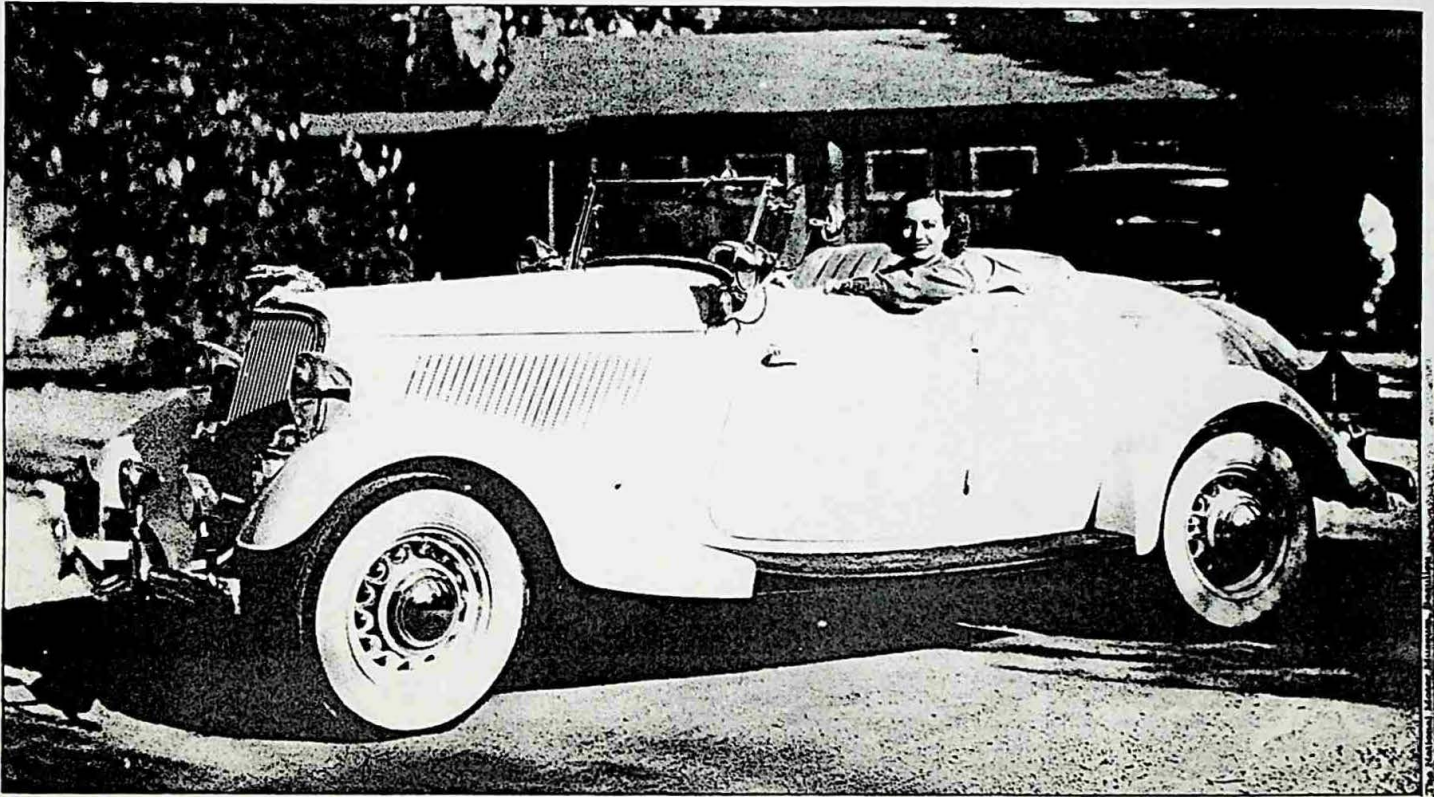


Life After Henry (Ford)

At the heart of New Times is post-Fordism. **Robin Murray** explains what it is and what it means



Joan Crawford in Fordist mode: Mass production plants developed special-purpose machinery for each model

During the first two centuries of the industrial revolution the focus of employment shifted from the farm to the factory. It is now shifting once more, from the factory to the office and the shop. A third of Britain's paid labour force now work in offices. A third of the value of national output is in the distribution sector. Meanwhile 2.5m jobs have been lost in British manufacturing since 1960. If the Ford plants at Halewood and Dagenham represented late industrialism, Centrepoint and Habitat are the symbols of a new age.

The Right portrayed the growth of services as a portent of a post-industrial society with growing individualism, a weakened state and a multiplicity of markets. I want to argue that it reflects a deeper change in the production process. It is one that affects manufacturing and agriculture

as well as services, and has implications for the way in which we think about socialist alternatives. I see this as a shift from the dominant form of 20th century production, known as Fordism, to a new form, post-Fordism.

Fordism is an industrial era whose secret is to be found in the mass production systems pioneered by Henry Ford. These systems were based on four principles from which all else followed:

a) products were standardised; this meant that each part and each task could also be standardised. Unlike craft production – where each part had to be specially designed, made and fitted – for a run of mass-produced cars, the same headlight could be fitted to the same model in the same way.

b) if tasks are the same, then some can be mechanised; thus mass production plants developed special-purpose machinery for each model, much of

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which could not be switched from product to product.

c) those tasks which remained were subject to scientific management or Taylorism, whereby any task was broken down into its component parts, redesigned by work study specialists on time and motion principles, who then instructed manual workers on how the job should be done.

d) flowline replaced nodal assembly, so that instead of workers moving to and from the product (the node), the product flowed past the workers.

Ford did not invent these principles. What he did was to combine them in the production of a complex commodity, which undercut craft-made cars as decisively as the handloom weavers had been undercut in the 1830s. Ford's Model T sold for less than a tenth of the price of a craft-built car in the US in 1916, and he took 50% of the market.

This revolutionary production system was to transform sector after sector

the 20th century, from processed, to furniture, clothes, cookers, in ships after the second world war the economies came from the mass production, for although mass production might be more costly to set up because of the purpose-built machinery, once in place the cost of an unit was discontinuously cheap.

of the structures of Fordism derived from this tension between fixed costs and low variable ones, the consequent drive for volume, as Ford himself emphasised, mass production presupposes mass consumption. Consumers must be will-buy standardised products. Mass production played a central part in establishing a mass consumption norm.

the provision of the infrastructure of consumption – housing and transport. To ensure that the road system created over rail, General Motors, Ford Oil and Firestone Tyres set up and then dismantled the electric trolley and transit systems in urban areas.

Second, Fordism was linked to a system of protected national markets, which allowed the mass producers to recoup fixed costs at home, and compete on the basis of marginal costs on the international market, or through the replication of existing models via foreign investment.

Third, mass producers were particularly vulnerable to sudden falls in demand. Ford unsuccessfully tried to counter the effect of the 1930s depression by raising wages. Instalment credit, Keynesian demand and monetary management, and new wage and welfare schemes were all more effective in stabilising the markets for mass products in the postwar period. HP and Jole cheque became as much the tools of the Fordist age as the tower and the motorway.

Mass producers not only faced the threat of changes in consumption. Mass production concentrated in large cities, they were also vulnerable to new 'mass worker' they had created. Like Taylorism, mass production taken the skill out of work, it fragmented tasks into a set of repetitive movements, and erected a rigid division between mental and manual labour. It treated human beings as interchangeable parts of a machine, labour according to the job they did rather than who they were.

The result was high labour turnover, workplace resistance, and strikes. The mass producers in turn sought constant reservoirs of labour, particularly in groups facing discrimination, in rural areas and from less developed regions abroad. The contractual core of Taylorism – higher wages in return for managerial control of production – still applied, and a system of industrial unions grew up to bargain for these wages levels. In the US, and to an extent the UK, a national system of wage bargaining developed in the

postwar period, centred on high-profile car industry negotiations, that linked wage rises to productivity growth, and then set wage standards for other large-scale producers and the state. It was a system of collective bargaining that has been described as implementing a Keynesian incomes policy without a Keynesian state. As long as the new labour reservoirs could be tapped, it was a system that held together the distinct wage relation of Fordism.

Taylorism was also characteristic of the structure of management and supplier relations. Fordist bureaucracies are fiercely hierarchical, with links between the divisions and departments being made through the centre rather than at the base. Planning is done by specialists, rulebooks and guidelines are issued for lower management to carry out. If you enter a Ford factory in any part of the world, you will find its layout, materials, even the position of its Coca Cola machines, all similar, set up as they are on the basis of a massive construction manual drawn up in Detroit. Managers themselves complain of deskilling and the lack of room for initiative, as do suppliers who are confined to producing blueprints at a low margin price.

These threads – of production and consumption, of the semi-skilled worker and collective bargaining, of a managed national market and centralised organisation – together make up the fabric of Fordism. They have given rise to an economic culture which extends beyond the complex assembly industries, to agriculture, the service industries and parts of the state. It is marked by its commitment to scale and the standard product (whether it is a Mars bar or an episode of *Dallas*); by a competitive strategy based on cost reduction; by authoritarian relations, centralised planning, and a rigid organisation built round exclusive job descriptions.

These structures and their culture are often equated with industrialism, and regarded as an inevitable part of the modern age. I am suggesting that they are linked to a particular form of industrialism, one that developed in the late 19th century and reached its most dynamic expression in the postwar boom. Its impact can be felt not just in the economy, but in politics (in the mass party) and in much broader cultural fields – whether American football, or classical ballet (Diaghilev was a Taylorist in dance), industrial design or modern architecture. The technological hubris of this outlook, its Faustian bargain of dictatorship in production in exchange for mass consumption, and above all its destructiveness in the name of progress and the economy of time, all this places Fordism at the centre of modernism.

Why we need to understand these deep structures of Fordism is that they

are embedded, too, in traditional socialist economics. Soviet-type planning is the apogee of Fordism. Lenin embraced Taylor and the stopwatch. Soviet industrialisation was centred on the construction of giant plants, the majority of them based on Western mass-production technology. So deep is the idea of scale burnt into Soviet economics that there is a hairdresser's in Moscow with 120 barbers' chairs. The focus of Soviet production is on volume and because of its lack of consumer discipline, it has caricatured certain features of Western mass production, notably a hoarding of stocks, and inadequate quality control.

In social-democratic thinking, state planning has a more modest place. But in the writings of Fabian economists in the 30s, as in the Morrisonian model of the public corporation, and Labour's postwar policies, we see the same emphasis on centralist planning, scale, Taylorist technology, and hierarchical organisation. The image of planning was the railway timetable, the goal of planning was stable demand and cost-reduction. In the welfare state, the idea of the standard product was given a democratic interpretation as the universal service to meet basic needs, and although in Thatcher's Britain this formulation is still important, it effectively forecloses the issue of varied public services and user choice. The shadow of Fordism haunts us even in the terms in which we oppose it.

Fordism as a vision – both left and right – had always been challenged – on the shopfloor, as in the political party, the seminar room and the studio. In 1968 this challenge exploded in Europe and the US. It was a cultural as much as an industrial revolt, attacking the central principles of Fordism, its definitions of work and consumption, its shaping of towns and its overriding of nature.

From that time we can see a fracturing of the foundations of predictability on which Fordism was based. Demand became more volatile and fragmented. Productivity growth fell as the result of workplace resistance. The decline in profit drove down investment. Exchange rates were fluctuating, oil prices rose, and in 1974 came the greatest slump the West had had since the 1930s.

The consensus response was a Keynesian one, to restore profitability through a managed increase in demand and an incomes policy. For monetarism the route to profitability went through the weakening of labour, a cut in state spending, and a reclaiming of the public sector for private accumulation. Economists and politicians were re-fighting the battles of the last slump. Private capital on the other hand was dealing with the present one. It was using new technology and new production principles to make Fordism flexible, and in doing so stood much of the old culture on its head.

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In Britain, the groundwork for the new system was laid not in manufacturing but in retailing. Since the 1950s, retailers had been using computers to transform the distribution system. All mass producers have the problem of forecasting demand. If they produce too little they lose market share. If they produce too much, they are left with stocks, which are costly to hold, or have to be sold at a discount. Retailers face this problem not just for a few products, but for thousands. Their answer has been to develop information and supply systems which allow them to order supplies to coincide with demand. Every evening Sainsbury's receives details of the sales of all 12,000 lines from each of its shops; these are turned into orders for warehouse deliveries for the coming night, and replacement production for the following day. With computerised control of stocks in the shop, transport networks, automatic loading and unloading, Sainsbury's flow-line 'make to order' system has conquered the Fordist problem of stocks.

They have also overcome the limits of the mass product. For, in contrast to the discount stores which are confined to a few, fast-selling items, Sainsbury's, like the new wave of high street shops, can handle ranges of products geared to segments of the market. Market niching has become the slogan of the high street. Market researchers break down market by age (youth, young adults, 'grey power'), by household types (dinkies, single-gender couples, one-parent families), by income, occupation, housing and, increasingly, by locality. They analyse 'lifestyles', correlating consumption patterns across commodities, from food to clothing, and health to holidays.

The point of this new anthropology of consumption is to target both product and shops to particular segments. Burton's - once a mass producer with generalised retail outlets - has changed in the 80s to being a niche market retailer with a team of anthropologists, a group of segmented stores - Top Shop, Top Man, Dorothy Perkins, Principles and Burton's itself - and now has no manufacturing plants of its own. Conran's Storehouse group - Habitat, Heals, Mothercare, Richards and BHS - all geared to different groups, offers not only clothes, but furniture and furnishings, in other words entire lifestyles. At the heart of his organisation in London is what amounts to a factory of 150 designers, with collages of different lifestyles on the wall, Bold Primary, Orchid, mid-Atlantic and the Cottage Garden.

In all these shops the emphasis has shifted from the manufacturer's economies of scale to the retailer's economies of scope. The economies come from offering an integrated range from which customers choose their own basket of products. There is also an economy of innovation, for the modern retail systems allow new product ideas

to be tested in practice, through shop sales, and the successful ones then to be ordered for wider distribution. Innovation has become a leading edge of the new competition. Product life has become shorter, for fashion goods and consumer durables.

A centrepiece of this new retailing is design. Designers produce the innovations. They shape the lifestyles. They design the shops, which are described as 'stages' for the act of shopping. There are now 29,000 people working in design consultancies in the UK, which have sales of £1,600m per annum. They are the engineers of designer capitalism. With market researchers they have steered the high street from being retailers of goods to retailers of style.

These changes are a response to, and a means of shaping, the shift from mass consumption. Instead of keeping up with the Jones' there has been a move to be different from the Jones'. Many of these differences are vertical, intended to confirm status and class. But some are horizontal centred round group identities, linked to age, or region or ethnicity. In spite of the fact that basic needs are still unmet, the high street does offer a new variety and creativity in consumption which the Left's puritan tradition should also address. Whatever our responses, the revolution in retailing reflects new principles of production, a new pluralism of products, and a new importance for innovation. As such it marks a shift to a post-Fordist age.

There have been parallel shifts in manufacturing, not least in response to the retailers just-in-time system of ordering. In some sectors where the manufacturers are little more than subcontractors to the retailers, their flexibility has been achieved at the expense of labour. In others, capital itself has suffered, as furniture retailers like MFI squeeze their suppliers, driving down prices, limiting design, and thereby destroying much of the mass-production furniture industry during the downturns.

But the most successful manufacturing regions have been ones which have linked flexible manufacturing systems, with innovative organisation and an emphasis on 'customisation', design and quality. Part of the flexibility has been achieved through new technology, and the introduction of programmable machines which can switch from product to product with little manual resetting and downtime. Benetton's automatic dyeing plant, for example, allows it to change its colours in time with demand. In the car industry, whereas General Motors took nine hours to change the dyes on its presses in the early 80s, Toyota have lowered the time to two minutes, and have cut the average lot size of body parts from 5,000 to 500 in the process. The line in short has become flexible. Instead of using purpose-built machines to make

standard products, flexible automation uses general-purpose machines to produce a variety of products.

Manufacturers have also been adopting the retailers' answer to stocks. The pioneer is Toyota which stands to the new era as Ford did to the old. Toyota, the founder of Toyota, inspired by a visit to an American supermarket, applied the just-in-time system to his component suppliers, ordering on the basis of his daily production plans, and getting the components delivered right beside the line. Most of Toyota's components are still produced on the same day as they are assembled.

Toyota's prime principle of the 'elimination of wasteful practices' meant going beyond the problem of stocks. His firm has used design and materials technology to simplify complex elements, cutting down the number of parts, and operations. It adopted a zero defect policy, developing machines which stopped automatically, when a fault occurred, as well as statistical quality control techniques. As in retailing, the complex web of processes, inside and outside the plant, were co-ordinated through computers, a process that economists have called systematisation (in contrast to automation). The result of these practices is a discontinuous speed-up in what Marx called the circulation of capital. Toyota turns over its materials and products 10 times more quickly than Western car producers, saving materials and energy in the process.

The key point about the Toyota system, however, is not so much that it speeds up the making of a car. It is that in order to make these changes it has adopted quite different methods of labour control and organisation. Toyota saw that traditional Taylorism did not work. Central management had no access to all the information needed for continuous innovation. Quality could not be achieved with deskilled manual workers. Taylorism wasted what they called 'the gold in workers' heads'.

Toyota, and the Japanese more generally, having broken the industrial unions in the 50s, have developed a core of multi-skilled workers, whose tasks include not only manufacture and maintenance, but the improvement of the products and processes under their control. Each breakdown is seen as a chance for improvement. Even hourly-paid workers are trained in statistical techniques and monitoring, and register and interpret statistics to identify deviations from a norm - tasks customarily reserved for management in Fordism. Quality circles are a further way of tapping the ideas of the workforce. In post-Fordism, the worker is designed to act as a computer as well as a machine.

As a consequence the Taylorist contract changes. Workers are no longer interchangeable. They gather experience. The Japanese job-for-life and corporate welfare system provides

security. For the firm it secures an asset. Continuous training, payment by seniority, a breakdown of job demarcations are all part of the Japanese core wage relation. The EETPU's lead in embracing private pension schemes, BUPA, internal flexibility, union-organised training and single-company unions are all consistent with this path of post-Fordist industrial relations.

Not least of the dangers of this path is that it further hardens the divisions between the core and the peripheral workforce. The costs of employing lifetime workers, means an incentive to sub-contract all jobs not essential to the core. The other side of the Japanese jobs for life is a majority of low-paid, fragmented peripheral workers, facing an underfunded and inadequate welfare state. The duality in the labour market, and in the welfare economy, could be taken as a description of Thatcherism. The point is that neither the EETPU's policy nor that of Mrs Thatcher should be read as purely political. There is a material basis to both, rooted in changes in production.

There are parallel changes in corporate organisation. With the revision of Taylorism, a layer of management has been stripped away. Greater central control has allowed the decentralisation of work. Day-to-day autonomy has been given to work groups and plant managers. Teams linking departments horizontally have replaced the rigid verticality of Fordist bureaucracies.

It is only a short step from here to sub-contracting and franchising. This is often simply a means of labour control. But in engineering and light consumer industries, networks of semi-independent firms have often proved more innovative than vertically integrated producers. A mark of post-Fordism is close two-way relations between customer and supplier, and between specialised producers in the same industry. Co-operative competition replaces the competition of the jungle.

These new relationships within and between enterprises and on the shopfloor have made least headway in the countries in which Fordism took fullest root, the USA and the UK. Here firms have tried to match continental and Japanese flexibility through automation, while retaining Fordist shopfloor, managerial and competitive relations.

Yet in spite of this we can see in this country a culture of post-Fordist capitalism emerging. Consumption has a new place. As for production the keyword is flexibility – of plant and machinery, as of products and labour. Emphasis shifts from scale to scope, and from cost to quality. Organisations are geared to respond to rather than regulate markets. They are seen as frameworks for learning as much as instruments of control. Their hierarchies are flatter and their structures more open. The guerrilla force takes

over from the standing army. All this has liberated the centre from the tyranny of the immediate. Its task shifts from planning to strategy, and to the promotion of the instruments of post-Fordist control – systems, software, corporate culture and cash.

On the bookshelf, Peters and Waterman replace F W Taylor. In the theatre the audience is served lentils by the actors. At home Channel 4 takes its place beside ITV. Majorities are transformed into minorities, as we enter the age of proportional representation. And under the shadow of Chernobyl even Fordism's scientific modernism is being brought to book, as we realise there is more than one way up the technological mountain.

'The perspective of consumption – so central to the early socialist movement – is emerging from under the tarpaulin of production'



Not all these can be read off from the new production systems. Some are rooted in the popular opposition to Fordism. They represent an alternative version of post-Fordism, which flowered after 1968 in the community movements and the new craft trade unionism of alternative plans. Their organisational forms – networks, workplace democracy, co-operatives, the dissolving of the platform speaker into meetings in the round – have echoes in the new textbooks of management, indeed capital has been quick to take up progressive innovations for its own purposes. There are then many sources and contested versions of post-Fordist culture. What they share is a break with the era of Ford.

Post-Fordism is being introduced under the sway of the market and in accordance with the requirements of capital accumulation. It validates only what can command a place in the market; it cuts the labour force in two, and leaves large numbers without any work at all. Its prodigious productivity gains are ploughed back into yet further accumulation and the quickening consumption of symbols in the post-modern market place. In the UK, Thatcherism has strengthened the prevailing wind of the commodity economy, liberating the power of private purses and so fragmenting the social sphere.

To judge from Kamata's celebrated account, working for Toyota is hardly a step forward from working for Ford. As one British worker in a Japanese factory in the north east of England put it, 'they want us to live for work, whereas we want to work to live'. Japanisation has no place in any modern *News From Nowhere*.

Yet post-Fordism has shaken the kaleidoscope of the economy, and exposed an old politics. We have to respond to its challenges and draw lessons from its systems.

First there is the question of consumption. How reluctant the Left has been to take this on, in spite of the fact that it is a sphere of unpaid production, and, as Gorz insists, one of creative activity. Which local council pays as much attention to its users as does the market

research industry on behalf of commodities? Which bus or railway services cuts queues and speeds the travel with as much care as retailers show their just-in-time stocks? The perspective of consumption – so central to the early socialist movement – is emerging from under the tarpaulin of production. The effects of food additives, a low-level radiation, of the air we breathe and surroundings we live in, the availability of childcare and community centres, or access to privatised city centres and transport geared to particular needs. These are issues of consumption, where the social and the human have been threatened by the market. In each case the market solutions have been contested by popular movements. Yet their causes are the relations of consumption have been given only walk-on parts in party programmes. They should now come to the centre of the stage.

Secondly, there is labour. Post-Fordism sees labour as the key asset of modern production. Rank Xerox is trying to change its accounting system so that machinery becomes a cost, an labour its fixed asset. The Japanese emphasise labour and learning. The Left should widen this reversal of Taylorism, and promote a discontinuous expansion of adult education inside and outside the workplace.

They should also provide an alternative to the new management of time. The conservative sociologist Daniel Bell sees the management of time as the key issue of post-industrial society. Post-Fordist capital is restructuring working time for its own convenience: with new shifts, split shifts, rostering, weekend working, and the regulation of labour, through part-time and casual contracts, to the daily and weekly cycles of work. Computer systems allow Tesco to manage more than 130 different types of labour contract in its large stores. These systems and employment and welfare legislation should be moulded for the benefit not the detriment of labour. The length of the working day, of the working week, and year, and lifetime, should be shaped to accommodate the many responsibilities and needs away from work.

The most pressing danger from post-Fordism, however, is the way it is widening the split between core and periphery in the labour market and the welfare system. The EETPU's building of a fortress round the core is as divisive as Thatcherism itself. We need bridges across the divide, with trade unions representing core workers using their power to extend benefits to all, as IG Metall have been doing in Germany. A priority for any Labour government would be to put a floor under the labour market, and remove the discriminations faced by the low paid. The Liberals pursued such a policy in late 19th century London. Labour should reintroduce it in late 20th century Britain.