completely trust each other, it helped to create the essential pre-condition for expanded economic activity: cheap credit.

The boom of 1688-1695 testifies to the availability of credit. For the first time there was a wide circulation in magazines of the prices of securities. Even the great South Sea Bubble did not overturn this new level of confidence in investment.

Falling interest rates and industry

The abundance of funds and the willingness to risk them led to a steady reduction in interest rates during the eighteenth century. This is reflected in the successively lower rates at which the government could borrow (in 1717, 5%, in 1727, 4% and in 1757, 3%). After a rather sharp rise during the exceptional circumstances of the war between 1793 and 1815 interest fell during the boom of 1825 to 2½ %. One well-known

opinion, by T. S. Ashton, is that "the importance of the lowering of the rate of interest in the half-century before the industrial revolution has never been properly stressed by historians" (p.11, *The Industrial Revolution*). In Ashton's view bills and cash received by southern and eastern banks at the time that crops were sold and rents paid, were remitted to London and there used to discount bills for wages and materials from the north and west. In other words, banks accepted and paid the bills of exchange of manufacturers with cash from agriculturalists.

Against this view it has been asserted that the prevalence of low rates of interest proves that industrialists made little demand upon capital. For them the sources of industrial capital were improvised local borrowing and the "ploughing-back" of profits. However, the increase of provincial banks (from 12 in 1750 to nearly 400 in 1800) does testify to the flow of funds to industry from "outside".

Controls over industry and trade abandoned

At the outset the industrial revolution depended upon the outcome of a struggle of ideas: a struggle between faith in individualism and freedom, and faith in collectivism and restriction. The outcome of this struggle was the abandonment of controls over industry and trade.

Individualism and freedom

Individualism is the belief in the power and the right of individual initiative. This confident spirit was already sounded by the poet, John Milton, in 1644 when he advised the government against censorship; since, with free inquiry, nothing was "beneath the reach of any point". The great discoveries of Isaac Newton seemed to show that everything was within the human power of observation and reason.*

* About this time advances began in the steam engine. In 1698 Thomas Savery invented and applied his steam pump to the copper mines of Cornwall.

Collectivism and restriction

In economic matters individualism came up hard against the three fundamental ideas that governed economic life in the middle ages: first, that whatever work a person did should be done in a corporate body (such as a gild) which was able to discipline his conduct for the ultimate benefit of his soul; second, that the difference between private and public interest demanded supervision of work and trade to ensure quality and fair dealing; third, that it was one of the prerogatives of the Crown to impose regulations.

The determination to throw off collectivism and restriction was expressed later as laissez-faire (part of the cry used at medieval tournaments, "clear the ways and let things alone").

The decline of gilds

The growth of new industries and new organisations had already forced the gilds to occupy a smaller part of the industrial scene. In its heyday the gild (or guild) was a fraternity of producers with a monopoly in their local town over the making and marketing of certain goods. The officials of the gild could search out bad work or dishonest dealings and hail offenders before the gild court. Gilds also had important social functions of mutual assistance and rites of common worship, e.g. of a patron saint. As a mark of status some gilds, usually merchant rather than craft gilds, obtained a charter of incorporation from the king. They were henceforth called companies. Gilds had never been universal, e.g. they did not apply outside towns.

New industries, and those old ones which were re-organised, as the cloth industry was, often dispersed into the countryside to escape gild jurisdiction. As merchants became more important some gilds became organisations of sellers rather than of makers. One consequence of this was that supervision of work lapsed. Furthermore, those who were merchants employed other gild-members as wage earners — contrary to the form and spirit of the older craft system.

Royal monopolies

When the gilds tended to disappear they were propped up by the Statute of Apprentices (1563). The Privy Council went

even further and controlled an incredible number of aspects of the economy by administrative decree (including wages, the movement of labour, methods of manufacture, dealings in wool and grain, foreign exchange and rates of interest).

Most important for its future, the Crown sold its authority over industries to influential courtiers by "patents of monopoly". These brought each manufacturer within a single company. By the same principle trade in various parts of the world was brought under the control of a few Chartered Companies (the East India Company, with the monopoly of Asian trade, being the most famous). By 1621 there were 700 monopolies, and trade was confined to those ports where monopolists could carry out their right of search. Monopolists controlled most items in everyday use. Tradesmen either joined the monopoly (for an extortionate fee) or had to give up their trade. Monopolies were enforced by the Star Chamber — a committee of the Privy Council.

The Puritan Revolution

In 1648 the Puritan Revolution shattered this economic order. "In the relaxation of state control lies the untold economic significance of the Civil War" (p.176, Lipson). Enclosure, interest and engrossing (to encourage the planting of more crops) were all allowed. More important, in 1656, the aristocracy got their lands freehold instead of as a military tenure from the Crown.

The common lawyers later prevented the pieces of the old economic order from being put back together again. For example, the Privy Council in 1669 were advised that the Statute of Apprentices (or Artificers) "had by most of the judges been looked upon as inconvenient to trade and . . . inventions". Later, this same Act of 1563 was said not to apply to industries that had come about after it was passed; these included the cotton and pottery industries.

Mercantilism

The Navigation and Staple Acts (1660, 1661, 1663) were an exception to the tendency towards the abandonment of restriction, since they created a monopoly over trade in British

territories for the benefit of the British Navy and British merchants. The restrictions fell into three parts: first, trade in the American colonies was restricted to English, Irish and colonial merchants and to English ships; second, American and Caribbean plantation crops going to Europe had first to come to England for sale and re-export by English ships and crews; third, English subjects everywhere were restricted by tariffs, bounties and prohibitions to using English manufactures and American estate products. By another measure England's staple exports of wool and corn were protected, and also promoted overseas. Together these restrictions constituted the mercantile system.

Mercantilism and the industrial revolution

This absence of competition is said by some historians to have "coaxed" commerce and new industries into life. Re-exports enlarged five-fold between 1640 and 1700, and the growth of the navy (itself an industry) gave significant employment. This view has several problems. First, trading at this time shows a great persistence in the face of difficulties; it does not seem necessary to have "Acts of Trade" to "coax" it into life (it seems to have been very much alive as it was). Second, the advantages of confining trade to one area is problematical. Third, it has been seen that the cheapness of estate crops, such as sugar and tobacco, has a lot to do with the expansion of trade. In that mercantilism defended a host of monopolies it lent itself to the dearness of commodities, a tendency opposite to that which produced the industrial revolution. Nonetheless, while mercantilism could have injured the volume and character of English trade in the long-term, the short-term (between 1660 and 1689) saw "forced" expansion. It also saw what trade there was divided unevenly in favour of English merchants. One clear benefit of the government's interest in trade was the use of the navy to curb piracy in and around the Mediterranean. This protection of merchants reduced the cost of freight.

Conclusion

Broadly speaking, each of the conditions of industrialisation, from the use of machinery to the abatement of controls over

industry, reduced the costs of producing commodities and encouraged demand.

The development of a liberal tradition completed the abandonment of the regulation of industry and trade.

The liberal tradition

Between those who possessed but did not work, and those who worked but did not possess, was the "middle class". The historically almost unique influence of the idea of freedom in England in the nineteenth century is often argued to be due to the attachment of this "middle class" to liberalism. This growing class looked to the further progress of trade and production to bring wealth, power and prestige. While there is truth in this argument the middle class were not always supporters of liberalism. In any case the theory itself should be judged apart from those who held it.

The basic ideas of liberalism, freedom of conscience and limitation upon the power of government, belong to the seventeenth century theories of Milton and Locke. In the later eighteenth century they took a more political form as the doctrines of Free Trade and Parliamentary Reform.

Free trade

By 1760 some manufacturers felt that England could dispense with the legal protection of trade and industry, since it now had the "natural protection" of its own greater efficiency. Here we see the beginnings of the attachment of the middle class to free trade. The commercial treaty with France in 1786, which substituted a small uniform tariff for prohibition and high duties upon each other's products, was the earliest political sign that free trade was influential. But there are many examples of more cautious feeling about this time. In 1787, the cotton industry itself demanded and got protection from Indian yarn and undyed cloth.

It is probable that at this critical time, when mercantilism and free trade were in the balance, that *The Wealth of Nations* of Adam Smith did tip the scales in favour of free

trade. T. S. Ashton wrote, "It is under its influence that the idea of a more or less fixed volume of trade and employment, directed and regulated by the State, gave way — gradually and with many setbacks — to thoughts of unlimited progress in a free and expanding economy" (p.22, *The Industrial Revolution*). Adam Smith pointed out incisively, both to England and to the middle class, where its future interests lay. "It is this effort (to better one's own condition), protected by law and allowed by liberty to exert itself in the manner that is most advantageous, which has maintained the progress of England towards opulence and improvement in almost all former times, and which, it is hoped, will do so in all future times" (Bk. II, Ch. II). In the time of confusion and distress after 1815, liberalism was the only theory that offered any sound direction — even to many of the governing aristocracy. Its message was simple. Poverty was due to insufficient production and high prices. This situation was caused by the obstacles lying in the way of trade and production, obstacles maintained by a selfish and misguided government.

The advantages of free trade were first pointed out in 1701 (but not convincing enough to prevent the banning of Indian calico from England). Sir Dudley North, a London merchant, defended the East Indian trade:

> *"The East-India Trade procures things with less and cheaper labour than would be necessary to make the like in England." One consequence was that, "It must put an end to such of (English manufactures) as are most useless and unprofitable; the People imploy'd in these will betake themselves to others, to the most plain easie, or to the single Parts of other Manufactures of most variety . . . (The) East-India Trade will be the cause of doing things with less Labour, and tho' Wages shou'd not, the prices of Manufactures might be abated . . . (This) begets in others a kind of Necessity and Emulation, either of using the same Art, Trade, or Engine, or of inventing something like it . . ." (pp.132-4, Mantoux).*

Here, 75 years before *The Wealth of Nations,* is Smith's doctrine that where society is allowed to regulate itself the extension of the market by free trade (here the eastern trade)

brings about the division of labour whereby each nation supplies cheaply and profitably to the world those commodities which it is most fitted to produce. Later, Adam Smith added that, whereas individual action is generally selfish, i.e. not done for the good of others, it is, nonetheless, "led by an invisible hand" to promote the good of all — often more unerringly than when the individual intends to promote it (see Bk. IV, Ch. II). Thus, what is seen at the base as a narrow conflict of individual wills is seen at the apex as an ordered and majestic harmony of interests.

The *Wealth of Nations* vigorously attacks the related goals of self-sufficiency and monopoly which together form the basis of mercantilism. It attacks mercantilism on political as well as economic grounds. Thinking of the commercial origins of the recent revolution in the North American colonies Smith says, "Commerce, which aught naturally to be, among nations, as among individuals, a bond of union and friendship, has become the most fertile source of discord and animosity".

To Smith a government courted disaster when it went beyond its legitimate duties to protect the realm, maintain law and order, and adjust private disagreements to manage the economy. In other words, the State was a "watchman" that invariably failed when it wanted "not merely to give security, but wealth".

> *"When (Ministers of State),"* a contemporary of Adam Smith wrote, *"assume to themselves a sort of dictatorial power, and prescribe positive rules for regulating the practice of individuals, they descend from their own sphere and enter upon another, in which it is impossible they can have sufficient degree of knowledge to be certain that they are acting with propriety, so that they frequently do hurt to the particular art they mean to encourage."*

John Stuart Mill set out similar objections to government interference in *On Liberty* (1859) — see pp.133-41, World's Classics edition. Even when, like Ricardo, the classical economist believed that wages had a tendency in the long run to fall, it was believed that it did no good at all for governments to interfere with the laws of nature which

governed them. The rule for the State was laissez-faire. The positive side of this phrase is best conveyed by the motto of the contemporary American Democratic Party: "Equal rights for all; special privileges for none." As a rule the economists saw that the State had wider obligations than those of a "watchman": the care of persons who for one reason or another could not help themselves; the provision of at least some public utilities; the maintenance of records and the collection of revenue; and, significantly, all of them saw the basic education of the poor to be a function of the State. Nonetheless, while liberals did have a wider conception of the functions of the State than modern critics believe, it is true that they saw the sovereign social remedy for anything wrong as more freedom. Their faith lay in individual initiative. Liberal reform almost always took the form of the repeal of laws.

Parliamentary reform

One important exception to this rule was parliamentary reform. As a largely aristocratic Parliament had fought the king for supremacy in the seventeenth century, so the middle classes fought the aristocracy for supremacy over Parliament after 1815. For a long time, and certainly since William Blackstone's famous *Commentaries on the Laws of England* (c. 1765), the English Constitution had been viewed not only in England but on the Continent as almost incapable of improvement. Its "mixed government", Blackstone argued, combined the best of all the forms of government: the goodness of democracy; the wisdom of aristocracy; and the strength of monarchy. Irreverently Jeremy Bentham ridiculed such a view. "Talk of balance", he wrote, "never will it do: leave that to Mother Goose and Mother Blackstone". There was in fact no balance. England was held in the selfish and often silly grip of the aristocracy: the great "Sinister Interest". There was only one way to right this situation: to give political power to the majority and to make sure that its representatives could never break free from its control. This was the doctrine of Philosophic Radicalism.

Armed with this doctrine, and the idea of free trade as a programme of reform, middle class felt equipped to govern the

new industrial society. It saw the aristocracy as feeble, with worn-out ideas, and remote from the problems that confronted the country. To counter this attack the two aristocratic parties, after a short but disastrous attempt to repress it, tentatively adopted this programme of reform themselves. In a mild way the tories adopted free trade and the whigs parliamentary reform. It was in this mood of readiness by the governing class to conserve traditional institutions by adapting them to changing circumstances that the institutions of Victorian England were created.

Civil liberties

The repeal of the Test and Corporation Act (1828) renounced the ideal of "one State — one Church". But the Established Church remained; while dissenters were no longer excluded as students and teachers from the universities or from public office. In 1829 the same freedom was extended to catholics; but the protestant succession to the throne was maintained. The police reforms of Peel (1829) abolished most capital punishments by which the State had previously tried to contain the growth of crime in towns. Instead a police force was formed under central control, at first in London at Scotland Yard, later in the industrial and market towns and finally in the counties. "Certainty of punishment rather than savagery of punishment became the ideal of public authorities." And, whereas often quite small mobs — of perhaps fifty — had in the past terrorised a town before being dispersed with bloodshed by the army, the police were able to prevent mobs from forming. The efficiency of the police was shown during the political crisis of 1831. The end result of this crisis was the Reform Act of 1832. While this Act still left the aristocracy in actual command of the government (in much the same way as the king still reigned after 1660), it admitted a large proportion of the middle class to the vote and, more importantly, signified that the aristocracy would submit to the direction of public opinion. The Municipal Corporation Act (1835) effectively turned local government over to the ratepayers, ending the anomalous government of many older towns by "closed corporations" under ancient charters.

These political reforms illustrate two important liberal principles: the first, that careers and public offices should be open to whoever had the talent and energy to occupy them; the second, that the most positive thing the State could do for the individual was to protect him both from criminals and from its own oppression. Overall these and other reforms illustrate the sovereign principle of liberalism: that the State should not do more than ensure to the able-bodied their rights. As the Factory Act of 1833 and the Poor Law of 1834 show, this principle still left the State some leeway as the custodian of civilised values to protect all those who could not help themselves.

Factory Act and Poor Law

The Factory Act of 1833 regulated the labour of children and young persons (under eighteen) in clothing mills — and the later Mines Act (1842) regulated the labour of women and children in mines. The Poor Law Report of 1834, on which the New Poor Law was based, exemplifies so well the fine line liberals drew between the two groups of the able-bodied and those who it assumed could not help themselves, that it deserves to be described in some detail. It will also provide the opportunity to see the application of economic and utilitarian thinking to social problems.

The institution of poor relief rested upon the great Elizabethan Statute of 1601. This law had legalised the customary claim of the poor of the parish upon the local occupiers of land by levying on them a compulsory poor rate. This money was to be used to provide for the "impotent" poor and orphans as well as for materials on which the able-bodied poor could be set to work in workhouses. The execution of this law collapsed into great local diversity after the start of the Civil War in the 1640s. The Act of Settlement in 1662 was a corollary to this Statute. The Act of Settlement ordered parish "overseers" of the poor to return vagrants to their birth places — where their "settlement" was. By the late eighteenth century workhouses had been found to be expensive, often inadequate to contain the poor, and difficult to administer without injustice and corruption. Their administration was frequently either too oppressive or too permissive; while the expenditure of large sums of money on food, clothing, materials, etc. became a source of fraud. Gilbert's Act in 1782 made legal the general practice of employing the poor outdoors

rather than in workhouses. This employment was either upon public works or "on the rounds" among the rate-payers at subsidised wages. (The employer paid two-thirds and the parish one-third of the wage.) The "roundsmen" system led directly to the Speenhamland system. Under this arrangement, started in 1795, magistrates throughout southern England agreed not to fix wages but rather to subsidise them by allowances from the rates. The labourer was allowed weekly earnings equal to three times the cost of a gallon loaf, i.e. between 3-4s; and one and a half times the cost of a loaf for each dependant, i.e. about 2s each. This was the institution which the economists and utilitarians wanted to reform.

Like Bentham the Poor Law Commissioners subjected this allowance system to the test of utility: how had this institution contributed to the general happiness? And, if it had not, what institution would contribute to it? The first thing their inquiry noted was the constant tendency of "partial relief" (as allowances were called) to increase. The sums spent upon the poor in a year had grown from just under two million pounds for 1783-1785 to 5.7 million pounds in 1815-1816 and had been rising since 1820. The reason, the Commissioners reported, lay in the irresistible temptations given by it to employers, officials and poor themselves. Farmers approved of it and were under constant temptation to reduce wages; as officials they had the means to award larger allowances so as to reduce the cost of the labour they purchased. Indeed, the Commissioners found, the old poor law had a strange and destructive way of working. For example, because wages were inclined to fall, the ordinary labourer could often get a larger and easier living from the rates for nominal work than he could get from employment. And, because overseers regulated labourers' incomes according to the size of their families, idle or improvident labourers lost nothing at all; in fact, a large family meant a large income. Also, farmers employed married men in preference to single men because to employ a single man would leave a married man on the rates; this in the end cost the farmer more money. Similarly, an honest and industrious man who had any property, e.g. a couple of cows or a pension, could find himself sacked and constantly refused work. This was because to employ such a man would leave a pauper wholly upon the rates. It could pay any labourer, with property, to

squander it to better qualify himself for poor relief or for a job (see pp.156-9, Poor Law Report).

The pauperisation of whole districts demoralised the poor. As one correspondent replied: "All were paupers alike. The most worthless were sure of something, while the prudent, the industrious, and the sober, with all their care and pains, obtained only something; and even that scant pittance was doled out to them by the overseer" (p.353). Among the poor, the Commissioners concluded, motives for all kinds of exertions declined. There was less self-restraint: personal habits and living conditions decayed. In fact obvious signs of destitution, such as an unkempt appearance and neglected house and garden, might help to obtain relief. While there is evidence that farmers did not mind the poor rates, however large ("It is a rent paid to the parish instead of the landowner"), Ricardo concluded (1819) that capital was eroded by the poor law and that all would be poor if the Speenhamland system continued.

So clearly the Speenhamland system had not contributed to the general happiness. Reading the report makes it obvious that the Commissioners were not thinking of doing something for the "impotent" poor (the lunatics, orphans, aged, sick, the lame and the neglected). Rather it aimed to change the treatment of the able-bodied; to cut free the Elizabethan Poor Law from its later encumbrances. Edwin Chadwick, author of the Report, concluded:

> *"It will be observed that the measures which we have suggested are intended to produce rather negative than positive effects; rather to remove the debasing influences to which a large portion of the labouring population is now subject, than to afford new means of prosperity and virtue" (p.496).*

The problem was the demoralising effects on labourers of the payment of part of their wages out of the parish poor-rates. The great difficulty in dealing with those who claimed to be unable to find employment was to discriminate between those who were genuine and those who were not. Because of this uncertainty, according to the report, overseers had tended either to refuse relief point-blank or, more often, to grant it indiscriminately. The answer in the eyes of the Commissioners

was to confine all relief to "well-regulated workhouses" in which conditions would be "less eligible", that is, worse, than amongst the lowest-paid labourers outside.

> *"By the means which we propose, the line between those who do and those do not need relief is drawn, and drawn perfectly. If the claimant does not comply with the terms on which relief is given to the destitute, he gets nothing; if he does comply, the compliance proves the truth of the claim — namely, his destitution" (p.378).*

The observations from already "dispauperised" parishes (where allowances were abandoned) showed to the Commissioners that pauperism came largely from idleness induced by the old Poor Law and not from "blameless want". The "workhouse test" had already been applied to these dispauperised parishes and there:

> *"New life, new energy is infused into the constitution of the pauper; he is roused like one from sleep, his relation with all his neighbours, high and low, is changed . . . He begs a job — he will not take a denial — he discovers that every one wants something to be done. He desires to make up this man's hedges, to clear out another man's ditches . . . nothing can escape his eye, and he is ready to turn his hand to anything" (p.358).*

Thus the "workhouse test" would be a powerful measure of social discipline. Its deterrent spirit would make men strive to be independent; anxious to foresee and provide for what lay ahead, whether it be marriage, illness, unemployment or old age; it would make men more steady and industrious in their work; and their own respectability would ensure their own self-respect. But, far from driving down wages any further, the workhouse system — because it did make men more productive — would actually improve both wages and employment. The burden of the poor-rates would be over. So, from the point of view of the utilitarians the consequences of this reform would promote the general happiness; and, as far as the economist could estimate, it would restore wages to the play of market forces.

The report shows no illusions about how far the guardians and overseers of the poor would voluntarily comply with the

new law. The Commissioners have little faith in the tradition of voluntary service by local men of good will in the implementation of laws. The result of their doubts is that, while the poor face a "well-regulated workhouse", the guardians and overseers face a Central Board of Control. The report recommends a small agency "which may assist the parochial or district officers, wherever their management is in conformity with the intention of the Legislature; and control them wherever their management is at variance with it" (p.417). To lighten the work of this Central Board it is recommended that parishes be grouped together into "Unions" wherein locally elected Boards of Guardians would establish and administer central workhouses. Within these Unions poor relief would be open to all who applied.

It is at first difficult to see why the landed classes who still controlled Parliament would assent (at once and almost unanimously) to a centralised system inspired by Jeremy Bentham. For it was a system that could in time be applied elsewhere to take from the aristocracy their control over the government of local areas. Elie Halevy suggests that they so readily agreed to the New Poor Law, to escape both the ruinous cost of poor relief and the unpopularity this new law would bring, by giving its control to some remote authority.

Corn Law repeal and income tax

Both aristocratic parties had much less enthusiasm for Free Trade than for poor law reform. Nonetheless, since 1823 customs duties on raw materials and manufactures had been gradually relaxed; in 1828 even the Corn Law was modified. The Corn Law of 1815, which practically prohibited the import of grain until the domestic price reached a level indicating famine, had been relaxed to a graduated scale permitting more to be imported as the domestic price rose. But there was no question of its repeal. The Anti-Corn Law League was founded in 1839 to overcome this opposition; its aim was the "total and immediate" repeal of restrictions upon the importation of grain. Its agitation is surely the most sustained use of economic arguments in nineteenth century history, and shows how Adam Smith's principle of "the division of labour being only limited by the extent of the market" could be translated into a

political doctrine. Very commonly, the League argued that if the English market were freely opened to corn from Poland, Russia or America, more English manufactures would be needed to pay for imports. That would lead to rising wages and employment. Labourers would then have more to spend and, in part, they would spend it on food. Due to free trade farmers would in the long run produce more grain, and certainly more beef, mutton and a greater variety of dairy products. Parliament withstood these arguments for seven years until the Prime Minister, Robert Peel was won over in 1845, and until the Irish famine in 1846 made it exceedingly callous to continue it.

Since the mainstays of revenue were customs and excise, even the limited application of free trade had, by the late 1830s, brought the country to the verge of bankruptcy. Financial reform was expedient and took the form of Income Tax. Richard Cobden, the leader of the agitation for the repeal of the Corn Laws, preferred a more realistic application of the Land Tax. As he pointed out in the course of debate upon taxation, the 1696 valuation of land was still used for the purposes of assessing the land tax and, "Thus the land, which anciently paid the whole of the taxation, paid now only a fraction or one twenty-fifth, notwithstanding the immense increase that had taken place in the value of the rentals". Parliament preferred to re-impose Income Tax (1842) — which had first been imposed briefly during the Revolutionary Wars — to pave the way for the end of protection of manufactures. The tax itself was unpopular and was presented by Peel as a temporary measure ("for a time to be limited"), and as a way to commute other obnoxious taxes. Liberals were divided on the merits of this tax. Their confusion illustrates the fact that they found it easier to suggest negative measures than positive ones — despite the canons of taxation which Adam Smith had provided (see Bk. V, Ch. II, pp.307-9, Everyman edition). Some saw income tax as an insupportable "inquisition into everyman's circumstances" and "uncertain" (and therefore as a constant temptation to fraud). Others like Ricardo favoured it, and the Benthamites since 1806 had boldly supported a graduated income tax.

Attitudes to democracy

Not only were liberals more divided and confused about issues than supposed (see G. Kitson Clark, pp.125-6), the English middle class were always less loyal to liberal positions than historians have acknowledged. They had been divided on the question of the corn laws, and when it came to foreign policy they rejected the liberal peace policy in the 1850s in favour of Palmerston's aggressiveness.

The later growth of democracy is one outcome of the liberals' disenchantment with both the middle class and the established political parties. Liberals such as Cobden and, more especially, Bright could see neither as an efficient instrument of liberal policies. In 1859 they began a determined campaign to form a Liberal Party upon the basis of a wider franchise — a development foreshadowed during the anti-corn law agitation when middle class support had lagged and liberals had briefly turned towards chartism. The liberals came to believe, as the Benthamites always had, that the interests of the entire community would never be included in any small class within it. When W. E. Gladstone was converted to their aims his immense energy in 1867 produced both a Second Reform Act and a Liberal Party. Paradoxically, despite its notable reforms, this Liberal Party was dismissed after only one term.

Nonetheless the liberals were never fully committed to democracy. To some only a democratic parliament would ever be willing or able to reform society for the public benefit. It also followed that a democratic government would be more stable and private property more secure. Moreover, since it allowed the rule of the majority, some argued that democracy came closest to permitting each man to rule himself; democracy was the freest form of government. Aristocracy, the government of the few, had been selfish and continually resisted by public opinion; democracy would at last allow this public opinion to express itself politically.

John Stuart Mill, now the best-known of liberal philosophers in the nineteenth century, endorsed these views with more caution in *Representative Government* (1859). For him democracy meant the education of character. Participation in

government would make each man more wise, because he would become more aware "that remote causes, and events which take place far off, have a most sensible effect even on his personal interests". Democracy would also make each man less selfish because by participating in government he "learns to feel for and with his fellow citizens, and becomes consciously a member of a great community" (p.276). But for Mill democracy carried as well the risk of "too low a standard of political intelligence, and of class legislation . . . in a very perilous degree" (p.281). And, while the "partialities, passions and prejudices" of the nobility had been held in check by public opinion, how would public opinion itself ever be held in check? Mill was led by his more cautious approval of democracy to substitute for Bentham's ways of making government bend to the will of the majority (for example by the secret ballot and annual parliaments) ways of making government representative of all, including minorities. Proportional representation, he thought, was the surest way to achieve this.

Standards of living

It is a mistake to think of reforms only as legal changes. The undeliberate but beneficial changes brought about by the industrial revolution itself are also reforms. The paving and lighting of towns, the supply of water and sewerage would scarcely have been possible without the materials (cheap iron and clay pipes) and funds which the industrial revolution provided. The same could be said of universal primary education (in 1870): only an industrial state could afford it. If the industrial revolution brought problems, it also brought the means to solve these problems. Contemporary observers and, after them, optimist historians claimed that the greatest single reform of the industrial revolution was the improvement in the standard of living of the people — a development which went forward despite the setbacks caused by "outside" events such as war and famine.

In 1830 Lord Macaulay, for example, reckoned that "in the old world we must confess ourselves unable to find any satisfactory record of any great nation, past or present, in

which the working classes have been in a more comfortable situation than in England during the last thirty years". George Richardson Porter's statistical description of *The Progress of the Nation,* between 1836 and 1843, concluded that:

> *"The diminution in the weekly earnings of parties (other than weavers) has been but small in any case, and certainly not commensurate with the diminished cost of most of the necessaries of life . . . By this means they have acquired, with their somewhat diminished wages, a much greater command than formerly over some of the comforts of life".*
>
> *(p.19, Cranfield, et al)*

As we shall see not all then, or since, have agreed with this view.

Part Two:
Exploitation and Repression

The proletariat

The visitor to London, says Engels who came there from Germany in November, 1842, cannot fail to be impressed by its immense size and power:

> *"I know nothing more imposing than the view which the Thames offers during the ascent from the sea to London bridge. The masses of buildings, the wharves on both sides, especially from Woolwich upwards, the countless ships along both shores, crowding ever closer and closer together, until, at last, only a narrow passage remains in the middle of the river, a passage through which hundreds of steamers shoot by one another; all this is so vast, so impressive, that a man cannot collect himself, but is lost in the marvel of England's greatness before he sets foot upon English soil."*
>
> (p.57)

But once ashore, Engels observes, one is conscious of the cost of this progress. Principally one is repelled by a fierce competitiveness "a battle for life, for existence" (p.108) of each against the other and aware, too, of the misery of the victims of this progress, the proletariat. This class, while nominally free, exists in a state as permanent, as degraded and without prospects, as serfdom. But, unlike serfs, workmen face the possibility of unemployment; and they are constantly

reminded by the destitute they see around them that no work will mean homelessness and starvation. The worker is hopelessly dependent upon the manufacturer (or farmer) for employment so that he may live, even though his wages only allow him to live hand to mouth. (It was reported at the end of the industrial revolution — 1858 — that 189,000 of the 211,000 who had died that year had left absolutely nothing.)

Factory towns

This "unprecedented class", the proletariat, were concentrated in the new industrial towns of West Yorkshire and South Lancashire to the north. What did the typical factory town between c. 1815 and c. 1840 look like?

Though unplanned these factory towns assumed a more or less identifiable shape which may be described in a composite form. Set in a beautiful and gently sloping hill country,' the town lies in the valley through which runs a river — and probably canal and railway as well. Drawn by the river the factories lie at the bottom of the valley "where they stand thickly crowded, belching forth black smoke from their chimneys" (p.77, Engels). At the valley bottom also lie the oldest dwellings — the remains of the eighteenth century industrial village from which the town arose. These dwellings in the Old Town are increasingly crowded-in by the building of new factories and warehouses. (Land is in fact very expensive here.) These dwellings are built in a narrow and irregular pattern, streets criss-crossing in a confused way uphill and down. Inside these old properties cellars are used as houses. (In Liverpool 45,000, mainly Irish, lived in cellars in the 1830s; while in Greater Manchester there were about the same number.) Inside the grounds of these old properties courts or enclosed spaces are built about with makeshift (and soon ruinous) huts. These courts are joined by a labyrinth of lanes and alleys, and connected to the nearby street by a covered passageway. Most alleys and lanes, and the streets as well in the Old Town, are unlit and unpaved and have no sewers or drains. Lavatories (or privies) are rare and no water is supplied. Consequently, in them refuse, debris and excrement accumulates amid pools of stagnant water. In the courts pigs

are kept or wander, rooting among the refuse and offal for food. Located in the Old Town as well are many rooming houses in which a transient population of beggars, vagrants, thieves and prostitutes are crowded indiscriminately. It is in the Old Town, therefore, that there arises the cholera, typhoid or smallpox epidemics which periodically endanger the whole town.

Housing

Consistent with rapid growth of the factory town, most operatives live in parts of the town built during the industrial revolution. These parts are built further up the hills and slopes of the valley in a more regular pattern upon wider and straighter streets. Here, long, monotonous rows of one or two storey houses are built. In these houses of brick and slate, usually only one family shares the 3-5 rooms and kitchen which often has an oven. However, in the event of a commercial crisis many houses will be empty for a time while relatives crowd together. (In the depressed conditions of 1841 the census revealed that in Oldham 1,800 houses were empty.) In the worst cases these houses are built back to back or, a little better, back directly onto a lane. Because such houses have no backyard, clothes lines hang across the lanes and the streets causing congestion. The houses share an outside privy and piped water so that the occupants use chamber pots and find it difficult to keep clean. And, because these areas are still unsewered, unpaved and unlit in most cases, very much of the same refuse and debris accumulates among the mud and stagnant pools as in the oldest part of town. (In defence of "jerry building" it can be said that it was almost commercially impossible to house the very poor — especially because of the taxes on building materials and the high price of land in factory districts.)

Manchester

Manchester itself, at the centre of the factory district, is a little untypical of the numerous industrial towns of South Lancashire. A greater diversity of trades is carried on here. Also it is far more commercial with a larger middle class which, as elsewhere, lives entirely separate from the working class.

The proletariat in Manchester make up two-thirds of the inhabitants; whereas in other towns they can be three-quarters or even four-fifths of the population. (In Leeds, in 1839, for example, 61,212 of the 82,120 inhabitants belonged to the working class.) The wealthiest part of the middle class, the merchants, bankers and largest industrialists live in garden villas on the fringes of the city, remote from the reach of the smoke of factories. They regularly pass to and from their offices, warehouses, mills and banks at the centre of Manchester along broad thoroughfares lined with the shops and dwellings of the less well-to-do. These buildings effectively exclude from sight the extensive working class districts which encircle the business district. (Ironically, while Engels was in Manchester, the building of an extension to the Leeds railway laid bare to the view of respectable classes a court "the filth and horrors of which surpass all others by far" (p.84), directly below the railway bridge.)

Diet and dress

Diet and dress vary considerably among the working class inhabitants of the town; between, for example, the skilled operative and his family (who are also employed) and the unemployed. Diet and dress are only universally poor when there is a depression. (In the commercial crisis of 1842 two-thirds of the inhabitants of Bolton were thrown out of employment.) One thing that is noticeable is that the poorer workers deal mainly with the petty traders who line the main streets of working class districts. These small traders sell the poorer grades of food — vegetables, cheese and meat. Those who must buy the cheapest grades of food more often run the risk of consuming adulterated tea, sugar, or tobacco; or being the victims of tainted meat of diseased or dead carcases. It is poorer workers who also fall victim to false weights and measures. In the same way there is an enormous difference in what the working class wear from quite good woollen clothing to rags. Engels discerned various layers of diet and dress (see p.105 ff.), and some attempt is made in Table 6 to classify this information:

Table 6: VARIATIONS IN WORKERS' DIET AND DRESS

Classes of workmen	Diet and dress
1. All members of the family employed or better-paid workers' families	Meat daily, bacon and cheese for supper; tea, sugar and milk. One or two good woollen suits.
2. Lesser-paid workers	Meat 2-3 times per week. Larger proportion of diet made up with bread and potatoes. Weak tea and sugar or spirits. A suit of fustian (cotton/wool mixture) or wool which is changed once a year.
3. Lowly-paid workers	Potatoes with small pieces of bacon; weak tea or spirits. Little or no bread. A suit of clothes which is carefully darned and patched.
4. Lowest-paid workers (often the Irish)	Potatoes. No tea. Vegetables often refuse or parings. Meat often tainted. Clothes in rags. No shoes.
5. Unemployed	Like 4. These persons do not know what it is to have enough to eat. Their situation is even more precarious. Slow starvation.

Mortality rate

From time to time water-borne epidemic diseases such as smallpox, typhus or cholera rage through the factory town. (Cholera, the most terrifying, swept through most factory towns in 1831-1832, 1848-1849, and 1852-1853.) In any year infectious disease accounts for half the deaths. Mortality rates are summarised in Table 7.

Table 7: MORTALITY RATES BEFORE AND DURING THE INDUSTRIAL REVOLUTION

Period	Mortality rate per 1,000	Followed by:
1731-40	35.8	Decline
1811-20	22.1	Rise
1831-40	23.4	Stable to 1870 then fall

Information from pp.241-2, P. Deane.

Whereas the death rate in the five largest towns excluding London, i.e. Birmingham, Liverpool, Manchester, Leeds and Bristol, was 20.7 in 1831, it had risen to 30.8 by 1841. Thus, what was happening here in these towns compared unfavourably with the rest of the country. Moreover, rates in towns compared very unfavourably with those in the country; for example, the average life expectancy of rural workers in Wiltshire and Rutland in the 1840s was twice as high as for Manchester and Liverpool. Within the industrial towns deaths were invariably higher in those streets which were in bad condition than in those whose condition was good.

Cotton factories

The cotton factories near the main waterways of our typical factory town are often quite large and surprisingly cheap to build. (In 1846 a six or seven storey weaving plant with 410 power looms including land cost only 11,000 pounds.) Inside the air is hot and heavy with humidity — as an aid to working the fibres. Ceilings tend to be low to economise on space, windows are narrow and in any case always closed. Fibrous cotton dust and the rancid smell of machine oil fill the air.

Work commonly begins with a bell which rings between 5 and 6 a.m. and ends between 6 and 8 p.m. (Factory inspectors in 1843 described the hours as still 14-16 hours per day.) Long hours in impure air without exercise, together with the common practice of night work, inflicts a general weakness upon workers which opens the way to a contagious fever

common to cotton factories. This fever spreads rapidly through the neighbourhood.

Some workers are bow-legged and have crooked backs. This comes from protracted standing or bending for perhaps six or seven hours at a stretch. This is especially the case among those who have begun their factory life at the age of about six. (In Leeds this deformity was reported to occur especially in children between the ages of eight and fourteen.)

At busy times work extends to nineteen hours a day, between for example 3 a.m. and 10 p.m., for up to six weeks. It is at this "brisk" time that the strap most often appears to keep the children at work and accidents are more frequent. Maiming — commonly the loss of a finger joint, sometimes a hand or arm (which could be accompanied by lockjaw and death) — accounts for a significant proportion of cases in the infirmary in the town. Occasionally too there are fatal accidents); for example, to those who are caught by the moving belt which supplies power to the machines.

Factory discipline with its regular hours, rules and fines (see Table 8) is a new feature of life and difficult to accept. Many men and women have been used to working at home or in a small workshop. The tedium of having to give constant attention to an inanimate, whirring machine, together with physical enervation, produces a kind of brutalisation known to the age as 'demoralisation'. (When tending machinery, Kay-Shuttleworth suggested, "The intellect dozes off in dull indolence, but the coarser part of our nature reaches a luxuriant development".) (Qu E., p.205.) This demoralisation takes varied forms of lethargy and drunkenness, a fondness for cruel amusements such as bull-baiting and cock-fighting, a neglect of cleanliness and diet, and promiscuity.

Table 8: FACTORY FINES AT TYLDESLEY c. 1825*

Infringement	Penalty s	d
Any spinner found with his window open	1	0
Any spinner heard whistling	1	0
Any spinner found dirty at his work	1	0
Any spinner found washing himself	1	0
Any spinner being five minutes after last bell	1	0
Any spinner being sick and cannot find another to give satisfaction must pay for steam per day	6	0

Some penalties listed by Cobbett in his *Political Register* and quoted by the Hammonds in their *Town Labourer*, pp.17-18.

* Tyldesley is near Manchester.

Employment of women and children

Large numbers of women and children are employed in cotton factories. (Less than one-quarter of factory operatives in 1839 were grown men.) More than half the operatives are female — more in woollen, silk and flax mills. Promiscuity, and prostitution among young persons which often follows, are commonly reported in factory towns. The "crowding into a small space of people (of both sexes) to whom neither mental nor moral education has been given is not calculated for the favourable development of the female character," wrote Engels (p.176).

Another remarkable effect of the employment of large numbers of women in factory towns is the dissolution there of the family. It is not hard to find an unemployed man tending to the household chores, darning and mending, while his wife is at work supporting the family. It is possible to find some cases where both man and wife are both supported by working children. At the early age of thirteen or fourteen these working children live emancipated lives, simply paying their parents for board and lodging. Working girls get little training in housekeeping (members of the family have little contact), and consequently neither sew, cook, wash, nor often know anything of the rearing of children. Working mothers have little time to

care for their children. Some return to work immediately after confinement. Infants are left with very young girls or very old women and are neglected. They are too often the victims of fatal accidents — by falling, burning or drowning. Some mothers hurry home at meal-times to feed their children but, because of long separation, parent and child can become estranged and indifferent to each other. One untold story of the industrial revolution is the dissolution of the working class family. (Engels remarks that this dissolution could well mean the emancipation of women.)

Origins of the proletariat

How had the proletariat come about? Pessimist historians give a variety of answers to this question: the introduction of machinery, competition, overpopulation (though they do not emphasise this), enclosure and the ending of protective customs and laws.

The introduction of machinery

How had the proletariat come about? The first answer to this important question is that they were persons whose work had been superseded by machines. This is the presumption which Engels frequently makes. "The history of the proletariat in England begins . . . with the invention of the steam-engine and of machinery for making cotton" (p.37); "every improvement in machinery throws workers out of employment, and the greater the advance, the more numerous the unemployed . . . (p.163). This has been the case from the introduction of the spinning jenny (each of which Engels calculates displaced five spinners using the spinning wheel) through to the self-acting mule, which dispenses with spinners altogether. In the area of cotton printing the work of 200 block printers, says Engels, is now done by one machine managed by one worker with the assistance of a child (p.221). A petition of woolcombers in 1794 tells the same story. "It appears to the petitioners that one (woolcombing) machine only, with the assistance of one person and four or five children, will perform as much labour as thirty men in the customary manual manner" (Mantoux, pp.406-7 n.).

care for their children. Some return to work immediately after confinement. Infants are left with very young girls or very old women and are neglected. They are too often the victims of fatal accidents — by falling, burning or drowning. Some mothers hurry home at meal-times to feed their children but, because of long separation, parent and child can become estranged and indifferent to each other. One untold story of the industrial revolution is the dissolution of the working class family. (Engels remarks that this dissolution could well mean the emancipation of women.)

Origins of the proletariat

How had the proletariat come about? Pessimist historians give a variety of answers to this question: the introduction of machinery, competition, overpopulation (though they do not emphasise this), enclosure and the ending of protective customs and laws.

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With the spread of such machines the petitioners anticipated that fifty thousand woolcombers with their families would become destitute. The following table succinctly describes the fate of the largest group of artisans affected by the industrial revolution, the 500,000 handloom weavers overwhelmed by the power loom.

Table 9: WEEKLY WAGES OF COTTON WEAVERS IN BOLTON

Year	Gross wages before deductions
1795	33s
1815	14s
1829-34	5s 6d*

* The net income from 5s 6d was 4s 1½d.

Hobsbawm, The Age of Revolution, p.60.

Basically, Engels concludes, the proletariat was created by the competition of pre-industrial workers with the new machinery. This fits well with the view of many of an idyllic eighteenth-century world of free and independent artisans and sturdy yeomen destroyed suddenly and painfully by capitalism.

In Part One the idea that the industrial revolution appeared suddenly has been placed in perspective. The idea that the proletariat made a sudden appearance must also be put into perspective.

Employment and wages

Against the view of "technological unemployment" creating a proletariat it can be said that inventions had a twofold effect that actually raised employment. Machines spared effort and saved money, and both effort spared and money saved could and did generate new economic activity. Also, if this "technological unemployment" were the only story then, as the nineteenth-century progressed, matters would have clearly grown more desperate. Then something like the reverse of urbanisation would have occurred in the nineteenth-century as

production in towns was mechanised. Moreover, if the introduction of machinery brought only unemployment and distress, areas without machinery would have improved their living standards while cities became areas of unemployment and low wages. Actually opinions to the contrary are universal among historians. "One of the most striking (facts), before as well as after the introduction of the factory system, is that the wages of industry were higher than those of agriculture (p.421, Mantoux). This is in fact why cities grew. Evidence given by a Bolton resident to the Factory Commission of 1834 illustrates this:

> *"You have been witness of growth of the operative class in these parts; you have seen it grow from nothing into a great body in the space of a few years . . . What were the spinners taken from?*
>
> *— A good many from the agricultural parts . . . People left other occupations and came to spinning for the sake of higher wages. I recollect shoemakers leaving their employ and learning how to spin. I recollect tailors, I recollect colliers, but a great many more husbandmen left their employ to learn to spin . . . " (p.409 n. ibid).*

Factory workers, therefore, came from a wide variety of pre-industrial pursuits; although the industrial revolution destroyed some of these pursuits and caused temporary and intense hardship, it did not of itself bring prolonged unemployment and low wages. It is rather the reverse. Both employment and income grew as a result of the industrial revolution (see also Deane, pp.222-3).*

* Even Engels concedes this: "in spite of the demand for working-men which, in general has increased . . ." (p.114).

Cottage industry

It is hardly likely, therefore, that the industrial revolution brought about a sudden, total collapse of living standards as some pessimist historians believe. The industrial revolution did not create this large, dependent class which Marx called the proletariat. By c. 1750 the proletariat was already there. This is revealed by a close study of cottage industry. The main cottage industry, the woollen industry, was spread extensively over three main areas: Yorkshire, Devon and other parts of the south-west, and Norfolk and other south-eastern counties. In all three areas:

> *"The greater part of the domestic clothiers live in villages and detached houses, covering the whole face of a district of from 20 to 30 miles in length, and from 12 to 15 in breadth . . . a great proportion of the manufacturers occupy a little land, from 3 to 12 or 15 acres."*
>
> *From Report . . . on Woollen Manufacture, 1806 (Qu. p.56 n., Mantoux).*

While, however, in Yorkshire, each man in these extensive villages worked with his family in his own home with his own tools and materials — and hence the term "domestic industry" — the situation was subtly different in the other two areas. Here merchants left their raw materials among various outworkers, then took away the processed cloth for finishing or "dressing" at their own workshops. This variant of the domestic system, called "putting-out", was probably the result of indebtedness. In bad times, when the weaver could not pay for his materials, he (or the framework knitter) borrowed from the merchant with his loom as security. In this way many ended up as an outworker, and perhaps even rented what had been his own loom after further indebtedness. In the course of time these indebted outworkers probably reached the stage of selling up and moving into the centre of production, say Norwich, as a landless labourer — perhaps to ensure a greater continuity of employment. This situation of a few entrepreneurs and many wage earners existed in many industries before c. 1760 — in cotton, silk, paper, soap, building and mining to name only a few examples of large-scale industry. Writers often cite the landless or the landpoor as those who turned to domestic industry to eke out a living. For

example, W. G. Hoskins reports that after the enclosure (and large-scale conversion to pasture) of Wigston in Leicester it grew as an industrial village that attracted the dispossessed for miles around into framework knitting. Irish and Scottish migrants are also reported in the early 1800s entering cotton weaving.

Conclusion

Therefore, while the industrial revolution may have destroyed the domestic system, in most parts by c. 1750 that system really employed a hidden proletariat. The industrial revolution brought it into factories — and thus under closer supervision and discipline. "It follows", as Lipson says, "that Engel's famous assertion — 'the proletariat was called into existence by the introduction of machinery' — betrayed ignorance of the fact that a wage-earning class, possessing no resources but its technical skill and a few tools, existed in England for several centuries prior to the factory age" (p.91). So instead of looking for the proletariat in the destruction of domestic industry, as the pessimist historians do, we should be looking for its origins among the causes of this same domestic industry.

Competition

The same considerations will apply if we look carefully at what Engels regards as another important cause of the proletariat: competition. When Engels speaks about competition he really has two things in mind: firstly, small farmers and manufacturers crowded out by capitalism and, secondly, competition amongst workers themselves. We have already looked at the first form of competition since it amounts to saying that the industrial revolution created the proletariat. This is because he is saying that, in both the case of the small farmer and small manufacturer, that they were destroyed by the extensive use by the capitalist of machinery. In any case Engels sees the competition of workers amongst themselves as "the worst side of the present stage of affairs in its effect upon the worker" (p.108).

Examples

Engels gives many poignant examples of what traditionally is known as "the struggle for existence". In Sheffield fork grinders lived very commonly only to the age of 30, dying slowly from the inhalation of sharp-edged metal fragments. Nonetheless they resisted any attempts to cover the grindstones or to carry off the dust by artificial draughts since they believed that this would attract more workers to the occupation and, of course, also lower wages. Fear of being "put-off" made some pregnant women factory workers work up to the day of their confinement. In London the threat of discharge kept women dressmakers almost continually working for nine consecutive days at the height of the "season", never undressing. The same poor bargaining position brought miners in remote areas under the truck system (though it was officially illegal), and under a system of arbitrary fines as well as into "tied" cottages as a condition of employment. In northern England they had to pledge themselves to be available for work for the coming year; on the other hand the mine owners did not have to guarantee work for their workmen. Competition may also explain the overcrowding of factory districts; living close to factories helped some workers get to factories first for casual employment.

Irish competition

In this regard the immigration of Irish, who lived upon "the lowest plane possible in a civilised country" (Engels, p.125) degraded living conditions in towns. (Irish tenants were known to use furniture and even doorposts, moulding and flooring for fuel.) Perhaps more importantly they lowered wages in many unskilled occupations. The reason was that the Irish, accustomed to going barefoot and in tatters and used to a diet of potatoes, were willing to work for less than others. Under the force of competition among themselves, workers were prepared to take the lowest wage which would maintain their customary standard of dress, diet and housing. This competition was not peculiar to industries in the north affected by the industrial revolution.

Industrial wages

The coming of the industrial revolution in fact raised all wages in the north of England. There, in town and country, wages rose between 1770 and 1795 as may be seen in Table 10 below:

Table 10: WEEKLY WAGES IN AGRICULTURE AND INDUSTRY, 1770-1795

Occupation	1770	1795
Agricultural labourer	5s-9s	7s-10s
Cotton weaver (Manchester)	7s-10s	16s
Metalworker	12s-13s 6d	15s-20s

From Mantoux op. cit., pp.421-3.

Thus, there was a tendency for competition to lower wages, and, indeed, such "fierce competition" was the main cause of the darker aspects of the life of the proletariat. (It is nonetheless true that the very worst periods, such as 1811-1813, were complicated by failure of harvest, war or trade fluctuations.) However, if in a sense workers selected themselves for employment in their struggle with other workers by their willingness to accept lower wages and more arduous conditions of work, then the common view among pessimist historians that the wealthy were the cause of workers' poverty is untrue. Of course this competition worked to the advantage of the employers, who often displayed, as Engels says, a "disgusting money-greed" and "barbarous indifference" (p.30 n., p.58) to their employees. The higher wages which occurred in the later eighteenth century does, however, suggest that the industrial revolution brought a countervailing tendency to the force of competition.

Conclusion

"Fierce competition" among workers does not make a proletariat; it presupposes one. The laws against trade unions

in the eighteenth century testify to the frequent existence of unions, and this must indicate the presence of competition among workers. Very early in the century both woolcombers and weavers in south-west England had associations which tried to regulate their trades and to raise wages. In 1725 a law was passed forbidding such associations. (The late development of trade unions among the unskilled does not of course indicate that competition amongst the unskilled did not exist; rather the opposite: it indicates that competition amongst such labourers was so intense that trade unions were impossible.)

Again we come to similar conclusions. Competition antedates the industrial revolution. The industrial revolution tended to raise wages; that is, it dampened competition. We must conclude with a foremost optimist historian, Professor T. S. Ashton, that instead of causing the proletariat and its troubles, industrialisation probably saved it from an even more catastrophic fate:

> *"If England had remained a nation of cultivators and craftsmen, she could hardly have escaped the same fate (as Ireland in the 1840s) and, at least, the weight of a growing population must have pressed upon the spring of her spirit . . . There are today (i.e. c. 1950) on the plains of India and China, men and women, plague-ridden and hungry, living lives little better, to outward appearances, than those of the cattle that (they) toil with by day and share their places of sleep by night. Such Asiatic standards, and such unmechanised horrors, are the lot of those who increase their numbers without passing through an industrial revolution."*
>
> *(p.161, The Industrial Revolution)*

Overpopulation

Did overpopulation produce the proletariat? In 1795 there were many signs of overpopulation: scarcity of food, rapidly rising prices, unemployment, low wages, increasing poor rates, the swarming of population into towns. In these circumstances, which were further complicated by the failure of harvest and war at sea, the Rev. T. R. Malthus wrote his *Essay on Population.*

Malthus

In it Malthus argued that whereas population grows geometrically (1, 2, 4, 8, etc.) food supply grows only arithmetically (1, 2, 3, 4, etc.). However, since population cannot outrun resources, what really happens is that population expansion is recurrently checked either by prudence, which Malthus calls the preventive check or, failing this, by vice and misery which increases mortality, the positive check. Later his doctrine was understood more plainly to be that population constantly tends to grow faster than food supply. An element (later to be called Social Darwinism) crept in too, that scarcity induced an intense struggle for existence in which only the fittest survived. The others learned from the bitter experience of extreme want to control their numbers.

There is no doubt that not only the middle class, but many artisans and operatives too, accepted this "principle of population". Unemployment and low wages were due to competition and surely this competition was caused by the pressure of numbers. The fall in wages for weaving between 1795 and 1800, for example, in the opinion of Mantoux (p.423) was due solely to the "overcrowding of the labour market".

In 1817 Ricardo explained how overpopulation produced a proletariat. His view was that, as the community grows, food production expands onto inferior soils where there is a lesser production for the same effort. This will mean a general rise in the price of necessities but falling profits. In these circumstances capital, the fund from which wages are paid, will decline. A smaller number of persons can then be employed or, if work is spread, wages must fall.

In sum, in perhaps not quite optimistic fashion, Malthus traces the proletariat to a natural rather than to a political cause. In other words, the proletariat is the visible sign of population pressing against the means of subsistence; it has nothing to do with the effect of laws.

The workhouse

The consequence of the general belief that poverty was due to a surplus population was the reform of the poor law. The Poor Law Commissioner accepted Malthus' own conclusion

that charity and poor relief were counter-productive since they only stimulated greater numbers while taking from the capital needed to employ them. This only ended up eventually in increased competition and lower wages. The kindest thing was not to pledge the State to support the able-bodied destitute but to let this "surplus population" starve itself into some kind of restraint upon its numbers. There was an excess population (i.e. one in excess of the demand for workers); the commissioners applied their preventive check: the workhouse.

The workhouse, built often on a hill to better broadcast its message of the preventive check, applied its "test" to all who would apply for relief. The test was its rules. The food was worse than that of any employed labourer; the work useless, monotonous and hard. The inmates wore "dresses of disgrace", Cobbett's phrase for the workhouse uniforms; the family was broken up and allowed only infrequently to see each other or to have visitors; tobacco or parcels from relatives were forbidden. Punishments for infringement of discipline at the Birmingham workhouse in 1843 included being kept naked in an enclosed space without food for lengthy periods or by being put among the insane. Dead paupers were buried outside consecrated ground in mass graves. The workhouse was designed to, and did, discourage all but the really "surplus" labourers; it was not unknown for paupers who had been refused outside relief to prefer starvation to admission.

Optimists' case

Optimist historians have generally adopted Malthus' explanation of a proletariat. "The central problem of the age was how to feed and clothe and employ generations of children outnumbering by far those of any earlier time" (p.161, T. S. Ashton, *Industrial Revolution*). According to them overpopulation brought social stresses which the industrial revolution could only inadequately alleviate. A proletariat had been created as population grew faster than the "units of property". The "residual surplus" of landless and landpoor peasants was Marx's "reserve army of labour".

Criticisms

While overpopulation can occur, do we have it in the industrial revolution in Britain? In one sense the English did not take the doctrine seriously — during the nineteenth century the proportion of persons in agriculture constantly fell. A statistic that throws the optimists' case seriously into doubt is that during the period 1760 to 1830 population was increasing at 1.5 per cent p.a.; yet at the same time average income per capita was itself increasing at 1.5 per cent p.a. (Knowing the power of the division of labour this is not at all hard to believe.) The most damning evidence comes from looking at the history of poverty in England. All the signs that prompted Malthus to write of overpopulation in 1798 already existed in 1598. "Poverty was rife in England throughout the whole of the sixteenth century and beyond. It has been estimated that between one-quarter and one-third of the population of most English towns were below the status of wage-earner . . ." (p.25, Pound). How similar 1595-1596 is to 1795-1796! There were bad harvests, inflation, thousands unemployed; but 1595-1596 was worse for there were also plague and insurrection. Yet, in 1598 the population of England was probably only half what it was in 1798!

The strength of the optimists' case rests on the image of an agrarian society running out of land. But the truth is that England was a rapidly evolving industrial and trading society. Increased productivity was being taken out in increasing imports of food. The optimists are right not to equate poverty and the proletariat with the industrial revolution. They are wrong to equate them with overpopulation. There is surely enough evidence to persuade us to look further into institutional causes of "overpopulation" and a proletariat.

Enclosure

Even when the controversy over enclosure raged between 1770 and 1800 its enemies were generally prepared to admit that it involved economic gains. On the other hand, nowadays even optimists acknowledge that it also involved social loss. (Naturally they do not emphasise this.) It is agreed that, chiefly, this social loss was "status, security, rights". Enclosure

converted cottagers, small tenants and landowners, and squatters "into a body of men who earn their subsistence by working for others" (Dr. Price, 1770).

Enclosure and "labour supply"

Optimists attack the importance usually given by pessimists to enclosure as a main cause of the "labour supply" to industrial towns. Their most recent position is that enclosure did finally separate the field labourer from all proprietory interest in the product of the soil he tilled. But it was not the main cause of the growth of industrial towns.

They argue that, generally speaking, enclosure Acts by Parliaments in the later eighteenth century did not disturb the stability of the rural population. Small owner-occupiers (the peasantry) were reduced; they did not disappear. Enclosure was the prelude to agricultural improvement so it did not reduce the employment of labourers. Farmwork became more intensive until finally curtailed by agricultural machinery in the 1850s. Some optimists add that agricultural labourers resisted factory life, and that manufacturers were not interested in them anyway because they were unsuited to factory discipline. They add that the whole reason for inventions in the 1770s was that there was little movement from the countryside into towns. The optimists conclude that, first, labour came from an all-round expansion of population which "creamed off" the "surplus" rural population and, second, rural population was attracted into towns by the prospect of higher wages and better opportunities for employment rather than expelled from the countryside by the enclosure movement. (There is a little inconsistency here since the first reason seems to imply that agricultural labourers came into towns because there were no prospects in villages, while the second implies they chose to come to towns.)

An "unabsorbed surplus"?

In defence of the pessimists there is a deal of evidence (which we have already seen) that suggests that the countryside made a significant contribution to the growth of factory towns — more than "creaming off" of a "surplus". The

remarkable difference in the poor rates (shown on Map 2) between the counties where there was industry (in the north) and those counties where there was not (in the south) does strongly suggest movement in the industrial counties from countryside to city. Those counties close to industrial towns (Warwick, Derby, Leicester and Nottingham) where there was considerable enclosure in the later eighteenth century, do have substantially lower poor rates than counties remote from industry which were also extensively enclosed. Rural wages were higher also in these counties close to factory towns. Why would this be so if only a negligible "unabsorbed surplus" were moving into towns? In 1792 Arthur Young actually reported that in industrial counties (Cheshire, Lancashire and the West Riding) there was competition between farmers and manufacturers for workmen. This is more believable when we remember that these northern counties were still relatively deserted in 1792.

It is true that in the south (in old enclosed counties) the proletariat was held in place (until c. 1835) by the old poor law. But what would have happened under the new poor law? Cobbett said of the "workhouse test" that it ensured "that the able-bodied, necessitous man should wander until he found the work he had failed in finding at home".

Finally, surely the large influx of Scottish and Irish into Glasgow and Lancashire are connected with the Scottish and Irish "clearances" (enclosures) of the period.

Low wages

The optimists see migration to industrial towns as coming principally from, one, higher wages and better opportunities available in towns and, two, a "surplus population" in the countryside. But, behind each of these causes of urbanisation, lies enclosure.

Wages were higher in factory towns. However, enclosure did depress rural wages and, consequently, also depressed urban wages — though still leaving them attractive. When the legal owners appropriated all the land in the village this set up a tendency to lower wages. Without allotments and rights to common the labourer could not choose between working for

others and working for himself. He had lost his bargaining position. In 1825 William Cobbett contrasted the condition of "free" labourers he had seen on the fertile Isle of Thanet with the inhabitants of forest and woodland (i.e. wasteland) in Hampshire and Sussex which, presumably, were still unenclosed (see pp.247-8, *Rural Rides*). On the Isle of Thanet the granaries and cornricks were enormous, but the labourers' houses were "beggarly in the extreme" and the people unkempt:

> *"Invariably have I observed that the richer the soil . . . the more miserable the labourers. The cause is this (where the soil is rich) the great, the big bull frog grasps all. In this beautiful Island every inch of land is appropriated by the rich. No hedges, no ditches, no commons, no grassy lanes: a country divided into great farms; a few trees surround the great farm-house. All the rest is bare of trees; and the wretched labourer has not a stick of wood and has no place for a pig or cow to graze, or even to lie down upon."*

Here is the secret of the hostility of farmers to enclosures that provided for commons and allotments of gardens for the poor. These only made labourers "saucy" and overly independent. In the words of the Poor Law Report (1834), "We can do little or nothing to prevent pauperism; the farmers will have it: they prefer that the labourers should be slaves; they object to their having gardens . . ." (Qu. p.157, Hammonds, *The Village Labourer*). It was thought better to have a reserve of cheap, dependent labour for harvest time and for enclosing. This attitude was well-understood by the poor and further demoralised them.

Schemes for systematic allotments through Poor Law legislation (part of the anti-enclosure agitation of the time) were therefore defeated in the 1790s. The Speenhamland system was adopted instead. The subsidisation of wages showed just how far wages could be pushed down by substantial enclosure (new or old). In more northern parts wages were higher; here industry provided an alternative, and the Speenhamland system was not applied. Enclosure, or the monopolisation of land by the few, almost removed the alternative of self-employment from labourers. This explains

why industry had to pay so little extra to attract labour from the countryside. The profitability of industry was not a factor. Enclosure also made labourers more ready to forsake the countryside. For, by it, labourers had lost the possibility of advancement from labourer to husbandman. As well they must have been unhappy at the dislocation to village life that enclosure brought. In this situation the prospect of more permanent (less seasonal) employment for higher wages in towns could have been the critical factor. It would have been the young and the single who would have most responded to these circumstances. In sum: enclosure contributed to the attractiveness of wages and conditions in towns by depressing both wages and prospects in the countryside.

Parliamentary enclosures

While the statistics of ownership in the village between c. 1760 and c. 1815 may be stable, was the reality stable? The optimists would have to concede the possibility that new owners have come into the village; for it is impossible to know how many non-peasant outsiders have come in. These outsiders could have been professional men-cum-farmers or speculators or artisans such as stockingers. They could have been tradesmen and retailers. The latter were now more numerous because, on one side, some villagers were undoubtedly better off while, on the other, there was five or six million pounds of poor relief finding its way "into the pockets of rural tradesmen who had an interest in supplying the pauperised labourers with the goods which they could have partly supplied, before enclosure, for themselves" (p.114, Chambers, *Enclosure and Labour Supply*). Also, small holdings could arise at enclosure to compensate those who had lost common rights. Nonetheless, the optimists have a sufficiently strong argument to prove that, where there was a combination of favourable soils and favourable economic conditions (e.g. in Lincolnshire during the war) this permitted the peasantry to survive longer. And, where wasteland was enclosed, the number of peasants could increase.

Elsewhere enclosure had different results. In Warwickshire there was a sixfold increase in enclosure costs per acre between

c. 1730 and c. 1840 — costs which fell disproportionately upon the poor. It is reasonable to assume, as the pessimists do, that here many small landowners met these sudden large costs either by selling up or by indebtedness which, sooner or later, caught up with them. Commissioners of enclosure who carried out the survey and other aspects of enclosure did respect legal rights, but these did not extend to tenants, cottagers and squatters on the common. In any case, some smallholders would never be sufficiently compensated by allotments for loss of rights to commons to graze livestock or poultry, cut firewood or turf, gather building materials and so on.

Old enclosures

Optimists treat only parliamentary enclosure (1760-1815); they omit the enclosure of many centuries. It was obviously both which made a proletariat. Manorial lords started to add to their lands by enclosure in 1235, nearly three hundred years before the famous protest by Thomas More in his *Utopia*. Seventeenth and early eighteenth century enclosures by agreement are untraceable but very extensive. It is interesting that Hobsbawm and Rude, both pessimists, argue that by 1750 (before parliamentary enclosure) the English system of agriculture had already been established (that is, a pyramidal system of landlords, large tenant farmers and hired labourers). Parliamentary enclosure did therefore only complete the proletarianisation of English peasants as the optimists say. But this only means that it filled in the gaps left by previous enclosures. The whole process of enclosure (since 1235) was surely the main reason for many peasants being upon minute plots and overcrowded commons by 1750. Enclosure gave the appearance of a "surplus population".

Post-1815

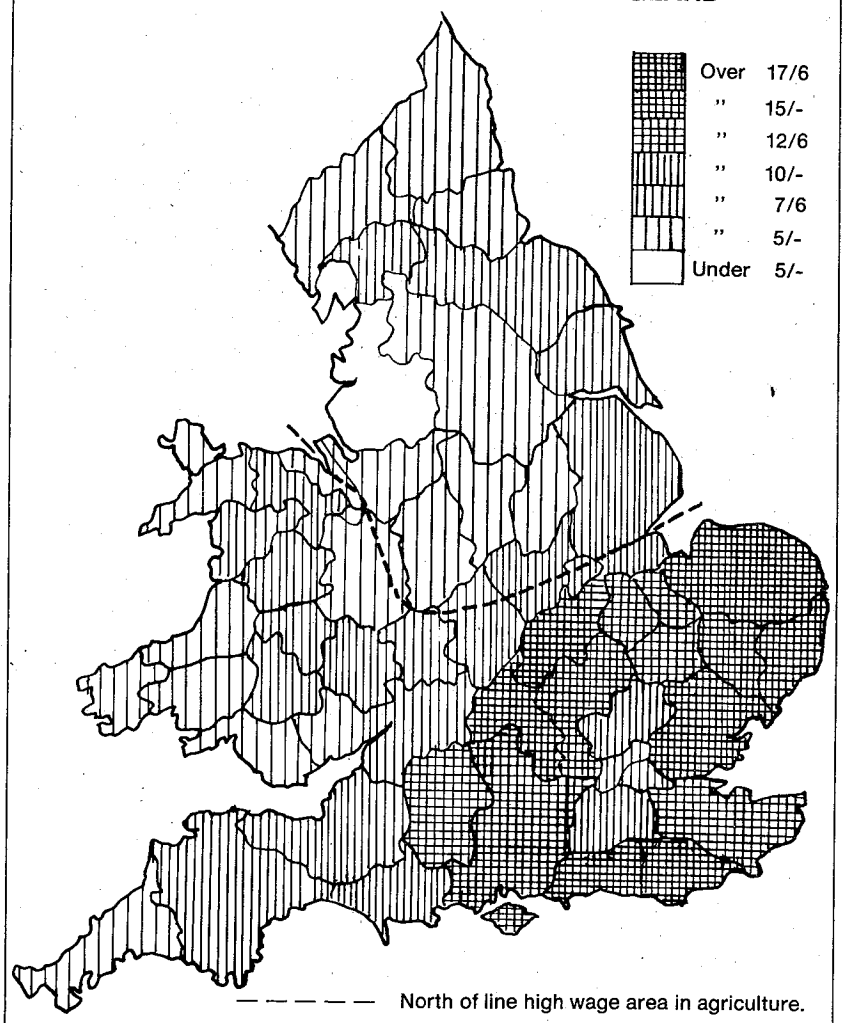
The pessimists' view of enclosure, viz. that poor men had been deliberately driven off the land or, more extreme, that "enclosure commissioners were a kind of capitalist press-gang" sent to recruit an industrial army, is false. Nonetheless, the optimists do not look at the post-1815 period "When prices fell . . . (and) rents remained high — or came down as they always do, tardily — thereby spelling the ruin of many

smallholders who had clung on to their few-acre holdings gained from enclosure (p.242, E. P. Thompson). It cannot be a coincidence that industrial towns grew fastest between 1811 and 1831, a period too when poor rates rose most significantly. Agricultural depression meant that land, brought into use during wartime, became unused though still enclosed.

Conclusion

Those who speak of an "unabsorbed surplus" think of what the land could employ under a use determined by the owner, and not of what it could maintain. When farmers chose to convert from tillage to pasture or to withdraw parts of their land entirely from production, it could of course employ less. Nonetheless, the land could never cease to maintain as many as it had before. A story from the Poor Law Report illustrates this. As the poor rate mounted, the farmers at Cholesbury during the 1820s, no longer finding farming as profitable, withdrew their land from production to escape the poor rate. Their land now employed no-one. This made the poor rate impossible to collect and in their plight the poor came to the rector. He recommended that, to maintain the poor, the unused land be divided up among them. He was confident that within two years "the whole of the (able-bodied) poor would be able and willing to support themselves" (p.141). The point is that when land was enclosed it was enclosed permanently; persons in the nineteenth century were as much subject to sixteenth century enclosures as those who lived in that century.

Map 2: POOR LAW EXPENDITURE IN ENGLAND AND WALES, 1834



POOR LAW EXPENDITURE IN ENGLAND AND WALES IN 1834.
PER HEAD OF POPULATION, BY COUNTIES.

The ending of protective customs

Church protection

More generally, could the proletariat have come about because Church and State ceased to maintain those laws and customs which protected the weak from the strong? From the early Middle Ages economic life was regulated by the Church. These regulations later acquired the force of custom. There was, for example, the "just price". This was based on either customary prices or the costs of production or sometimes on what it cost the seller to maintain his standard of living. In the Church's opinion, "To leave the prices of goods at the discretion of the sellers is to give rein to the cupidity which goads all of them to seek excessive gain" (Qu. p.53, R. H. Tawney).

State protection

With weakening ecclesiastical influence after the Reformation, custom had to be reinforced by law. More controls than ever now seemed necessary against the rising tide of "license grown by liberty of the Gospel" (Qu. p.169 ibid). The chief agent of the king, the Privy Council, brought pressure to bear everywhere to maintain social stability: on merchants during bad trade not to dismiss their workmen; upon farmers and merchants to make their stocks available for sale at a fixed price when harvests failed; upon noble landlords to plough up their enclosed fields and return them to cultivation. Justices fixed wages periodically to "yield unto the hired person both in the time of scarcity and in the time of plenty a convenient proportion of wages"; the Privy Council just as regularly set the prices of necessities such as bread, coal and ale.

Interference with progress

There seems to be justification for this intervention. In the period 1500-1640, despite a threefold rise in money wages, real wages dropped by as much as 50 per cent. So then it is likely that the ending of protective customs gave rise to the proletariat. But here we have the same paradox as we faced in regard to enclosure. The same customs which protected the

poor from "conscienceless property"* made newer forms of industry and trade impossible. Innumerable Acts in the woollen industry, for example, prescribed how the industry was to be carried on — how and from what the cloth should be made; an army of gild officials measured, counted and weighed the cloth. They fined and they confiscated forbidden imports. Obviously this industry, and the cotton industry, could not have been "industrialised" without deregulation. After 1640, while population rose and the ancient system was being neglected and corrupted, real wages rose. In a strange way custom both helped and harmed the proletariat. In any case custom and law always assumed that a proletariat existed; they merely stopped the powerful from taking so many opportunities to exploit them.

Conclusion

A central fact about the industrial revolution was the presence of a proletariat. Its impotence is symbolised in the words used about it: "hands", "operatives", "a labour force", "a cost of production". Its poverty is a measure of its impotence.

The radical tradition, to which we now turn, asked why such a class existed, and indeed as well why there were the upper classes. As John Ball had put it so well and so defiantly in the thirteenth century:

When Adam delved and Eve span,
Who was then the gentleman?

The radical tradition

Class consciousness?

About 1840, thanks partly to Carlyle's essay *Chartism,* public opinion began to take more seriously what Carlyle called "the-condition-of-England-question". This question had several sides to it: what were the conditions of the poor? Why had they occurred? and how could they be remedied?

The poor had already answered these questions for themselves. As the names of the various political movements

* It is notable that in the industrial revolution the least scrupulous employer frequently set the standard for everyone else.

indicate, they did not give one answer to their situation. The rise of trade unions, the development of various avenues of "self-help", state intervention, socialism and moves for the more extensive distribution of land or for the franchise, are all different answers to the-condition-of-England-question.

It is important to realise that at the core of each political movement is one of the "causes" of the proletariat which we have been discussing (the decay of protective custom, machinery, competition, "surplus population" and enclosure). Each is an important and distinct element in working class consciousness of the time. Few had developed that desperate and revolutionary awareness that they were exploited by the economic power of their employers and repressed by the political power of the aristocracy, which socialists have tried to impress upon the poor. As the following discussion will show, up to 1840 at least, their imagination seemed to be seized by the idea that the labourers' world could be made better by returning to the past.

Restoration of custom — food riots

The first way in which the poor saw their predicament was that it had taken place due to the decay of custom. Thus the most elementary remedy for the poor was to exercise their customary rights. One instance of this is food riots.

Food rioters, active even into the 1840s, were not simply unruly mobs. To buy up food in or near a market to sell again at a profit had been a criminal offence until 1791. In times of scarcity, when the common people of the neighbourhood became aware that those who made or sold them provisions (millers, bakers, etc.) were doing this, it was likely that the marketplace would be taken over — sometimes for several days. Then, by a kind of disciplined intimidation, produce would be requisitioned from the neighbourhood and sold at customary prices, the rioters often handing back the proceeds to its owners. John Wesley, for example, saw a hungry mob who calmly took away corn that had been gathered for export in a Dutch ship and "sold it for the owners at a common price".

Unfortunately, this kind of disruption to trade was not legitimate as far as the authorities were concerned. When, in 1783, boatloads of flour and cheese were held up on the Grand Trunk Canal, soldiers were sent to restore order. The crowd resisted and were fired upon. Several convictions resulted, one of them a death sentence.

Petitions

Another instance of resort to custom is the frequent petitions to Parliament by artisans, especially in the early years of the nineteenth century. Artisans such as calico weavers and stockingers, invaded by newcomers and too scattered to form a union, made petitions to Parliament to regulate their industries in customary ways. It was proposed, for instance, that the ratio of apprentices to journeymen be fixed (to prevent employers using cheap labour) and that the provisions of the Statute of Artificers be applied. The only result of these petitions was the repeal of the labour codes (in 1809 and 1813-1814) including the Statute of Artificers. Clearly the remedy of the poor was not to appeal to custom.

Anti-Poor Law agitation

In 1835 when Cobbett led the attack on the New Poor Law, especially on its unspoken premise that the poor had no legal right to relief, he argued that custom dictated that the poor were entitled to support from the rents of land. For the monasteries this rent had been paid in the form of the duty "to keep hospitality". Later, after the dissolution of the monasteries, this duty was laid upon the landowners by the Elizabethan Poor Law, in the form of the parish rate. In his *Legacy to Labourers* he hinted that the government might well pay all its expenses this way. His cry, "We want great alteration, but we want nothing new," was of course unheeded.

Destruction of machinery

Luddite riots

Cobbett was sure that if labourers were not given their customary rights to poor relief, and still expected to fend for themselves, that this amounted to a short proposition: "That a man, in a state of extreme necessity, has a right to use another's property . . ." (Letter VI). No doubt this was the

opinion too of food rioters, artisans who destroyed machinery and rebellious agricultural labourers. The Luddite riots in 1811-1812*, the most extensive machine-breaking to occur in England (in the West Riding of Yorkshire, South Lancashire and the Midlands) came from the desire to be rid of machines which were taking work away from the poor. All were skilled men in (mainly) small workshops. All came from three dying trades — "croppers" (or shearmen), cotton weavers and stockingers (or framework-knitters). All had been refused protective legislation by Parliament. The Luddite riots mark the point at which English government moved from paternalism to laissez-faire.

A brief story of these riots can be told by describing the best-known case: the stockingers. In the winter of 1811-1812 one thousand "wide-frames" were destroyed in and around Nottingham. Wide-frames were not a new machine but they were associated with a new development in the hosiery industry: the cutting-out of the various items of hosiery from one wide-woven cloth and their sewing together with seams. This "mass production" allowed the use of many "apprentices". These inferior but cheaper articles (perhaps a response to depressed trade) lowered the general level of earnings of stockingers by one-third between 1807 and 1811. The reduction in wages (really the reduced prices being offered under the "putting-out system") went along with other forms of exploitation: payment in kind under the truck system; raising the rents of frames; and the classification of fine work as coarse. Bolder (more unscrupulous) hosiers led the way; others had to follow. The artisans were fighting for what they believed was their right: to make hose in the customary way at customary prices. When they could not achieve those rights constitutionally they resorted to disciplined intimidation (terrorism?). Machine-breaking spread from Nottingham to Leicester and Derby until quelled by a law in February, 1812, which conferred the death-sentence upon frame-breakers.

The changes which brought about the Luddite riots are summarised in the following table.

* Both the Luddite and the later Swing riots in 1830-1831 took their names from the signatures to threatening letters of the time to employers and farmers, e.g. "King Ludd", "Ned Ludd", "Captain Swing".

Table 11: OVERVIEW OF LUDDITE RIOTS

Rioters	Objects of riot	Exploited, looking back on better days	Parliament fails to pass/ignores
"Croppers"	Shearing frames	No	All protective legislation (wool) repealed.
Framework-knitters	Wide-frames "cut-ups"	Yes	Bill for Preventing Frauds and Abuses (1812)
Weavers	Power looms	Yes	Arbitration Act (1803), Minimum Wage Bill (1808)

The "Swing" riots

In 1818 a minimum wage bill for agriculture was dismissed. The agricultural labourers in the south of England were thus also "thrown upon their own resources". The outcome was the "Swing" riots. One characteristic feature of the riots was the destruction of threshing machines.

The background to the riots is interesting. The post-1815 agricultural depression was marked by growing unemployment, underemployment and the "proletarianisation" of lesser tenants and smallholders. Farmers failed to maintain old customs. For example, they no longer fed and housed labourers; it was cheaper to give them wages. They also hired as little and as briefly as they could, "relying on the parish to maintain the unemployed" (p.72, Hobsbawn and Rude). They paid by results. The consequence overall was that the general level of wages fell below a living wage.

Escape to London was increasingly difficult — despite the fact that between 1821 and 1831 London grew almost as fast as Manchester. The young and the single, disadvantaged in employment, formed a high proportion of those who did emigrate, while the mature man with a large family remained and grasped harder at poor relief. It is significant that as wages fell so did expenditure per capita on poor relief. In 1830 it was only three-quarters what it had been at its peak between 1815 and 1820.

Degrading and repulsive work was invented to discourage and humiliate: paupers were put in harness to draw the parish cart; the young were set to breaking stones ("road-making").

Here in these parishes the New Poor Law had already begun. On the other hand farmers suffered a lot less. They even managed to pass on the poor rates to landlords (see p.138, *Poor Law Report*). Indeed, the increasing social gap between farmers and their labourers ("since farmers lived in parlours, labourers are no more found in kitchens") made them insensitive to the pauperisation befalling their labourers.

Crime generally increased in the years before the "Swing" riots. Poaching was one way to express individual discontent — as well as to relieve hunger. Setting fire to hay or cornstacks was another. Yet, overall, most families, demoralised, to some extent shored up by the Speenhamland system, or simply overawed by landlords, endured the deterioration until 1830.

It was the horror at having to endure a winter as bad as that in 1829, and the growing appearance of threshing machines that threatened their winter employment, which caused a more general expression of discontent. News of the revolution in France, reaching the labourers from the radical artisans in towns, and carrying the presentiment of great change, could also have been a factor. In any case the first riots were directed against the threshing machines being introduced in the vicinity of Canterbury (in Kent) to enable farmers to get their wheat to London sooner and thus realise the higher prices. Between August and November, 1830 riots spread slowly, but in mid-November the "contagion" gathered momentum and intensity, striking in a pincer fashion until London was enveloped (more than 20 counties in all).

Nonetheless, there was no serious rioting in, or in the immediate vicinity of, London, nor in any manufacturing town in the Midlands — the most pressing anxiety to authorities. The availability of work and higher wages explain this (further proof that the industrial revolution was not associated with the worst conditions of the time).

In each region where rioters held temporary control over the countryside the pattern of events was similar. The "wages riot" was common in the south-east. According to a *Times* correspondent:

> *"Each Parish, generally speaking, has risen per se; in many places their proceedings have been managed with astonishing coolness and regularity . . . The farmers have*

notice to meet the men: a deputation of two or more of the latter produce a written statement, well drawn up, which the farmers are required to sign . . . Where disorder has occurred, it has arisen from dislike of some obnoxious clergyman, or tithe man, or assistant overseer, who has been trundled out of the Parish in a wheelbarrow, or drawn in triumph in a load of ballast (in the Parish cart) by a dozen old women. The farmers universally agreed to the demands they made: that is, they were not mad enough to refuse requests which they could not demonstrate to be unreasonable in themselves, and which were urged by three hundred of four hundred men after a barn or two had been fired, and each farmer had an incendiary letter addressed to him in his pocket."

Qu. pp.246-7, The Village Labourer.

The customary demand for a living wage varied between high- and lower-wage counties. The farmers' argument that they could only pay higher wages when they paid smaller tithes often led smaller groups on to mob the parson. Smaller groups still roamed the countryside destroying threshing machines — in some instances factories, mills and foundries ("in order to make more work for the poor people"). Acting from ancient habit and in the name of customary rights the rioters were mistaken in their belief that somehow their actions were acceptable to the authorities. In fact, the authorities in London sent down soldiers and Special Commissioners to try the rioters. Nineteen hundred and seventy-six prisoners were tried by 90 courts in 34 counties; 252 were sentenced to death of which 19 were hung; 481 were transported to Australia and 644 imprisoned. Ironically, the severest repression was in Wiltshire where the poverty of the farm labourers was most acute.

Temporary gains were made in wages; threshing machines (except in the eastern counties near London) were discontinued until the 1850s. But "Captain Swing" had not been able to rescue the sinking class of agricultural labourers from demoralization and poverty.

What had been in dispute, both among the Luddites and followers of "Captain Swing", was the right of the artisan or labourer to go on earning his livelihood in the way he had always done. In this sense the fight for custom and against

machinery was the same thing. The pessimists usually defend this right and attack the rights of property, which they see as indefensible while the common people were in need. This view is an over-simplification of a complex problem.

Trades union

Like capitalism, unions were much older than the industrial revolution. Whitbread in 1800 discovered 40 repressive Acts against combination prior to the Combination Acts of 1799, 1800. In the Act of 1725 forbidding combinations of weavers, the penalty for strikes with violence was transportation or death.

Poverty due to competition

To trade unionists the predicament of the poor had come about by competition among workers themselves for work. The remedy was to end this competition by creating a union that had a monopoly over labour in a certain trade. This union could then withdraw labour (strike) until individual employers in that trade met the conditions of the union.

Yet, as Engels' description of the fortunes of one union shows, unions themselves had to overcome the fact of competition.

Coal miners' strike (1844)

Trade unions first appeared among miners in factory districts and took root in Northumberland and Durham in 1843. At the first conference in 1844 at Manchester 60,000 workers were represented; at the second conference in Glasgow six months later over 100,000. On 31 March, 1844, the contracts of all miners in Northumberland and Durham expired. W. P. Roberts, a Chartist solicitor from Bristol, had been appointed their Attorney-General. He now drew up and presented to the mine owners a new agreement upon which all the miners united. It demanded payment by weight rather than measure; determination of weight by ordinary scales subject to public inspectors; half-yearly renewal of contracts; abolition of the fines system and payment according to work done; the employers to guarantee to miners in their exclusive service at least four days per week or wages for the same. The employers answered that for them there was no union only individual workmen. Counter-proposals were made but rejected and soon every mine in the region was empty.

While the funds of the union gave to each family an allowance of 2s 6d per day Roberts went all over England calling on miners to adopt a peaceful and legal agitation, using the courts to secure the release of those miners arrested by Justices of the Peace and, in turn, bringing to justice mine owners who still used the Truck System (prohibited in mining since 1817). During the strike Newcastle itself was supplied with coal from Scotland.

Then, towards the summer of 1844, the Union's funds faltered, spreading want and indebtedness amongst the miners. Outside help came but could not relieve the distress. Nonetheless, the miners kept the peace and committed no theft. The miners lived in "tied" cottages (i.e. owned by the mineowners) and the mine owners now turned to evicting their workers with soldiers and police present ready to fire on those who resisted. In this way 40,000 were made homeless and lived in fields, on roadsides and in ditches. (Those who camped on private property were prosecuted, fined and committed to the treadmill). They and their familes thus lived eight weeks in the open. At Deaham in Durham, Lord Londonderry, who owned the town, and one of the principal "coal kings", prevented the shopkeepers and tradesmen in "his" town from giving any more credit. When all other ways failed — including attempts to provoke the miners to civil disorder so that the military could intervene and end the strike — the mine owners imported men from remote parts of Ireland and Wales (men eager for work in any circumstances). Against this competition the strength of the union totally collapsed.

At the end of September, 1844, the starving miners were forced to dissolve their union, dissociate themselves from Roberts and accept the employers' terms.

Lessons of the strike

This nineteen week strike illustrates the classic forms of struggle between the economically powerful and the economically weak. It is observable that the mine owners, often aristocrats, clearly had more power than the average manufacturer working on credit and himself a tenant liable to rent. It illustrates as well the directions which unionism would take to strengthen and defend itself from competition; for example, by forming a national miners' federation and a trade

council among other unions of the locality to control "blacklegs".

As a socialist opposed both to unlimited freedom (competition) and to private property, Engels saw another role for trades union: to "contribute greatly to nourish the bitter hatred of the workers against the property-holding class" (p.246). Moreover, Engels believed, "If (by unions) the competition of the workers among themselves is destroyed . . . the rule of property is at an end" (p.245).

Owenism and co-operative movement

The G.N.C.T.U.

John Doherty, an organiser of the National Spinners Union, saw from the failure of the cotton spinners' strike of 1829 "that no individual trade could stand against the combined efforts of the masters of that particular trade: it was therefore sought to combine all the trades" (Qu. pp.875-6, E. P. Thompson). The result was the National Association for the Protection of Labour (1830), bringing together spinners, wool textile workers, mechanics, miners, potters, builders and so on. But as a follower of Robert Owen, Doherty also saw that one big union would not only ensure the success of any strike, it would allow workers to end competition completely and create a co-operative society. This concept of a sudden leap into Utopia gave birth to a new development: Owen's Grand National Consolidated Trades Union (1834). This dual role of trades union was mirrored in the existence of two builders' organisations: the Operative Builders' Union "struggling to improve conditions under capitalism" and the Grand National Gild of Builders "struggling to eliminate capitalism".

Collapse of Owenism

Owen's solution went far beyond his earlier idea of village communities ("parallelograms of paupers" according to Cobbett) working and being re-educated under salutary influences — the scheme that had recommended itself to certain poor law reformers in 1817. It went also beyond his experimental communities in America which had failed in the 1820s. For Owen's solution amounted in fact to the proposal to run the community by the exchange of goods between trades

organised co-operatively. Enthusiasm for this "rational state of society" was one thing (the G.N.C.T.U. reached half a million in a few weeks); its implementation was another.

Both government and employers acted promptly. The Act of 1825, which virtually forbade any union activity as "molestation", "obstruction" or as "intimidation", was used repressively — and of course the more obscure Act of 1798 against the taking of illegal oaths (against the "Tolpuddle Martyrs"). Employers used lockouts in conjunction with "the document" (whereby employees had to renounce their unions to be re-admitted to work). By December, 1834 this concerted effort had put an end to Owen's project.

Nonetheless, even without this repression, Owen's scheme had weaknesses. One was that since he had eliminated competition from his new society he had to find some kind of centralised system for the distribution of goods. His National Equitable Labour Exchange really did not solve this problem. Another weakness was that his artisan followers were more radicals seeking a way to be self-employed than socialists. The repeated use of the term "gild" suggests what was in the minds of most of them. But the critical weakness in Owen's plans was how the old society would be ended and the new one commenced. Would William Benbow's "Grand National Holiday" (a month-long general strike) persuade or force the upper classes to hand over government and private property to "the productive classes"?

The co-operative movement

The germs of Owen's ideas lay in the co-operative or "self-help" schemes which were being carried on more modestly in the same period. One obvious example was the friendly societies or benefit clubs by which money was "put away for a rainy day". Even in 1801 there were 7,000 such "poor man's clubs" (for example, the Oddfellows of Manchester) with membership of perhaps 700,000. Another example was co-operative production on a small scale, "the attainment of independence by means of a common capital" as the society of weavers at Ripponden in 1832 suggested. The most important kind of "self-help" movement of the time

involved co-operative buying and selling. Here, the workers' predicament was seen to lie at least partly in high prices for the necessities of life. As *Common Sense,* a co-operative journal, suggested the way out was to contribute to a Trading Association for the wholesale purchase of unadulterated tea, sugar, bread and oatmeal for members. This idea became the Rochdale Society of Equitable Pioneers (1844) whose first object was "The establishment of a store for the sale of provisions, clothing, etc.". Other objects, e.g. a building society, it promised, would follow.

Chartism

In the 1830s only one other movement held as much promise of solving all problems at once as Owenism and this was Chartism. For, no matter what the cause of the people's problems was (competition, the decay of custom, enclosure) popular government (by which the Chartists meant good government) would set all things straight. In the eyes of Chartists the predicament of the people was due to the attitude of government (without workingmen) towards workingmen's problems and the monopoly of power by the upper classes. Said the Chartist petition of 1839:

> *"The energies of a mighty kingdom have been wasted in building up the power of selfish and ignorant men . . . The good of a part has been advanced at the sacrifice of the good of the nation. The few have governed for the interests of the few, while the interests of the many have been sottishly neglected, or insolently and tyrannously trampled upon."*

The first of the so-called Six Points of the Charter, universal (manhood) suffrage, would make Parliament a much wiser and less selfish instrument of government. The other five points would ensure the government of workingmen, by workingmen and for workingmen. For government to be by workingmen they must be able to vote freely in addition to having the vote. It was necessary, therefore, to be able to resist the pressure of landlord and employer — by the secret ballot. It was no use having the vote if it were only possible to vote for men of the middle or upper classes. To have a government of workingmen, who could be trusted to do something, it was necessary to

have the abolition of property qualifications and the payment of members. Yet it was no use to have the vote and to use it to freely elect workingmen to the House of Commons if "plural voting" or the unequal size of electorates continued to give the numbers to "the few". It was therefore also necessary to have equal electorates (constituencies). And, finally, all these improvements would lead to very little if workingmen entered Commons and went their own way because of wilfulness or corruption. It was most important that M.P.s be utterly responsive to the people's wishes, carrying out the "mandate" they had been given, and constantly be subject to correction and new directions. Annual Parliaments were vital to democracy as well.

The collapse of Chartism

Thomas Attwood, who presented the Chartist petition to the Commons in June, 1839, made the mistake of emphasising the distressed condition of the people, rather than their civil and political rights, so that the government was able to refuse the petition on the grounds that it was foolish to think that the condition of the working classes could be helped by legislation. The vote was 235 against to 45 in favour.

The rejection of this first petition of 1¼ m signatures (two others were put forward in 1842 and 1848) and the argument by some Chartists that threat of force would have more effect led to the division of the Chartists into "moral" and "physical force" factions. In May, 1839, the Chartists had decided, should the petition fail, to put to gatherings in July a manifesto calling for "ulterior measures", including a general strike (the Sacred Month) for 12 August. This would probably have been the time for a march of 500,000 armed men on London that had also been decided on. However, "moral force" Chartists like William Lovett gave little support to the scheme of a Sacred Month; indeed, so many were undecided that the aftermath to the presentation of the Charter was badly organised and directionless. In the event the leading members of the Chartist Convention soon found themselves arrested.

English socialism

Origins of Chartism

To socialist historians, whose test of a political movement is its tendency to produce "class consciousness", Chartism, despite some redeeming features, belongs to the past. To them, "The Chartist movement failed first because it was largely a reactionary movement of an economically superseded and politically powerless class" (p.233, Pauline Gregg). Apart from George Harney and the left-wing, who opposed anything the middle class stood for, most Chartists failed the test of "class consciousness"; firstly for the reason that they were fighting industrialism and the factory (the weavers and stockingers) and, secondly, because they saw the aristocracy as their principal enemy. To socialist historians, Feargus O'Connor's scheme of a Chartist Co-operative Land Society (1845), to acquire allotments to ballot-out to its shareholders (which by 1848 had 75,000 shareholders at 26s each) is "technically and socially reactionary" (p.221). Even Lovett is suspect since the Chartist petition itself, which he wrote, has few signs of "class consciousness". In it for the most part, "the people", the productive classes, are set against the aristocracy. There is another important "reactionary" tinge to Chartism and this is that "a large part of the mental equipment of Chartists" came from the writings of pre-Marxian or English Socialists — Spence and Ogilvie, Hall, Owen, William Thompson, Hodgskin and Bray. These ideas were taken up by Chartist demagogues and worked up into an highly emotional indictment of landlords and manufacturers. The most violent "carriers" of this agitation were the once-prosperous weavers who were the chief victims of "progress".

Nonetheless, even though many writers bear a grudge against manufacture, and the later ones are distinctly anti-capitalist, all are careful to trace poverty and powerlessness to the enclosure of land. From Spence (1770) to Bray (1839) we find the same idea: "Property in land has led by degrees to what in effect is property in man" (James Bray quoted, p.285, Alexander Gray). Put in another way: men were denied the full product of their labour because they had been denied the right to land.

The effects of civilization

The best work by which to illustrate "English Socialism" is *The Effects of Civilization on the People in European States* by Dr. Charles Hall written in 1805, since it combines both elements of this school of socialists in equal proportions (the attack upon landed property and the attack on manufacturers).

For Hall the origin of inequality lies in the unequal distribution of landed property, since the monopoly of land gives the power to claim the goods of the others without land. In Hall's mind wealth is "a certain species of power; viz. a power over the labour of the poor" (p.184). Freedom of contract is therefore illusory. Contracts between those with land and those without it are one-sided; "the rich man has truly nothing to give the poor man" (p.103).

The cause of calamitous poverty is that, since inventions have appeared, the rich have been commanding the labour of the poor in the direction of "refined manufactures" and away from agriculture, where they could have been employed providing themselves with the necessities of life. Hall often sets out this argument so that he appears (like Rousseau) to say that manufactures, trade and commerce are the cause of poverty. Hall's point is that the vast concentrations of goods in warehouses that pass for wealth, demonstrate that it is the wealthy few who command production. And, if the many are poor, he asks, how can the nation be said to be rich? When most persons are stunted and die early from occupational diseases how can the nation be declared strong? When the labouring man cannot enjoy the full fruits of his labour how can the nation be considered free? (Hall boldly calculates that a poor man labours only one day out of eight for himself and his family.) And when most men are ignorant how can the State be considered civilized?

No matter what its form the State is always and everywhere an aristocracy of wealth (of those who command the labour of the poor), "seldom affectionate" and always difficult to change — since the rich have "the means of deluding, bribing, decoying and compelling the common people" (p.189). Wealth brings about poverty, weakness, subjection and barbarism "in

a regular, orderly, silent manner . . . with the external appearance of liberty" (p.213).

The cause of inequality, he says, is "land in large parcels"; the remedy is the abolition of primogeniture — and sumptuary taxation. Further on, Hall comes to a different remedy: allotments (a more direct but less constitutional reform). He blames the increase in poor rates, not on the increase in the number of people, but on the situation where the labour of the poor is diverted to manufacturing for the rich. They could instead, he claims, be working the land for themselves. Hall calculates that at the moment (1805) every family could be allotted 36 acres. Malthus, he says, assumes wrongly that the land is producing all it is capable of; in fact, by careful farming, one family could live on 3½ acres, and England could comfortably cope with a population of 90 millions!

The situation in England, Hall concludes, is historically extremely ancient, but is obscured because the use of money and manufactures "throws a veil" over the original state of things (pp.341-2 fn.). Perhaps Hall would then agree that it is not manufacture which is a sign of barbarism but the conditions in which manufacture occurs. If the poor got all their wages then, doubtless, they would command manufacture.

Part Three: Conclusions

Optimism vs pessimism

So far two different pictures of the same period have been given. One, which has the theme of Progress and Reform, is called an optimistic view; the other, the view of Exploitation and Repression is dubbed pessimistic.

In its classic form the pessimistic side argues that conditions in mills and factory towns were so bad that a marked deterioration in living standards must have taken place. And, since capitalists had brought factories into being, they were morally responsible for this deterioration. At the centre of this picture of sudden and unprecedented deterioration is the opinion that the rise of modern industry (the cause of it all) had been at the expense of much that was socially desirable in the pre-industrial way of English life. In place of the protective customs of village life there was "left remaining no nexus between man and man than naked self-interest, than callous 'cash-payment' ". In place of the sturdy, independent artisan or yeoman there suddenly came the dependent and property-less proletarian. In place of skilled crafts there came dreary "over-specialisation" inside factories. Regimentation replaced freedom; brutalising ugliness replaced rural beauty and tranquility.

Against this "pessimist" view of the sudden and total loss of "the world that was" optimists have ranged the economic argument that has led to the conclusion that the same period was one of slow but steady improvement. This was because, by introducing machinery and division of labour, the costs of

production fell. That is, the amount of human effort expended per product declined, increasing and cheapening the goods produced. This process in time led also to the consumption of more varied and better goods, e.g. washable cottons for woollens. According to this school, this presumption of progress is strengthened by the considerations that, first, there was a substantial movement of workers from relatively unskilled and lowly paid agricultural pursuits to relatively skilled and more highly paid industrial employments. This process was probably a continuous one since expanding markets continually led to greater specialisation and, thus, higher and cheaper output. If there is a seamy side to change for the optimists, it is due to "impersonal historical forces which possibly no man can control".

Weaknesses

Which of the two is the right approach? The weaknesses of each are fairly easy to spot. The case studies of the pessimists are less typical than they pretend to be. Prof. W. H. Hutt says of Sadler's Report of 1832 (from which pessimists derive many examples), "To say that the report is one-sided as regards the evidence contained in it would be a mild criticism" (See p.159, Hayek). Hutt also points out that little notice is taken by the Hammonds (the principal pessimists) of Commissions which produce more favourable evidence about the factory system. Moreover, Hutt notes the technique among the critics of the factory system of citing cases of cruelty to children (c. 1780) which do not belong to the time of which they are critical (c. 1830). On the other hand, the statistics upon which the optimists build so much, when investigated, can be found to come from incomplete or unrepresentative samples or to be capable of different interpretations. One statistician says, "I do not believe that index numbers can serve over very long periods" (Qu. by T. S. Ashton, p.148, ibid.). Also, the economic argument that lies behind the presumption of progress assumes a wider application of innovation and invention than occurred. Prices and wages statistics do show stable, even improving earnings in the cotton industry despite a "spectacular" drop in prices for cotton yarn and cloth. But

industries like cotton and iron account for only a small number of workers during this period — see Table 12 below:

Table 12: NUMBERS OF WORKERS IN SOME MAJOR INDUSTRIES c. 1850*

Industry	Numbers of Workers
Agriculture	1,790,000
Domestic service	1,039,000
Cotton	527,000
Building	443,000
Wool	284,000
Coal	219,000
Iron	80,000

Figures taken from 1851 Census of occupations. Population over 10 yrs. old 15,771,000.

* Handloom weavers were then a very small group but in 1835 they were estimated to be between 800,000 and 840,000

Moreover, falling mortality rates do not automatically mean that people were living longer. Ashton himself points out that they may only mean that the population was composed of more young people than previously.

However, there is one sense in which both pictures can be true. This is because they are both talking about different things. Those who write of progress and reform are mainly talking about material conditions — in which there could have been improvement. On the other hand those who write of exploitation and repression are often talking about status — in which there might have been decay. (As Cobbett wrote, "When farmers became gentlemen their labourers became slaves" Qu. p.256, E. P. Thompson). For one group the standard of living controversy is a wages issue; for the other it is an issue of "status, security, rights".

It is interesting to see what happens when an historian from one group comes upon a point usually made by his opponents. Sometimes the point is no sooner made than it is forgotten or passed over:

> *"True, enclosure brought about an abrupt end of a distinctive peasant society and way of life. But to a great extent that society was already disrupted by commercialism . . ."*
>
> *(p.186, G. E. Mingay)*

> *"From the acquaintance with commoners in the New Forest and the Forest of Dean I entirely accept that common rights conduce to an independence of mind not found among hired farm hands. But it is a luxury made possible precisely by economic growth stemming from the replacement of communal farming by commercial agriculture over most of the country."*
>
> *(p.23, E. L. Jones)*

Compromises

There have been more constructive attempts to come to terms with opposition. As a result there has been some revision of standard positions. E. P. Thompson's description of working men's movements up to c. 1830 quite clearly shows, from the

evidence of letters and songs, that working men were a tougher and less sentimental lot than were the Hammonds. Working people were not simply "victims". Also the pessimists acknowledge that parliamentary enclosures were less drastic than the Hammonds describe them in their *Village Labourer.* But the overall opposition is still there:

> *"(The country labourers) lost what little right and security they had . . . Instead (of liberal rights in towns) another, less human, more unequal hierarchy closed in upon them — the farmer who talked to them like a squire, the squire who drove them out for partridge and hares, the collective conspiracy of the village rich who took their commons, and gave them instead their charity in return for their servility, and on whose whim depended their livelihood."*
>
> *(p.52, Captain Swing)*

And the tendency still lingers to see "surplus population" as an institutional creation: "It was not human biology but human society", Hobsbawm writes (p.43, ibid) "which created the surplus labour in the countryside".

Upon the question of changing material standards of living there is now more agreement than previously. This compromise position is set out in the following table.

Table 13: THE STANDARD OF LIVING CONTROVERSY: A POSSIBLE COMPROMISE

Period	Standard of living	Especial features of the period
1730-1790	Improving	Cheap grain. Falling mortality rate. Slackening improvement after c. 1770.
1790-1820	Worsening	War. Combination Acts. Trade dislocated. Heavy indirect taxation. Inflation. Scarcities.
1820-1840	Too little variation to be certain	Less (?) imports of tea, sugar, tobacco. Wider use of potatoes. Plight of agricultural labourer; weavers. Trade fluctuations. Falling wages (?)
1840-1880	Improving	Greater regularity of employment. Rising real wages.

Some pessimist historians, e.g. E. P. Thompson, would say that the worsening condition of workers carried over to c. 1840. Curiously, T. S. Ashton, the leading optimist historian, admits from figures given of costs of diet in Manchester (1821-1831) that "They indicate that throughout the twenties the cost of the staple diet moved to a higher rather than to a lower level" (p.152, Hayek).

Distribution of wealth

No-one denies that wealth was increasing during this period (1790-1840). There unfortunately appears to be little evidence about how this wealth was distributed among rent, interest and wages. It is of course possible for national output to rise but for standards of living to decline, if some few people monopolise the increase. Naomi Riches points out that c. 1790 in Norfolk, for example, the greater efficiency of farm labourers came out in higher rents and farm profits but not in higher wages. It is interesting in this regard that Eric Hobsbawm estimates from the property census of 1873 that

"not more than 4,000 proprietors owned four-sevenths of the land (of England and Wales)" (p.23, Hobsbawm and Rude). Phyllis Deane says, "To some extent it is undoubtedly true that there was a shift in the distribution of incomes in favour of profits and rents . . ."(p.252). Describing the rapidly growing taxable income in England after 1840, W. E. Gladstone says:

> *"The fact is so astonishing as to be almost incredible . . . this intoxicating augmentation of wealth and power . . . entirely confined to classes of property . . . must be of indirect benefit to the labouring population, because it cheapens the commodities of general consumption. While the rich have been growing richer, the poor have been growing less poor."*
>
> *(Qu. p.610, Capital (Vol. I))*

Two paradoxes

E. P. Thompson says that when the labourer's share in "progress" amounted only to "more potatoes, a few articles of cotton clothing for his family, soap and candles, some tea and sugar" (p.351) the overall effect was a feeling of declining standards. In sum: it does appear that between 1780 and 1850 that material standards of working people had risen in absolute terms but declined relative to other classes. This is the great paradox of the industrial revolution, and one given classic expression by John Stuart Mill:

> *"Hitherto it is questionable if all the mechanical inventions yet made have lightened the day's toil of any human being. They have enabled a greater population to live the same life of drudgery and imprisonment, and an increased number of manufacturers and others to make fortunes. They have increased the comforts of the middle classes. But they have not yet begun to effect those great changes in human destiny, which it is in their nature and in their futurity to accomplish."*
>
> *(Bk. IV, Ch. VI, Principles of Political Economy)*

Thompson explains this paradox, at least as far as field labourers were concerned, as due to, first, greed and second, to "the general revolutionary tone" of the whole period (p.242). Historians further to the right cite the capital expenditures

which would have absorbed national wealth during industrialisation. But are these explanations acceptable? It seems unsatisfactory to explain exploitation by a deterioration in morality — even if there was a deterioration in morality. And it is just not possible that greed could hold so many people for so long near the "brute subsistence level". To say that money was being spent upon factories, canals and railroads instead of upon the needs of the poor, even if true, is only really to say that the poor had little power to command production, i.e. that they were being exploited in the first place.

Finally, to say that the French Revolution aroused the aristocracy to be harder in their exploitation of their farm labourers is, like the use of greed as an explanation, to leave the matter as simply the outcome of will. But why could the manufacturers be greedy? and why could the aristocracy press harder upon the poor? Did repressive laws depress standards of living? Could the repressive laws be the Combination Acts? Conditions had grown depressed before 1799, the date of the first Combination Act. And wages appear to have risen in absolute terms between 1799 and 1825, when the Combination Acts were repealed. Even E. P. Thompson implies that they were often ineffective. Yet it is worthwhile to consider that the political conditions of the industrial revolution could be more important than the revolution itself in causing poverty.

Arnold Toynbee in his famous *Lectures on the Industrial Revolution* (published in 1884) raises the same question: why was there an unequal distribution of wealth during the industrial revolution? His answer is unfettered competition governing employment at the time. "The effects of the industrial revolution (upon workers)", he says, "prove that free competition may produce wealth without producing well-being" (p.5, Philip Taylor). As a social reformer his remedy was "that the whole meaning of civilisation is interference with brute struggle. We intend to modify the violence of the fight and to prevent the weak being trampled under foot". In doing this Toynbee believed "that embankments may be thrown up within which (competition) may do its work harmlessly and beneficially". In other words the poor bargaining position of the worker came from too much freedom during the industrial revolution. His assumption is that the "embankments" (state

regulation of industry) will do no injury to economic progress. This assumption is dubious if one takes seriously the argument (in Part One) that economic progress occurred after industrial regulations were removed. In fact, Toynbee has tried to get past what observers at the time, and historians since, have perceived to be the second paradox of the industrial revolution: that legislation did seem necessary to advance the position of the poor, but that such legislation injured the poor in another way by placing obstacles in the way of overall progress. Reformers such as Sheridan and Peel could see this at the time. Elie Halevy refers to this same paradox talking about Bentham's teaching: "Thus on the morrow of the Reform Bill the contradiction between the doctrine of complete free-trade and the systems of organised democracy was revealed . . ." (p.101).

Mantoux also clearly sees the same two opposite tendencies of the industrial revolution: its economic consequences strengthened ideas of laissez-faire but its social consequences strengthened ideas of government intervention (p.474).

It is wise I think to end our study of the industrial revolution with these paradoxes. They remain even today and remind us that neither school, represented in the major parts of our study, offers a single easy solution to the complexities of the industrial revolution. Let us leave the subject with some provocative words from Mill's last published work, his *Autobiography:*

> *"The social problem of the future we considered to be, how to unite the greatest individual liberty of action, with a common ownership in the raw material of the globe, and an equal participation of all in the benefits of combined labour. We had not the presumption to suppose that we could already foresee, by what precise form of institutions these objects could most effectually be attained, or at how near or how distant a period they would become practicable."*

References

W. Blackstone, *Erlich's Blackstone;* Capricorn; N.Y.; 1959.

S. G. & E. O. A. Checkland (eds.), *The Poor Law Report of 1834;* Penguin; Harmondsworth; 1974.

W. Cobbett, *Legacy to Labourers;* Griffin; London; 1872.

W. Cobbett, *Rural Rides;* Dent; London; 1973.

G. A. Cranfield et al (eds.), *Select Documents;* McGraw-Hill; Sydney; 1966.

F. Engels, *The Condition of the Working Class in England in 1844;* Panther; London; 1969.

Dr. C. Hall, *The Effects of Civilization on the People in European States;* Kelley; N.Y.; 1965.

K. Marx and F. Engels, "Manifesto of the Communist Party"; *"Selected Works",* Vol. I; Foreign Languages Publishing House; Moscow; 1951.

J. S. Mill, *On Liberty, Representative Government and Subjection of Women;* O.U.P.; London; 1954.

J. S. Mill, *Principles of Political Economy;* Penguin; Harmondsworth; 1970.

J. S. Mill, *Autobiography;* O.U.P.; London; 1955.

A. Smith, *The Wealth of Nations;* Dent; London; 1977.

R. L. Tames (ed.), *Documents in the Industrial Revolution, 1750-1850;* Hutchinson; London; 1971.

A. Toynbee, "Lectures on the Industrial Revolution of the Eighteenth Century" in Philip Taylor (ed.), *The Industrial Revolution in Britain: Triumph or Disaster?;* Heath; Boston; 1966.

Further Reading — A Select Bibliography

ASHTON, T. S., "The Treatment of Capitalism by Historians" (1949) and "The Standard of Life of the Workers in England, 1790-1830" in F. A. Hayek (ed.), *Capitalism and the Historians;* Phoenix; University of Chicago; 1974.

ASHTON, T. S., *The Industrial Revolution, 1760-1830;* O.U.P.; London; 1948.

CHAMBERS, J. D., "Enclosure and Labour Supply in the Industrial Revolution" in E. L. Jones (ed.), *Agriculture and Economic Growth in England, 1650-1815;* Methuen; London; 1967.

CHAMBERS, J. D., *The Workship of the World;* O.U.P.; London; 1971.

KITSON CLARK, G., *The Making of Victorian England;* Methuen; London; 1962.

DEANE, P., *The First Industrial Revolution;* C.U.P.; London; 1965.

GREGG, P., *A Social and Economic History of Britain, 1760-1972;* Harrap; London; 1973.

HALEVY, E., "The Triumph of Reform, 1830-1841" in *History of the English People in the Nineteenth Century,* Vol. III; Benn; London; 1961.

HAMMOND, J. L. & B., *The Town Labourer;* Anchor; N.Y.; 1968.

HAMMOND, J. L. & B., *The Village Labourer;* Longmans; London; 1966.

HAMMOND, J. L. & B., *The Rise of Modern Industry;* Methuen; London; 1925.

HARTWELL, R. M., *The Causes of the Industrial Revolution in Britain;* Methuen; London; 1967.

HOBSBAWM, E. J., *The Age of Revolution, 1789-1848;* Mentor; N.Y.; 1962.

HOBSBAWM, E. J. AND RUDE, G., *Captain Swing;* Norton; N.Y.; 1975.

HOSKINS, W. G., *The Midland Peasant;* MacMillan; London; 1965.

HOVELL, M., *The Chartist Movement;* Manchester U.P.; 1970.

LIPSON, E., *The Growth of English Society;* A. & C. Black; London; 1964.

MANTOUX, P., *The Industrial Revolution in the Eighteenth Century;* Methuen; London; 1966.

MARX, K., *Capital* (Vol. I); Progress Publishing House; Moscow; 1977.

MINGAY, G. E., *English Landed Society in the Eighteenth Century;* Routledge & Kegan Paul; London; 1963.

POUND, J., *Poverty and Vagrancy in Tudor England;* Longman; London; 1971.

REDFORD, A., *Labour Migration in England, 1800-1850;* Manchester U.P.; 1964.

RICHES, N., *Agrarian Revolution in Norfolk;* Chapel Hill; North Carolina; 1937.

SAVAGE, C. I., *An Economic History of Transport;* Hutchinson; London; 1959.

TAWNEY, R. H., *Religion and the Rise of Capitalism;* Penguin; West Drayton; 1948.

THOMPSON, E. P., *The Making of the English Working Class;* Penguin; Harmondsworth; 1968.

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