THE SOCIOLOGY OF WORK
Implicit in much of the discussion of alienation (in Chapter 2) and skill (in Chapters 3 and 4) was the idea that the organization of the production of goods and services during the twentieth century had changed and that this has influenced the extent to which workers are alienated and skilled. This is readily apparent in Blauner’s model of the evolution of manual work from highly skilled and non-alienating craft work, to relatively unskilled and alienating assembly-line work, and the move to “non-manual” responsibility called forth by continuous-process technology’ (1964: 169). Blauner’s prescience was also discernible where he speculated that ‘a more affluent and educated public, reacting against the standardization of values and products in a mass society, may increase its future demand for unique and individuated articles’ (ibid.: 168).

In the sociological history of production systems a range of concepts have been developed in an attempt to comprehend the complexity of social change. Among the most widely used are Fordism, and the systems that replaced it, namely neo-Fordism and post-Fordism, although the precise meaning of these terms often varies. There are three inter-related meanings of the concept of Fordism (Lipietz, 1992). First and foremost, Fordism refers to a production system or labour process element characterized by mass production. Second, it refers to an economic system or regime of accumulation characterized by mass consumption. Third, it refers to a socio-political system or mode of regulation that is supportive of mass production and mass consumption, and which, among other things, ensures the supply of physically healthy workers.
and financially healthy consumers. Here the focus will be mainly, but not exclusively since all three dimensions are inter-related, on Fordism as an industrial production system and its successors. The aim of this chapter is to consider the rise, development and decline of Fordism, and the alternatives to Fordism, namely neo-Fordism and post-Fordism, primarily with reference to car production since this was the source and the main focus of research that utilizes these concepts.

The rise of Fordism

During the course of the nineteenth century, the factory became the dominant image of work in industrial capitalism in Britain, yet manufacturing often still involved a mixture of machine- and hand-made products by machine operators and craft workers producing a range of small batch and individual products (Samuel, 1977). The great variety and complexity of factory production systems in the nineteenth century make it difficult to generalize about pre-Fordism. However, those who have attempted such an exercise typically emphasize the role of highly skilled craft workers operating general purpose machines, the assembly of a whole product or large part of a product by one worker, and the use of non-standardized parts to produce a small number of high-quality products (e.g., Meyer, 1981). In the discussion of Blauner (in Chapter 1) and of Braverman (in Chapter 2), it was noted that craft workers typically controlled the technology and the work process. As a result of this way of organizing production, complex products, such as cars, were extremely expensive to build and buy.

At the beginning of the twentieth century, Henry Ford was aware that there existed a potentially vast untapped market for cars while he was just one of a number of small-scale car makers for the 5 per cent of the population who could afford one. In 1909, he announced: ‘I will build a motor car for the great multitude … it will be so low in price that no man making a good salary will be unable to own one’ (2008 [1922]: 52). On the plus side, there was a plentiful supply of unskilled rural migrants and immigrants, on the minus side, there was a shortage of skilled workers. In order to expand his output of cars he had to devise a production system that overcame the shortage of skilled workers and took advantage of the availability of unskilled workers (Babson, 1995). His solution was to combine the organizational innovations of Taylorism, namely the separation of conception from execution and associated task fragmentation and simplification (i.e., deskill work), with the introduction of special or single-purpose machine tools which made standardized and therefore interchangeable parts and developed a sequential layout of the detailed tasks, and special machines culminating in progressive or continuous flow production in the form of a moving assembly line derived from meatpacking (Meyer, 1981). The effect of these innovations transformed production work; in 1910, the
majority of Ford workers were classified as ‘skilled’, but by 1917 this group had declined to under 10 per cent, replaced by unskilled workers who now comprised the majority of workers (ibid.). Henry Ford acknowledged that the new production system involved the ‘reduction of the necessity for thought on the part of the worker and the reduction of his movements to a minimum. He does as nearly as possible only one thing with only one movement’, and added that: ‘Dividing and subdividing operations, keeping the work in motion – these are the keynotes of production’ (2008 [1922]: 58, 64). Ford also designed machines that were ‘absolutely fool-proof’ to improve quality and reduce accidents (ibid.: 80). Ford’s innovations transformed productivity, profits and prices. The Ford Motor Company was founded in 1903 and in its first year of (craft) production 125 workers produced 1,700 cars and a company net income of $246,000, by 1921 the workforce had increased to over 32,000, output to over 900,000, and net income to just under $78,000,000 (Meyer, 1981). Production peaked in 1923 when 1.8 million Model T cars were mass produced (Hounshell, 1984). Meanwhile, the price of the Ford model T declined from $850 in the first year of production in 1908 to less than $300 by 1923 (Wells, 2007). Ford had revolutionized the way cars were made, extended the market down the class structure by producing a limited range of standardized cars, and in the process had become the ‘world’s first self-made billionaire’ (Levinson, 2002: 49).

Ford achieved these unprecedented production figures and profits while reducing the working day from nine to eight hours and more than doubling wages to $5 a day in 1914, similar to Taylor’s advocacy of ‘high wages and low labour costs’ (1947 [1903]: 22). This was an exercise in social engineering that involved an ‘incentive to better living’ in the form of a complex profit-sharing scheme divided into two components: a basic wage paid to all workers and a profit-sharing element that was only available to those who had worked for Ford for at least six months, married men ‘living with and taking good care of their families’, single men aged over 22 ‘who are of proved thrifty habits’, and young men under 22 and women ‘who are the sole support of their next of kin’ (Ford, 2008 [1922]: 88). Ford’s idea of an appropriate lifestyle was one that involved no drinking, no smoking and no gambling. Thus this was not an act of altruism but a policy for the social control of workers aimed at reducing the exceptionally high labour turnover, absenteeism, and the threat of unionism. For example, 60,000 workers had to be replaced in 1913, whereas only 2,000 had to be replaced in 1914; absenteeism also ‘declined from 10 per cent to less than one half a per cent’ (Beynon, 1975: 25). Ford also expected greater efficiency from his workers, sacking the less efficient more briskly (Meyer, 1981) and increasing pay dramatically had the extra advantage of generating extensive free publicity (Hounshell, 1984). More conventionally, Ford subscribed to the ideal of the male breadwinner since he did not employ married women if their husbands had a job; in other words, he operated a marriage bar.

These changes evolved following experimentation over a number of years. For example, the moving assembly line was the culmination of many mechanical
conveyor and transfer devices introduced between 1910 and 1914 (Williams et al., 1992a). The first moving assembly line was introduced in the sub-assembly section concerned with the production of flywheel magneto in 1913 and extended to other areas of production until an endless and highly synchronized chain conveyor for final assembly was achieved in 1914 (Hounshell, 1984). The flow production principle was basically an organizational innovation which necessitated changes to the layout of work processes and saved time by restricting workers to their position on the line. In the unending search for the most efficient production method, a stop-watch was often used to calculate how much time a worker spent walking to collect materials and tools, and how much working. For example, in the case of piston-rod assembly it was found that four hours out of nine were spent walking not working! Ford also automated processes such as riveting the crank-case arms to a crank-case, which once automated was operated by one worker instead of twelve (Ford, 2008 [1922]). These innovations increased production, productivity, and profits dramatically (Meyer, 1981).

The three main elements of the production system implemented by Ford after years of continuous refinement and which inspired the term ‘Fordism’ are:

- the fragmentation and simplification of work via Taylorized tasks;
- managerial control over the pace of work via the moving assembly line; and
- the standardization of parts and products via single-purpose machines.

Finally, the consent of workers was achieved via higher wages for those who complied with Ford’s model of good behaviour, and in due course this was underpinned by state welfare policies which sought to provide an economic safety net for unemployed workers. This created a virtuous circle in which the gains in productivity meant that there were only winners. The employer achieved larger profits, the employee received higher wages, and the consumer was able to purchase cheaper products. The Fordist system of mass production democratized consumption by making what were previously luxury goods for the few, available in a standardized form to potentially everyone. The key features of Fordism and pre-Fordism are summarized in Table 5.1.

<table>
<thead>
<tr>
<th>Table 5.1 Key features of industrial pre-Fordism and Fordism</th>
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<tbody>
<tr>
<td><strong>Pre-Fordism: type of production system characterized by:</strong></td>
</tr>
<tr>
<td>1 Craft skills</td>
</tr>
<tr>
<td>2 Non-linear and stationary assembly</td>
</tr>
<tr>
<td>3 Non-standardized parts and a low volume of high-quality products</td>
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<tr>
<td><strong>Fordism: type of production system characterized by:</strong></td>
</tr>
<tr>
<td>1 Fragmented and simplified (Taylorized) work tasks</td>
</tr>
<tr>
<td>2 Linear production and moving assembly line</td>
</tr>
<tr>
<td>3 Standardized parts and a high volume of low-quality products</td>
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The unparalleled success of Ford's new system of mass production was therefore based on changes to the division of labour and to the type of machines workers operated, plus the switch from non-linear and stationary production to progressive production and a moving assembly line. Ford had transferred craft workers' skill to machines, removed control from workers to managers, and transformed productivity at the cost of heightening the monotony of repeating endlessly one simple task. The scale of Ford's achievement can be gauged by the impressive increase in production and profits in a few years noted above, and also by Ford's share of the total car market which increased from less than 10 per cent in 1908 to nearly 50 per cent in 1914, and an amazing 96 per cent of all American cars sold at under $600 (Meyer, 1981; Williams et al., 1992a). Ford had set out to produce a car for the 95 per cent who were excluded previously from a market that catered for the rich and he certainly accomplished his objective. Ford's success is also apparent from the extent to which the new methods of mass production were adopted not only by other car manufacturers in America and eventually Europe, but also by makers of other products, notably household appliances such as vacuum sweepers, consumer goods (e.g., radios), furniture, and even houses (Hounshell, 1984). The steep decline in the price of Ford cars led to a major growth in car consumption that was stimulated by advertising and financed increasingly by instalment buying, with 75 per cent of cars purchased via loans in 1924 (Rhode, 2002/03). Such was Ford's success that a prominent Boston businessman of that time, Edward Filene, declared that competition 'will compel us to Fordize American business and industry' (quoted in Hounshell, 1984: 305).

This straightforward account of the rise of Fordism is not without its complexities. First, Ford had accomplished his mission to provide a car for the masses by 1923 when 74 per cent of American families owned a car compared to less than half a per cent in 1910 (Gartman, 1987). However, market saturation required a new strategy, one that involved selling cars to those who already owned one. Ford persisted with his limited range (i.e., different body styles) of one low-priced, though not unchanging car, the Model T, whereas General Motors (GM) introduced a far wider choice consisting of 'five basic price classes by car makes and several subclasses of models' that covered the whole price range, and evolved the idea of annual models, which showed that the 'mass production of automobiles could be reconciled with product variation'; in short, 'a car for every purse and purpose' (Sloan, 1986 [1963]: 158, 438). In order to achieve this degree of model diversification GM devised a more flexible mass production system that facilitated frequent model changes with minimal delays in production. This involved the development of a 'new middle-range machine that used the unskilled labour of the Ford single-purpose machine and contained some of the flexibility of the general purpose ones' (Meyer, 2004: 6). Importantly, semi-special machines did not alter the subordinate relationship of the worker to machinery and the moving assembly line since the skill was still built into the technology and the work still involved limited tasks and monotonous routines (Gartman, 1987). In other words, it was still based on the rules of
mass production founded by Ford. However, this technical development extended the advantages of Fordism from the lowest to the highest priced cars and by 1931 GM had overtaken Ford as the leading car maker in terms of sales, and had become the exemplar of corporate success (Williams et al., 1992a). Ford’s achievement was to open up the car market to the masses, but it was GM who expanded the range of standardized cars and the frequency of new models.

Second, there is some debate about the exact relationship between Taylorism and Fordism. Hounshell (1984) has questioned the nature and extent of Taylorism in the early Ford factories on the grounds that Taylor was concerned primarily to improve efficiency using the existing technology whereas Ford tended to focus more on replacing labour by machinery and recruiting unskilled workers to attend to the machines. Yet Hounshell has also confirmed that Ford had a time study department by 1913 to establish work task standards and instituted a clear division of labour between management and workers in line with the Taylorist principle of separating conception from execution. More generally, Hounshell concurs with Meyer (1981) by arguing that: ‘If by Taylorism we mean rationalization through the analysis of work (time and motion studies to eliminate wasteful motions) and the “scientific selection” of workmen for prescribed tasks, then … Ford engineers “Taylorized” the Highland Park factory’ (1984: 249). Dassbach’s more recent research supports this view by noting that studies were undertaken in the early Ford factories to calculate ‘the total number of man-hours required to assemble various components, the number and type of operations performed, and the amount of time expended for each operation’ (1991: 84). Dassbach concluded, like others before him, that Fordism was similar to Taylorism in that it was founded on the systematic study of work processes. This conclusion is in accord with Ford’s claim that, ‘by the aid of scientific study one man is now able to do somewhat more than four did a comparatively few years ago’, and that a worker ‘must have every second necessary but not a single unnecessary second’ (2008 [1922]: 59). Thus there may be some differences between Taylorism and early Fordism, but Taylor and Ford were certainly ‘reading from the same page’, as can be gauged from their respective discussions of the limited abilities and ambitions of most workers, the imperative to eliminate wasted movements, the advantages of simplifying tasks by subdividing them, the marked division of responsibility between managers and workers, the ceaseless development of new and more efficient tools, and the cost-cutting benefits of paying higher wages for increased output. Moreover, the use of ‘speed bosses’ by Taylor (1947 [1903]: 100) and ‘pace setters’ by Ford (Gartman, 1987: 58), led them to be known by those who experienced the intensification of work as ‘Frederick “Speedy” Taylor’ (Beynon, 1975: 135) and the ‘Speed-Up King’ (Dassbach, 1991: 89) respectively.

Third, the extent of the diffusion of Fordism has been questioned, most notably by Williams et al. who have argued that ‘even in America there was only limited imitation’ of Ford’s production methods (1992a: 537). In Europe, the introduction of Fordism was constrained by weaker markets and stronger trade
unions, especially craft workers who resisted the deskilling aspect of Fordism (Beynon, 1975). Conversely, it has been argued that Ford’s pride in his achievements and his openness about his production methods encouraged technical journalists to write about them, and foreign car makers, such as William Morris from England and Kiichiro Toyado (Toyota) from Japan, to tour his factories. As a result of this positive publicity, Ford’s methods of production spread to car makers world-wide. American engineers also travelled abroad, disseminating their knowledge of the new production techniques, including the Soviet Union where factory walls were adorned with pictures of ‘the two men who had “revolutionized” the twentieth century’, namely Lenin and Ford (Sussman, 1974: 450).

Fordism was exported more directly to Europe when Ford purchased a derelict factory in Manchester in 1911 and installed the first assembly-line method of production in Britain in 1914 (Lewchuk, 1989). Ford also exported Taylorism, anti-unionism, and an ultra strict approach to discipline, prompting one former employee to describe working for Ford in Manchester as ‘worse than Alcatraz’, but tolerated due to the relatively high wages and lack of alternative job options (McIntosh, 1995: 75). Later Ford established foreign subsidiary companies elsewhere (e.g., Japan) and GM followed suit when it took over the British car maker Vauxhall in 1925 (Littler and Salaman, 1984). Fordism became a global production system when mass production was established in developing countries to take advantage of lower wages and weaker trade unions. The term ‘national Fordisms’ and reference to different types such as ‘state’ (France) and ‘peripheral’ (Brazil) Fordism, indicate the global reach of Fordism and the context-specific nature of variations outside its ‘classic’ form in the USA (Peck and Tickell, 1994: 285–7). The diffusion of Fordism was greater if the car companies were American, for example, Ford in Britain, but less complete among British firms, such as Morris (Lewchuk, 1989). These multiple sources of variation suggest that the globalization of Fordism was not a smooth process, but an uneven one with different conditions resulting in diverse adaptations. Yet, thanks to the dissemination of technical knowledge and organizational practices nationally and internationally, plus the rise of the multinational corporation, Fordism spread around the world. Ford’s success inspired the term ‘Fordism’, which became shorthand for standardization; a standardized product produced by standardized machinery using standardized methods and standardized human labour employed for a standard working day (Doray, 1988). Ford’s achievement in creating a new way of organizing production was acknowledged at the time and since as epoch-making.

The development of Fordism beyond the workplace

So far, the discussion of Fordism has focused mainly on the production dimension but as indicated above, from the outset, Fordism was about more than how work was organized. Henry Ford was aware that workers carry cultural baggage
into work and that some of their habits and values were not conducive to efficiency, hence he was concerned about the behaviour of his workers outside and inside the factory. To administer the momentous $5-a-day pay deal, Ford created a Sociological Department in 1914 (Beynon, 1975). Thirty investigators were recruited to ensure that Ford employees were not only punctual and performed their work well, but as noted above, also conformed to the non-work behaviour deemed appropriate by the company. In return for satisfying these work and non-work prescriptions, Ford offered the prospect of regular work for higher pay, initially only to men but extended to women who were heads of households in 1916 during the wartime shortage of male labour (Meyer, 1981; Gartman, 1987). In these and other ways, such as by encouraging adult male workers to buy houses, cars and life insurance, Ford promoted the idea of full-time male workers as ‘responsible heads of households’ (Lewchuk, 1995: 228). For the many immigrant workers among the Ford workforce, English language tuition was provided, but if an employee refused to learn English in the Ford school, they were sacked. Social provision also included a Ford hospital, trade school, band, athletic park, newspaper and shops (Meyer, 1981). The effect of the five dollar day and related welfare programmes introduced by Ford, and other car companies, was to reduce labour turnover and absenteeism, and increase output and the economic dependence and normative ties between the employee and the employer (Gartman, 1987). Thus higher pay was not the only inducement to change work and non-work attitudes and behaviour, the provision of welfare programmes also had a cultural as well as economic purpose, namely to encourage certain values and forms of behaviour, such as self-discipline and reliability that were considered vital to commercial success.

This kind of self-interested paternalism was typical of nineteenth-century capitalism, especially family-owned businesses, before the advent of state welfare (McIvor, 2001). For example, the Ford shops were an echo of the truck system discussed in Chapter 1, although unlike their nineteenth-century predecessors, the Ford shops were organized in the same way as Ford car production, namely a flow-system providing a limited range of standardized goods at low prices (Freathy and Sparks, 1992). However, Ford’s paternalism developed in a less than benign direction. The Sociological Department was renamed the Service Department and expanded for an enhanced disciplinary role. Some 3,500 private policemen were employed to discourage union activity, spy on employees at work and at home, and punish and reward them accordingly. Ford was vehemently anti-union as well as anti-drinking and gambling, and his zeal for control over his workers inside and outside work led to him being referred to as an ‘industrial fascist’ (Beynon, 1975: 28). A more subtle version of his paternalist tradition was still in evidence at the beginning of the twenty-first century when Ford offered every employee a personal computer with internet access for $5 a month (Hammersley, 2000). This act of apparent generosity by Ford has several potential benefits for the employer: it opens up a new form of direct communication with employees when they are at home; it may increase
loyalty to the company; and it could increase the computer skills of the workforce which in turn may enhance both production and sales (Coops, 2000).

Ford regarded an employee as a ‘partner’ and considered it ‘utterly foolish for Capital and Labour to think of themselves as groups’ (2008 [1922]: 81). This view of a capitalist work organization corresponds to a ‘unitary’ managerial ideology in that it admits to only one source of authority and loyalty, the company, and considers unions to be unnecessary (Fox, 1966: 3). However, Henry Ford eventually altered his view to a ‘pluralistic’ managerial ideology when he conceded the right of workers to join a union in the USA in 1941 and in the UK in 1944, thereby accepting that work organizations are made up of divergent as well as common interests (ibid.: 4). This was after many years of often bitter struggle and the backing of a ‘reformist State apparatus’ (Beynon, 1975: 45). It is significant that union recognition was achieved at Ford in the USA and the UK during the Second World War when their production facilities were redirected towards the war effort and the central state in both countries was concerned to ensure uninterrupted military production (Beynon, 1975; Gartman, 1987). The acceptance by unions and employers of the legitimacy of each other, including the understanding that productivity gains that accrue from the extreme rationalization of work will be shared, has been called the ‘Fordist compromise’ (Lipietz, 1992: 6). Mutual recognition, however, did not mean conflict-free factories. Two of the more famous instances of industrial conflict during the mature phase of Fordism were the equal pay strikes by women workers at Ford’s UK Dagenham plant in 1968 – portrayed in the film Made in Dagenham, released in 2010 (Crocker, 2008) and the dispute at GM’s Lordstown plant in the USA over work intensification in 1972 (Sallaz, 2004).

As noted above, the other main party to the Fordist compromise was the state, which provided a legal framework within which employers and employees negotiated, notably the right to join a union and therefore enjoy representation, and the provision of minimal income and welfare services. The term ‘Fordist welfare state’ has been used to describe the development of sociopolitical institutions and policies that are compatible with mass production and mass consumption (Lipietz, 1994: 351). For example, in addition to ensuring the supply of healthy workers, the state adopted interventionist Keynesian monetary policies in an attempt to smooth out the booms and slumps of the business cycle, and introduced welfare benefits to enable those who are not in full-time employment to avail themselves, albeit at a reduced level, of the products of mass production (Jessop, 1994). As a result of these compromises, workers became integrated to the extent that they accepted the legitimacy of the hierarchical structures that played such a large part of their lives – the private company, the trade union, and the capitalist state. The sum total of this arrangement as it developed during the middle of the twentieth century in Western industrial capitalist societies has been well expressed by Beck in the process of contrasting the Fordist model involving the standardization of work and life with the risk model involving the individualization of work and life:
The Fordist growth regime ... did not only mean fixed times for holidays and other activities that underpinned and standardized life together in family, neighbourhood and community. It was also shaped and reinforced by a ‘mode of regulation’, which supported the growth machine culturally, politically and legally. This involved a wide range of strategies, actors and conditions which tied company management, banks, trade unions and political parties, as well as governments, to a relatively uniform philosophy of growth and a corresponding set of measures that held out a promise of success. The cultural-political targets of these measures were citizens in full-time employment, who had expectations of rising living standards and job security, while the main recipes were workforce participation, free collective bargaining, strong trade unions, government intervention and Keynesian macro-politics. ... Thus, under the conditions of Fordism ... rising consumption, public affluence and social security constituted the ‘social cement’ of the regime. (Beck, 2000: 69)

Thus, Fordism culminated not only in standardized production, work and employment, but also in standardized consumption, and standardized lifestyles, even standardized politics, often referred to as the post-war consensus. According to this view, ultimately Fordism involved much more than a new way of working. It involved a new way of life, or to be more precise, an American way of life characterized by increasing prosperity for all via mass production and mass consumption.

The development of the Fordist compromise was the culmination of work trends discussed towards the end of Chapter 1, namely the emergence of a dominant conception of work epitomized by the employment of full-time, permanent male workers. This was especially the case in the car industry which was more male-dominated during the rise of Fordism than other assembly-line industries, such as food, clothing and electrical goods, in which the predominantly female workforce was not married (Glucksmann, 1990). From the beginning, therefore, in addition to a class dimension, the Fordist compromise involved a gender dimension which favoured male workers who were excused responsibility for domestic work whereas women were correspondingly restricted in the labour market on the grounds that they were primarily responsible for domestic work (Pfau-Effinger, 1993). Although a large minority of women have worked full-time since the beginning of industrial capitalism, the rate remained relatively stable at approximately one-third between the 1950s and 1980s in Britain, suggesting that the prevailing Fordist norm was that permanent full-time work was a male prerogative (Crompton and Harris, 1998; Hakim, 1996). In the same way that there were national variations in the adoption of Fordist production methods, there were differences in the gender contracts, which varied from a strong, male breadwinner and female carer pattern in Japan and Germany, to a weaker version in Sweden and the USA (Gottfried, 2000). The Fordist model of standardized mass production and the standardized male factory worker and female homemaker reached its peak in the West in the 1950s, since when it has declined and by
the mid-1970s, the post-1945 era of prosperity and stability that was Fordism was in crisis.

**The decline of Fordism**

There are a number of theories about what happened to Fordism (Amin, 1994b). The two discussed here, the regulation approach and the flexible specialization approach, have been selected because they are among the most influential and connect to the topics discussed in the previous chapters, namely the historical development of industrial capitalism (Chapter 1), alienation (Chapter 2), and skill (Chapters 3 and 4). Both theories have been advanced in the context of increases in the cost of production during the 1970s, especially oil, plus growing competition from Japan and from lower wage production in industrializing countries.

Regulation theory was developed in France and argued that, as a capitalist production system, Fordism is inherently alienating and inevitably involves deskilling, which is likely to provoke a negative response from workers, no matter how well paid they are, and that discontented workers are not good news for productivity and hence profits. Regulationists claim that the negative features of work ‘multiplied during the 1960s’ and that this was reflected in an increase in accidents, absenteeism, defective products, and conflict at work (Aglietta, 1987 [1976]: 120). The increased scale of labour dissatisfaction contributed to declining productivity and higher costs of production, and therefore reduced profits, for example, by constraining employers to devote extra time and resources to quality control. Thus, according to this view, the demise of Fordism was due primarily to ‘a crisis of the labour process, which, because it dehumanizes the worker, ends up by not being efficient, even from the employer’s point of view’ (Lipietz, 1992: 17). This crisis for labour and capital impacted on the ability of the state to fund the ensuing recession out of declining taxable income, thereby prompting cuts in welfare benefits, which compounded the problem as well as threatening the political dimension of the Fordist compromise.

The theory of flexible specialization originated in America and argued that as a production system, Fordism is intrinsically inflexible in that it is unable to respond to variable demand, especially once mass markets have been saturated and consumers’ tastes have changed in the direction of more individualized and higher-quality products, as happened in the 1960s (Piore and Sabel, 1984). It is claimed that the success of Fordism created the demand for greater variety and the ability to pay for premium products which provoked manufacturers to ‘radically modify, if not completely abandon’ their Fordist principles and introduce more flexible technologies and workers (Sabel, 1984: 201). New computer technologies allowed companies, even small ones, to respond quickly to changes in fashion, thereby overcoming the crisis of declining consumer interest in standardized products.
Although these arguments have different points of departure, they end up in the same place, namely that Fordism had reached the limits of its shelf life as a profitable system of mass production and consumption. The first approach starts from the supply side and argues that Fordism is incapable of overcoming workers’ dissatisfaction, whereas the second starts from the demand side and argues that Fordism is incapable of overcoming consumer dissatisfaction. Both approaches conclude that, by the 1970s, Fordism was in a profitability ‘crisis’ and that in this more competitive environment the search was on for new production methods that would increase productivity and therefore profits.

These complementary analyses of the decline of Fordism have been criticized extensively. As far as regulation theory is concerned, it has been pointed out that the rise in labour disputes in the 1960s may not have been due simply to the nature of the Fordist labour process, but to other factors, such as the wider political and economic conditions prevailing at that time, and that the alleged progressive degradation of labour may be overcome, partially at least, ‘by further automation and labour displacement’ (Sayer, 1989: 669). The theory of flexible specialization has been criticized on the grounds that replacement demand and new products compensate for market saturation, and that the argument about the break-up of mass markets ‘does not rest on any sound empirical basis’ (Williams et al., 1987: 427; see also Williams et al., 1992a). This suggests that neither theory provides an adequate explanation of the decline of Fordism and that it was probably a combination of worker militancy, consumer discontent, increased costs of production, and growing competition that turned a virtuous circle into a virtueless one of declining worker satisfaction, declining consumer satisfaction, and declining profits.

Notwithstanding these critical comments on the reasons for the decline of Fordism, there is broad agreement that in the main industrial capitalist societies there was an emerging crisis in the Fordist way of organizing production by the 1970s. By way of a summary of the rise and decline of Fordism as an industrial production system, Table 5.2 notes its main advantages and disadvantages from the standpoint of society as a whole, workers, employers, and consumers. The eventual decline of Fordism implies that over time and in the context of increased international competition, the disadvantages of Fordism as a production system outweighed its advantages.

**Table 5.2** Advantages and disadvantages of industrial Fordism

<table>
<thead>
<tr>
<th></th>
<th>Society</th>
<th>Workers</th>
<th>Employers</th>
<th>Consumers</th>
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</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Mass production &gt; economies of scale</td>
<td>Higher pay</td>
<td>Increased productivity and profits</td>
<td>Cheaper goods</td>
</tr>
<tr>
<td></td>
<td>&gt; improved standard of living</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Standardization of work and life</td>
<td>Alienating low skilled work</td>
<td>Absenteeism, higher labour turnover and conflict</td>
<td>Low quality standard products and limited choice</td>
</tr>
</tbody>
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101
Solutions to the crisis of Fordism: neo-Fordism and post-Fordism

Fordism and variants of it predominated for most of the twentieth century in industrial and industrializing capitalist societies. Since this system of organizing production entered a crisis of productivity and profitability in the 1970s, there have been various attempts to transcend the difficulties associated with it, including automating production, internationalizing production, and re-organizing production (Wood, 1992). The first typically involves the use of industrial robots, 50 per cent of which are in car factories (Williams et al., 1987). This solution tends to displace labour as living labour is replaced by dead labour, such as machinery which often reduces the amount of heavy and repetitive work for those retained. A second option is to relocate Fordist production to less developed countries where non-unionized, low-skilled, and cheaper labour is available. The third is the partial (i.e., neo-Fordist) or total (i.e., post-Fordist) re-organization of production. These strategies are not mutually exclusive as the unevenness of the growth of Fordism as a global production system testifies. The focus here will be on the third strategy with reference to the previous discussion of Fordism as a type of production system. More specifically, a neo-Fordist solution to the crisis of Fordism involves modifications to one or more of the key elements of Fordism, whereas a post-Fordist solution involves their transformation. It will be recalled that in Table 5.1 the key elements of a Fordist production system included: (a) the fragmentation and simplification of work via Taylorized tasks; (b) managerial control over the pace of work via the linear sequencing of production and the moving assembly line; and (c) the standardization of parts and low quality goods.

Four alternative production systems to Fordism emerged during the last quarter of the twentieth century: (1) Swedish socio-technical systems; (2) Italian flexible specialization; (3) German diversified quality production; and (4) Japanese lean production (Appelbaum and Batt, 1994). The Swedish and German production models both operate at the higher end of the car market and are dependent upon supporting social institutions such as government training policies, whereas Italian flexible specialization is best suited to small-scale production. These features inhibit their transferability and applicability to all segments of the global car market, consequently only Japanese lean production will be considered here.

Japanese lean production: a post-Fordist interpretation

Japanese car makers developed the most famous and widely emulated alternative solution to the Fordist production system and overtook American car companies as world leaders in terms of output, productivity, and profitability by the 1980s (Cusumano, 1985). Whereas Ford had pioneered mass production,
hence the term Fordism, Toyota invented lean production which superseded Fordism as the exemplar of successful production methods (Babson, 1995), hence it is sometimes referred to as ‘Toyotism’ (Elger and Smith, 1994), but more usually simply as Japanese lean production (JLP) due to the extensive adoption of the Toyota production system by other Japanese car companies (Womack et al., 1990).

The success of the Japanese car companies prior to the 1980s was attributed to lower wages, government support, and/or automation, but continued success into the 1980s provoked international interest in their production methods and a reverse of the pattern earlier in the century when foreign car makers visited American car plants. Ford and GM executives went on fact-finding missions to Japan in 1981 and 1983 respectively and ‘discovered the answer to Japanese success: lean production’ (ibid.: 237). The same study noted that the diffusion of JLP was furthered during the 1980s by the establishment of Japanese transplant production facilities and joint ventures in the West. By the end of the 1980s, there were 14 transplants (typically non-unionized) and seven joint ventures (typically unionized) in North America and Europe. Books by US and UK management experts extolling the superiority and transferability of Japanese lean production (e.g., Schonberger, 1982; Wickens, 1987), academic studies of the development of Japanese car production (e.g., Cusumano, 1985), and an account of the historical evolution of the (lean) Toyota production system by its creator (Ohno, 1988), also played a part in disseminating detailed information about what lean production involves and how to implement it.

One book in particular, The Machine that Changed the World (Womack et al., 1990) which was a mixture of academic research and management style prescriptions was a hugely influential advocate of JLP and the source of the term ‘lean production’. It claimed that the way Japanese companies organized production combined ‘the advantages of craft and mass production, while avoiding the high cost of the former and the rigidity of the latter’, and was born out of the necessity of a small market for a great variety of cars (ibid.: 13). In short, high quality, greater variety, plus low cost and flexible volume production. This system of production is called lean

because it uses less of everything compared to mass production – half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time …requires keeping far less than half the needed inventory on site, [and] results in many fewer defects. (ibid.: 13)

It also claimed that JLP involves upskilling rather than deskilling, and is fulfilling rather than alienating. The key questions are: how does JLP manage to accomplish all this? And does it represent a new, post-Fordist way of organizing production or is it a modified version of Fordism (i.e., neo-Fordist)?
The essence of JLP is captured by the concept *kaizen*, which means the continuous improvement (CI) of every phase of production in order to ‘increase production efficiency by consistently and thoroughly eliminating waste’ — the uneconomic use of labour, machinery, parts, raw materials, space, and so on (Ohno, 1988: xiii). Waste equals unnecessary expense hence the unending search to identify and abolish it is vital if costs are to be reduced progressively while the quantity and quality of the products are increased. To motivate workers to embrace CI, Japanese companies promised job security in the form of lifetime employment (Womack et al., 1990). Several interdependent practices were introduced to achieve the reductions in waste and improvements in the volume and quality of the output, the three most important were just-in-time production (JIT), total quality control (TQC), and teamwork (TW).

JIT refers to the supply of materials, parts and sub-assemblies for the final assembly exactly when they are needed, ‘just-in-time’, rather than in advance, ‘just-in-case’ they were needed as was the production method under Fordism (Cusumano, 1985: 264–5). Ohno recalled that the inspiration for JIT was the American supermarket in the 1950s which was organized so that ‘a customer can get (1) what is needed, (2) at the time needed, (3) in the amount needed’ (1988: 26). This way of organizing production reduces the size of buffer stocks to a bare minimum and requires the use of a *kaban* (or tag) to ensure that each part is available when and where it is needed, thereby facilitating the continuous flow of production. This approach epitomizes leanness since it saves on materials, space, labour, and stock inventories. For example, by predicating JIT on minimal buffer stocks, less space and fewer workers are needed to store and move parts. However, for JIT production to be effective, it is essential that components are produced and delivered defect-free ‘in lots as small as possible’ and that workers are trained to check that this is so and have the authority to stop the production line (Cusumano, 1985: 265). Thus the smooth operation of JIT necessitates the empowerment of workers in the process of quality control, which in turn cuts down the number of inspectors and the accumulation of defective parts. Moreover, to produce a variety of models economically meant that set-up times had to be reduced and workers had to change the machines, otherwise the assembly line and those who work on it would be idle during the changeover of models. Cusumano provides details of how parts were standardized, special-purpose machines were modified, and the tasks assigned to workers were increased, and, as a result, changeover times were reduced by Toyota from three hours to three minutes between the early 1950s and the early 1970s, whereas US and European car manufacturers were still taking between 4 to 6 hours to accomplish a changeover in 1977. In addition to checking, maintaining, and correcting machinery, plus taking responsibility for die changes when production was switched to a different model, multi-skilling was extended to the assembly line itself by the development of ‘U-shaped’ or ‘parallel-configured lines’ which enabled a worker to perform tasks on both sides of the line (Schonberger, 1982: 141). Ohno (1988) noted
that the reconfiguration of the assembly line made it possible for workers to operate as many as three or four machines if necessary. JIT was not limited to the production process but applied backwards to the suppliers of parts and forward to the distributors of cars; parts are supplied when needed on a daily basis directly to the factory and production was geared to demand, both of which minimized stockpiling and saved on storage space. The JIT system took many years to perfect since it required the co-operation of suppliers, managers and workers, and resulted in significant cost reductions and improvements in quality while increasing the variety of models produced (product flexibility), the range of tasks workers performed (functional flexibility) and variations in the supply of workers to particular tasks (numerical flexibility).

It is clear from the above that a successful JIT system places a premium on total quality control (TQC). In fact, such is the symbiotic relationship between these two features of JLP that they are sometimes referred to as one, namely JIT/TQC (e.g., Schonberger, 1982). As with JIT, Ohno (1988) noted that TQC was imported from America. It was applied to all aspects of car production, from pre-production testing to eliminate design faults, to ‘a given level of quality determined by what consumers desire and are willing to pay for’ (Cusumano, 1985: 320). For example, keeping the factory clean and tidy, known as good housekeeping, is a TQC priority and the responsibility of every employee since it is conducive to the safety of labour and machinery – injury to either would disrupt production. Moreover, in addition to error-proof machines, workers check their machines before they start to operate them and undertake preventive maintenance. Thus, TQC is a company-wide exercise to improve quality at every stage of production; if a defect is detected, it is dealt with at source rather than at the end of the process by randomly selected inspections. This broad approach to quality is not only crucial for the successful operation of JIT, it also ensures ‘higher quality finished goods’ (Schonberger, 1982: 37). Like JIT, TQC saves on time (e.g., fewer rework hours), saves on labour (e.g., fewer inspectors), and saves on materials (e.g., fewer defective parts). The emphasis on quality and the transfer of responsibility for it from management to the shop-floor alters the role and therefore the training of production workers. JLP training programmes in Japanese companies are more comprehensive (Cusumano, 1985) and last much longer than those in US and European companies (Womack et al., 1990).

In order to achieve CI, training in quality issues does not stop at the recruitment stage, it is followed up with time set aside for workers to study production methods and make suggestions about how to enhance the production process as members of quality control circles (QCC). According to Cusumano (1985), formally structured QCC were developed as work groups because it was thought that workers would feel more comfortable studying in this structure than individually since working in groups was common in Japanese schools. He also noted that QCC are regarded by Toyota and Nissan executives as primarily concerned with increasing worker participation and morale.
The main purpose of QCC may be their human relations function, but they can also save money; for example, it has been claimed that between 1974 and 1984 quality circles saved Nissan ‘40 billion yen ($160,000,000)’ which ‘worked out to about $5,000 per circle, an amount typical of other firms in Japan’ (Cusumano, 1985: 334). As a result of this holistic approach to quality, Cusumano noted that in the late 1970s the recall rate of Japanese cars sold in the USA was one-third that of American companies.

The third and final element in the triumvirate that constitutes the JLP system is teamwork (TW), yet another idea that Ohno imported from America. In the above discussion of JIT and TQC it was apparent that production TW was vital to the efficacy of both and hence integral to JLP. The team concept is also used as a metaphor for cordial co-operation as in a sports team, a perspective which favours the propagation of a unitary company culture, manifestations of which include single status uniforms and dining rooms. Both meanings of TW evoke egalitarianism and feature prominently in the rhetoric of managerial discourses that encourage all employees to identify with the company, thereby blurring divisions within the workforce. While both forms of TW will be discussed, the main focus will be on TW production since it is considered central to the success of JLP; ‘it is the dynamic work team that emerges as the heart of the lean factory’ (Womack et al., 1990: 99; see also Kenney and Florida, 1993: 102). Womack et al. note that there are three stages to the process developing efficient TW. Workers are trained in a variety of skills to facilitate job rotation; they are taught additional skills, such as simple machine repairs to ensure continuous production; and they are encouraged to think creatively to resolve problems before they become major ones. Team leaders coordinate the work of teams as well as undertake assembly tasks and responsibility is effectively transferred from management to work teams, not individual workers. As a result of TW, it is claimed that JLP increases productivity, work satisfaction, and that, like JIT and TQC, TW can be transplanted successfully.

For Womack et al. (1990), the contrast between Fordism and JLP is stark. Instead of the monotony of task fragmentation and extreme alienation, there is rotation of multi-skilled tasks and empowerment as part of creative work teams that produce a great variety of high quality products at lower costs. JLP is therefore the ‘new best way’ and such is their confidence in JLP, they assert that once implemented fully, companies will be able ‘to automate most of the remaining repetitive tasks …[and] by the end of the century we expect that lean-assembly plants will be populated almost entirely by highly skilled problem solvers’ (ibid.: 84, 102). Hence, they recommend that ‘the whole world should adopt lean production and as quickly as possible’, and expect JLP to replace mass production ‘to become the standard global production system of the twenty-first century’, by which time the ‘world will be a very different, and much better place’ (ibid.: 225, 278).

The Womack et al. study does not use the Fordism paradigm, though it is abundantly clear from their analysis and conclusions that they consider mass
production to be Fordist and JLP to be post-Fordist. For example, they characterize mass production as unskilled workers tending single-purpose machines to produce large volumes of standardized parts and low quality products, and lean production as multi-skilled workers operating flexible machines to produce small quantities of a great variety of high quality parts and products.

Other advocates of JLP, notably Kenney and Florida, draw upon the concept Fordism and claim that ‘the social organization of production in Japan ‘is postfordist’ since ‘Self-managing teams, just-in-time production complexes, and learning by doing have replaced the functional specialization, deskilling, and linear production lines of fordist mass manufacturing’ (1988: 122, 145). Thus they too consider that JLP is a new and superior production system to Fordism. Table 5.3 summarizes the key features of a post-Fordist interpretation of JLP in terms of the three main characteristics of Fordism outlined in Table 5.1 earlier in the chapter.

### A neo-Fordist critique and interpretation of JLP

Among those who extol the virtues of JLP there is a tendency to do less than justice to its negative features (Babson, 1995), and to exaggerate its discontinuities with Fordism (Williams et al., 1992b), the combination of which enables them to argue that it represents something different and better than Fordism, namely post-Fordism. Womack et al. admit that JLP workers ‘may find their work more stressful’ and that the ‘pace of work was clearly harder’, but claim that ‘it also provides workers with the skills they need to control their work environment and the continuing challenge of making their work go more smoothly’ (1990: 14, 80, 101). Furthermore, they speculate that ‘lean production is unlikely to prove more oppressive than mass production’, though they also note that ‘it is vital to remove unneeded workers from the system so that the same intensity of work is maintained. Otherwise the challenge of continual improvement will be lost’ (ibid.: 102–3, 259). Kenney and Florida (1993) are more critical of JLP in that they show that JLP has been transferred less successfully to consumer electronics transplants due to local opposition and traditions. Second, in addition to the lean deal of lifetime employment in exchange for total commitment to the company emphasized by Womack et al., they confirmed the point made by Cusumano (1985) and others (e.g., Wickens, 1987), that the recruitment of temporary workers, who are more easily hired and fired, is a feature of JLP. Third, they concede that
JLP involves ‘long hours and high stress’, and a higher incidence of injuries as a result of the ‘fast work pace’, consequently it is ‘not a workers’ paradise’ (1993: 10, 25, 266). They surmise that these negative features arise from the incomplete implementation of JLP and will therefore disappear over time. In the meantime, they suggest that such problems are outweighed by the positive features of the JLP system, notably the creative potential unleashed by multi-skilled TW. In contrast to these celebratory accounts of JLP from a management perspective, data from those who work in JLP plants will be afforded greater consideration with reference to the three key features of Fordism outlined previously.

First, although the Taylorized fragmentation of tasks has been altered in JLP to the extent that workers are trained to perform a variety of direct (e.g., assembly line work) and indirect (e.g., preventive maintenance) functions, the essence of Taylorism is not only retained but applied more thoroughly. Cusumano noted that at Toyota, Ohno introduced time and motion studies to revise ‘standard operation sheets to make it easier for unskilled workers to perform more efficiently’ and sought ‘to redistribute worker motions and cycle times to eliminate idle time for a series of workers, and then remove one or more of them or have the last person on the line take over the tasks of his neighbour, and so on down the line’ (1985: 272). He also commented that while both these techniques for improving productivity had originated in America, Ohno ‘applied them with much more rigour’ in his determination ‘to eliminate all unnecessary movements and allow no idle time for machines or workers’ (ibid.: 272). Even advocates of JLP confess that, ‘the Japanese out-Taylor us all’ (Schonberger, 1982: 193). This is because JIT production requires workers to perform their tasks in a standard way/time, otherwise it will not work (Rinehart et al., 1997). Thus JIT is based on the same Taylorist principles as Fordism (Wood, 1992).

A survey of workers, team leaders, union representatives, and managers in a GM-Suzuki joint venture in Canada has shown that the rhetoric of CI, job enrichment, and job rotation, obscures the degree to which CI is operationalized narrowly in terms of cost reduction not safety or skills, and the rotated jobs are learned easily and quickly, highly standardized, repetitive, and involve very little discretion, hence the term ‘multi-tasking’ is considered as a more accurate description of work under JLP than ‘multi-skilling’ (Rinehart et al., 1994; Rinehart et al., 1997). Taylorism was also prominent in Nissan’s UK factory where the standardization of work was company policy, rotation was rare except to cover for absentees, and job enlargement tended to be down rather than up, such as cleaning up the work space (Garrahan and Stewart, 1992). In a US transplant study based mainly on interviews with workers, Besser noted that: ‘Toyota prides itself on standardized work’, hence workers are not allowed to deviate from the detailed specifications of how to perform a particular job (1996: 63). In some Japanese transplants, management either discourages extensive job rotation or seeks to abolish it altogether since it can
make it more difficult to locate the source of quality problems (Parker and Slaughter, 1990; 1995) and compromise efficiency (Elger and Smith, 2005). The claim that JLP plants place greater emphasis on training is undermined by research which found that although the total instructional time in one Japanese transplant was high (127.5 hours), less than half (56) were devoted to technical training while the majority (71.5) were concerned with socializing new recruits into the ‘we’ company culture (Graham, 1995). Absorbing a pro-company culture is clearly given a higher priority than acquiring multiple technical ‘skills’, which further reveals the vacuity of the designation ‘multi-skilling’.

Reservations have also been expressed about the reunification of mental and manual labour, which, according to one of the Womack et al. study researchers, JLP ‘stands Taylorism on its head’ (MacDuffie, 1995: 56). Workers have always used their brains as well as their brawn, typically to make their work easier, much to the chagrin of Taylor who advised that managers gather their knowledge and use it to increase efficiency. What is different about JLP is the method used to collect workers’ knowledge; in addition to employing specialists, workers share their knowledge with team members and in quality circles (Parker and Slaughter, 1995). JLP therefore involves a refinement of Taylorism not a rejection of it (Dohse et al., 1985). The prevalence of Taylorism in JLP is indicated by the use of the terms ‘despotic Taylorism’ and ‘democratic Taylorism’ by Adler (1995) to describe the different ways of harnessing workers’ knowledge under Fordism and JLP respectively. The introduction of a participative form of Taylorism is more effective since it reduces costs by cutting down on specialists and lessens antagonism by encouraging workers to be actively complicit in their subordination to the JLP goal of CI (Rinehart et al., 1997). In this regard, JLP is just a ‘more efficient form of Fordism’ (Price, 1995: 101); in other words, it is neo-Fordist.

The second key feature of Fordist production concerns the assembly line, which post-Fordist interpreters of JLP admit involves a tougher pace of work than in a Fordist system, but still consider it more fulfilling. The alleged benefits of JLP assembly-line work are thought to derive from workers’ ability to stop the line, the opportunity to perform multiple ‘skilled’ operations in teams, and the sense of pride in producing high quality goods. But even proponents of JLP have found that workers in US transplants are put under pressure by management not to stop the assembly line (Kenney and Florida, 1993). A study of a non-union JLP transplant by Graham reported that, contrary to what workers were told during orientation and training, ‘unless there is a safety emergency, only team leaders or higher ranking company officials have the authority to pull the red cord and stop the line’ and that when the line speed was increased, it resulted in more hand and wrist injuries to workers who were expected to continue working with splints on their wrists (1995: 79). Graham also found that a normal working day was nine hours but if production quotas were not met, overtime was compulsory and announced at short notice. Graham concurred
with other critics of a post-Fordist interpretation of JLP that assembly-line work is monotonous under both Fordism and JLP, and the main difference between them is that ‘speedup and work intensification’ are greater in JLP (ibid.: 62). The tendency for the authority to stop the line to be limited to team leaders or supervisors and the pervasiveness of mandatory overtime were confirmed in a study of Toyota transplants in Europe (Pardi, 2007).

The intensification of work on a JLP assembly line has been corroborated by many studies including that of the GM plant in California in which workers were kept busy for 45 out of 60 seconds, but when it became a Toyota-GM joint venture they worked on average 57 out of 60 seconds (Adler, 1995). Similarly, the aforementioned study by Rinehart et al. found that the practice of line speedup without adding workers created an exceptionally heavy workload and concluded that: ‘Lean production places greater demands on workers’ time and effort than does mass production’ (1997: 84). The main sources of intensification in a JLP plant, according to the Nissan UK study, were the requirement to help and/or cover for other team members and the extra responsibilities devolved to teams such as quality checks (Garrahan and Stewart, 1992; see also Stewart and Garrahan, 1995; Stewart et al., 2009). These accounts of the demanding nature of work in JLP plants are indicative of a ‘management by stress’ system (Parker and Slaughter, 1990). They also suggest that little has changed since Kamata’s diary of working on a Toyota assembly line in Japan during the 1970s revealed an obsession to eliminate all sources of waste to achieve higher output at lower costs that resulted in increased workloads, hours, and fatigue, which in turn lead to more work accidents, injuries, and fatalities, which were called ‘serious accidents’ by management (1984: 107).

Working on an assembly line in teams is portrayed as a distinctive and positive dimension of JLP by those who consider it to be post-Fordist, but research on transplants reveals that there is a dark side to TW, namely peer pressure. This is recognized by some advocates of JLP, notably MacDuffie, who noted that when a team member is absent, workloads increase and that: ‘The peer controls that emerge in such a situation can easily turn poisonous’ (1995: 57; see also Kenney and Florida, 1993: 279–80). This point acknowledges that peer pressure is integral to a JLP system in which multiple responsibilities are devolved to teams. A study of JLP plants in the USA found that: ‘When the team is made responsible for getting the assigned work done, a powerful peer pressure is set up; if one person is absent, the system forces other team members to take up the slack’ (Parker and Slaughter 1995: 48; see also Garrahan and Stewart, 1992). In addition to covering for absent, injured or slower team members, pressure to work hard can result from the internalization of corporate goals (Besser, 1996), although there is often gap between the management TW rhetoric and the reality of infrequent and poorly attended team meetings at which only the team leader speaks (Stewart et al., 2009). However, even if workers are less than convinced by the company-as-one team discourse, teams
operate as a powerful horizontal supplement to hierarchical supervision that can ‘boast attendance, job performance, and kaizen activities’ (Rinehart et al., 1995: 223). Peer pressure may be good for management, but for workers it is yet another source of social control. The requirement to meet output quotas via extra hours and extra effort by under-staffed teams means that the real buffers in a JLP system are the workers (Berggren, 1993; Rinehart et al., 1997). Thus, for workers, JLP tends to increase work intensification and is therefore clearly neo-Fordist.

The third key feature of Fordism, the standardization of parts and low quality products, was overcome in JLP by making every effort ‘to put together a specialized, yet versatile production process through the use of machines and jigs that can handle minimal quantities of materials’ to produce a variety of products without ‘undermining the benefits of mass production’ (Ohno, 1988: 40). Hence contrary to the claim that JLP is ‘beyond mass production’ (Kenney and Florida, 1988: 121), lean production is still mass production as Ohno has acknowledged, and many others have confirmed (e.g., Cusumano, 1985; Sayer and Walker, 1992). It would be more accurate therefore to describe JLP as a manufacturing system designed for a large number of small lots and Fordism as one for the production of a small number of large lots. Moreover, as noted above, product variation was developed by GM in the 1920s; it was only during the first decade of Fordism that consumer choice was limited to ‘any colour …so long as it is black’ (Ford, 2008 [1922]: 52). The continued importance of economies of large-scale production to JLP is demonstrated by the tendency of such companies to reduce model variations in order to cut costs (Berggren, 1993). This trend has been documented by Coffey (2006) who showed that, in 2003, customers were offered a choice of 54 specifications of the Toyota Corolla and 130 for the Honda Accord, whereas there were over ten million specifications for the Ford Focus and twelve million for the Vauxhall (GM) Astra. Thus product variation was not only pioneered by GM during the rise of Fordism, but Western car companies still lead the founders of JLP in terms of consumer choice. This contradicts the assertion by Womack et al. that it was only under JLP that a ‘true renaissance of consumer choice’ was achieved (1990: 126). Hence, the association of product diversification and JLP is a ‘myth’ (Coffey, 2006: 40) and in this regard JLP does not represent a post-Fordist alternative to Fordism, but a neo-Fordist modification.

Finally, for advocates of JLP, the quality dimension of this new best way of manufacturing cars is a major improvement on Fordism and recent consumer surveys have confirmed this (www.consumerreports.org). However, the JLP reputation for high quality products was dealt a severe blow in 2009–10 when Toyota had to recall over 8.5 million cars for safety checks following numerous complaints and accidents, some of which were fatal, that were linked to problems with braking, accelerator pedals, and slipping floor mats (www.guardian.co.uk/news/datablog/2010/feb/09/toyota-recalls-full-list). Sales of Toyota in the USA were down nearly 10 per cent in February 2010 compared to the
same month in 2009, whereas all the other main car makers reported increased sales, which suggests that Toyota’s reputation for quality has been affected negatively by the massive scale of their recall problem (www.msnbc.msn.com/id/35662491/). Toyota’s response was to embark upon an extensive advertising campaign to reassure current and future customers that quality is still their top priority. Until this global recall crisis, the view that JLP, pioneered by Toyota, resulted in high quality products was incontrovertible, but it is no longer so.

These criticisms of a post-Fordist interpretation of JLP suggest that it is essentially a neo-Fordist system of production. The key features of a neo-Fordist interpretation of JLP are summarized in Table 5.4, once again in terms of those outlined for Fordism in Table 5.1 earlier in the chapter.

The argument that JLP is more a development of, rather than a radical departure from, Fordism, is also discernible from evidence which shows that Henry Ford’s approach to mass production was ‘proto-Japanese’ as he too operated with low stock levels, sought CI ‘through labour intensification’, and encouraged workers to make suggestions about how to improve the production process (Williams et al., 1992a: 519, 532). This analysis is supported by other researchers, notably Levinson (2002) and Wilson (1995) who have documented the parallels between Ford’s version of Fordism and JLP, especially their mutual concern to eliminate waste, both of whom quote Ohno who when asked about the origins of his ideas about lean production, responded by saying that, ‘he learned it all from Henry Ford’s book’ (Wilson, 1995: 59). When Japanese companies were not drawing upon Henry Ford for inspiration, they were borrowing other American innovations, such as Taylorism and quality control techniques (Cusumano, 1985).

Finally, it has been argued by critics of JLP that its successful transfer to the West has been based in part on four other factors related to the production process. First, Japanese companies show a clear preference for rural, non-union areas rather than urban union environments for locating transplants because this improves the prospect of recruiting a loyal and dedicated workforce (Rinehart et al., 1997). Second, such companies tend to adopt a lengthy and highly selective recruitment process to screen out those who do not express the required attitudinal and behavioural attributes (Graham, 1995). Third, those hired are often put on temporary contracts on a trial basis with the promise of a permanent contract if they conform and perform to company expectations (Jacobs, 1995). Temporary workers are also more disposable. For

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**Table 5.4 Key features of a neo-Fordist interpretation of industrial JLP**

**JLP: neo-Fordist production system characterized by:**

1. Qualified Taylorized work tasks and limited job enlargement and rotation
2. Intensified work on a modified assembly line organized into teams with limited autonomy
3. Partial de-standardization of parts and an increasingly limited range of higher quality products
example, BMW, who won an award in 2003 for their successful implementation of a JLP system, sacked the entire weekend shift of temporary workers who did not qualify for redundancy payments at their Mini factory in Oxford when sales declined (Milner, 2009). Fourth, JLP plants favour a compliant workforce that lacks independent trade union representation and is therefore more likely to co-operate with management over a range of production rationalizations (Besser, 1996; Stewart et al., 2009). The anti-union tendency of Japanese car companies is a recurrent theme in the JLP literature in accounts of its rise in Japan (e.g., Cusumano, 1985), and even research by supporters of JLP who consider it to be post-Fordist (e.g., Kenney and Florida, 1993). In this respect, JLP is identical to the early decades of Fordism and its unitary managerial ideology and like its precursor has discovered that attempts to neutralize independent union activity does not guarantee conflict-free workplaces (Maguire, 2003; Rinehart et al., 1997) or solve the problems of labour recruitment and retention (Elger and Smith, 2005). These considerations have led some to conclude that JLP ‘is simply the practice of the organizational principles of Fordism under conditions in which management prerogatives are largely unlimited’ (Dohse et al., 1985: 141). The implementation of JLP is therefore not just a matter of an allegedly superior production system, the contribution of factors other than the production process need to be taken into account.

The continuities between JLP and Fordism are therefore extensive, particularly from the standpoint of workers who remain subjected to the imposition of Taylorized work standards with limited job rotation of multiple tasks and a fast-paced assembly line that they are discouraged from stopping, all predicated upon a divided workforce and a diminished role for independent unions. Hence, JLP tends to increase both work intensification and mandatory overtime, and is more accurately described as ‘lean and mean’ (Harrison, 1997). This suggests that JLP constitutes a neo-Fordist solution to the crisis of Fordism, notwithstanding the ‘we’ rhetoric, enhanced worker input, and higher quality products emphasized by advocates of JLP who regard it as post-Fordist.

The future of JLP seems far less assured than the confident assertions of Womack et al. (1990) since a neo-Fordist interpretation of JLP suggests that it has not solved many of the labour and consumer problems associated with Fordism. It is also apparent that there are several other limitations regarding the universality of the JLP model, notably opposition from local vested corporate interests who fear increased competition (Kenney and Florida, 1993), the perception that cost-cutting was a causal factor in the recent global safety recall crisis at Toyota, the originator and exemplar of JLP (Clark and McCurry, 2010), and the images of thousands of unsold cars parked at docks in the UK and the USA that appeared in the press during the 2009 recession (e.g., Guardian 7 April, 23 May 2009) which are indicative of Fordist just-in-case production and suggest that JIT has not been achieved fully. Finally, the JIT dimension of JLP has been criticized by unions in Japan for exacerbating road congestion and pollution (Berggren, 1993) and a US study has shown that
while JIT plants save on space, materials, and energy, the environmental impact of increased transportation in terms of toxic emissions has been transferred to suppliers and 'the general public (www.bren.ucsb.edu/academics/courses/289/Readings/Nathan-2007.pdf). It is ironic that a production system celebrated for its focus on empowering workers and eliminating waste, and hence its social and ecological soundness, is a major contributor to both the degradation of workers and the environment.

Post-Fordist interpreters of JLP have been criticized for adopting a management perspective and emphasizing its positive features, but neo-Fordist interpreters are open to the reverse charge, namely that they view JLP from below and focus on its negative impact on workers. With this in mind, Table 5.5 notes the main advantages and disadvantages of JLP from the standpoint of society as a whole, workers, employers, and consumers. It is important to recognize that, just like the global spread of Fordism, JLP has been ‘constructed and reconstructed’ differently in specific countries and companies in response to local conditions, including product and labour markets, and management–worker relations (Elger and Smith, 2005: 358).

For example, it has been argued that statist neo-Fordism prevails in Japan as a result of an interventionist state and a weak labour movement, whereas corporate neo-Fordism exists in the USA where labour is also weak but state intervention on its behalf is minimal (Gottfried, 1995). It remains to be seen whether the disadvantages of JLP lead to a reassessment of the social and economic benefits of this way of organizing production, and if so, the nature and extent to which it is modified or transformed in the future. What is certain is that JLP is not the ‘the end of history’ (Berggren, 1993: 163).

### Summary and conclusions

Fordism is primarily a type of industrial production system, typically referred to as mass production, one that was pioneered by Henry Ford during the first two decades of the twentieth century. During this period Fordism subscribed to a unitary managerial ideology which considered unions as unnecessary, but under pressure from workers and the state eventually acknowledged the legitimacy of union representation and accepted a pluralistic compromise. Fordism is also an economic system characterized by mass consumption thanks to the sharing of the benefits of the economies of large-scale production. The
third inter-related dimension of Fordism concerns its political features, notably a supportive state welfare system that, among other things, ensures a supply of physically healthy workers and economically healthy consumers. Thus, the rise and development of Fordism involved mass production, mass consumption and political stability in the West. It marked a major departure from the craft-based, non-standardized, low-volume production and consumption characteristic of pre-Fordism.

As a new type of industrial production system, it was based in large part on Taylorism, although there is some debate about the exact relationship between Taylorism and Fordism. Taylor and Henry Ford advocated remarkably similar prescriptions for minimizing waste, maximizing output, lowering costs, the social control of workers inside and outside the factory, and neutralizing conflict. Fordism, by virtue of its defining features, namely fragmented and simplified work, assembly-line production, and standardized parts and products, became inextricably associated with deskilled work, conflict between labour and capital, and the mass production of low-quality goods. GM developed industrial Fordism in the direction of annual model changes and extended the mass production market to all income groups. The increase in productivity and decrease in costs achieved by Fordism resulted in it being adopted globally during the twentieth century, albeit variably in terms of place and time. In the process of stabilizing this problematic production system, it became synonymous with the standardization of work and workers’ behaviour, cultural values that emphasized regular hard work for high pay, and contractual social benefits, underpinned initially by paternalistic company social programmes and later by state welfare systems, all of which culminated in the full-time male worker and the full-time female homemaker model. Fordism entailed economic, social, and political disadvantages, as well as the well-known advantages of mass production and consumption.

Various theories have been advanced as to why this successful yet flawed industrial production system experienced a crisis of productivity and profitability in the 1970s. Among the most influential are regulation theory, which attributed the crisis in Fordism to worker dissatisfaction, and flexible specialization theory, which attributed it to consumer dissatisfaction. Both theories have been criticized on empirical grounds which suggests that the decline of Fordism had a lot to do with higher costs of production and increased competition from new entrants to the global car market. Whatever the merits and demerits of these views, there is broad agreement that there was a crisis of profitability and that an alternative to Fordism was needed.

Several solutions to the crisis of Fordism emerged during the second half of the last century, including automating production, and/or internationalizing production, and/or re-organizing production. These solutions are not mutually exclusive. The main global solution to industrial Fordism was JLP, pioneered by Toyota and emulated by other manufacturers in Japan, especially car companies. The success of JLP in terms of productivity and profitability led to Western car
companies adopting JLP, often via joint ventures. The key elements of JLP are *kaizen* or CI via JIT, TQC, and TW, the combination of which is thought by its advocates to improve productivity, quality, and profits while simultaneously enhancing worker satisfaction. A post-Fordist interpretation of JLP claims that this is a new way of organizing production as it involves the reunification of mental and physical labour, job rotation in multi-skilled teams of empowered workers who work harmoniously on modified assembly lines to produce non-standard parts for a variety of high quality products. According to this view, JLP is a major advance on Fordism that will become the dominant system globally during this century.

The post-Fordist interpretation of JLP has been criticized for its management bias, relative neglect of its negative impact on workers, and for exaggerating the discontinuities with Fordism. An increasing body of empirical research on workers’ experience of JLP in the car industry and beyond suggests strongly that it involves Taylorized multi-tasking, limited job enlargement and rotation, heavier and more intense work by teams of workers with minimal discretion on modified assembly lines, producing standardized parts for an increasingly narrow range of quality products. According to this view, work in a JLP car factory, often lacking independent trade unions, is more oppressive and exploitative than under Fordism. This more critical interpretation of JLP suggests that the post-Fordist rhetoric of multi-skilled workers co-operating to improve continuously the quantity and quality of products is so far removed from the actual experience of work in a JLP system that it represents a neo-Fordist development of Fordism, rather than a post-Fordist transformation.

In terms of the organizational features of JLP that are thought to distinguish it radically from Fordism, namely CI via JIT, TQC, and TW, critical research on JLP plants shows that: (1) CI tends to be defined in terms of lower costs, not more humane work practices; (2) JIT depends on the rigorous implementation of Taylorism; and that (3) TQC, when combined with TW, institutionalizes the sharing of workers’ knowledge. Thus these key features of JLP do not constitute a radical departure from Fordism. Moreover, the proto-Japanese character of Fordism confirms that post-Fordist interpreters of JLP have not only played down its negative features, but have exaggerated its discontinuities with Fordism. JLP has not replaced mass production, it has only modified it, has not transcended Taylorism, but revised and reinforced it, and it has not overcome worker alienation and unrest, it has merely contained it despite its attempts to ensure that a unitary managerial ideology prevails. Overall, therefore, it is difficult to escape the conclusion that since JLP is founded on Taylorism, the moving assembly line, and standardized parts, it ‘may best be described as neo-rather than post-Fordist’ (Rinehart et al., 1997: 202; see also Wood, 1992: 538). There are several obstacles to the global adoption of JLP in the car and other industries, including opposition from capital who fear competition, from labour who resist exploitation, from consumers who abhor gridlocked roads, and the general public who resent pollution. While post-Fordist interpreters of
JLP assert that it should and will become the standard way of organizing production in the future, a neo-Fordist exposition suggests that this possibility is problematic since it represents a partial solution to the crisis of Fordism.

The Fordist paradigm was used first and researched with reference to the evolution of industrial production, particularly car production. The next chapter explores the extent to which Taylorism and the Fordist conceptual framework are relevant to the sociological analysis of service sector work.

Further reading


WEBSITES The University of Michigan’s The Automobile in American Life and Society website is an excellent resource – the webpages by Meyer are particularly relevant – www.autolife.umd.umich.edu/

For a useful but uncritical overview of the development of lean production with special reference to manufacturing, consult www.strategosinc.com/just_in_time.htm
Questions for discussion and assessment

1. What are the defining characteristics of Fordism and how do they differ from pre-Fordism?
2. Assess the advantages and disadvantages of Fordism.
3. Discuss the claim that Fordism involved more than just a new method of production.
4. Account for the decline of Fordism.
5. Consider the view that Japanese lean production constitutes a post-Fordist transformation of Fordism.
7. Evaluate the advantages and disadvantages of Japanese lean production.