

# Competitiveness Strategies and Industrial Governance in the Era of the Global Political Economy

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The shelf life for most athletic shoes is six months; it used to be 12. Some last only 90 days. Nike has 300 models in 900 styles. "Every year we change our product line 100%" (Davies, 1990: 93).

Corporate strategies designed to maximize the generation and retention of profits from industrial production have changed considerably with the development of a global political economy over the last two decades (Gill and Law, 1988: 191-220). This article explores the implications of these competitiveness strategies for the governance of the industrial work situation, based on recent empirical research. Many have argued that the new strategies of profit maximization reflect a transition from Fordism to post-Fordism, "from economies of scale to economies of flexibility," in which big plants employing a large number of semi-skilled workers mass producing standardized products have become obsolete (Cox, 1992: 28). Piore and Sabel have investigated the consequences of the shift to flexibility for the labour process (Piore and Sabel, 1984). They argue that there are two major ways in which companies can remain competitive in the new environment. First, corporations can extend mass production by linking pro-

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duction facilities around the world (Piore and Sabel, 1984: 17). This strategy of transnational production gets around those rigidities of national regulation that have prevented corporations from taking advantage of differences between the factor endowments of countries (Cox, 1987: 245). The second road to profitability discussed by Piore and Sabel is *flexible specialization*. This is

a strategy of permanent innovation: accommodation to ceaseless change, rather than an effort to control it. This strategy is based on flexible - multi-use - equipment; [and] skilled workers (Piore and Sabel, 1984: 17).

Although Piore and Sabel argue that craft or batch production has always supplemented mass production,

What is distinctive about the current crisis is that the shift toward greater flexibility is provoking technological sophistication - rather than the regression to simple techniques. As firms have faced the need to redesign products and methods to address rising costs and growing competition they have found new ways to cut the costs of customized production. And the more they have narrowed the gap in cost between mass and craft production, the easier it has become to draw customers away from the formerly cheaper mass-produced goods. Technological dynamism has thus allowed a shift from a purely reactive strategy, aimed at survival, to an expansive strategy, which has threatened to cut ground away from mass production. In short, craft has challenged mass production as the paradigm (Piore and Sabel, 1984: 207).

David Harvey's work is in part an attempt to come to terms with the constraints and opportunities created for workers by business initiatives. Harvey suggests that there are a range of strategies which business can pursue, including lowering the wage rate and changing plant location (Harvey, 1982: 120). However, he reinforces the point that the strategy ultimately put in place is likely to depend upon prior circumstances and cannot be deduced in the abstract. This sensitivity to the importance of the particular circumstances of different industries,

cultures, and situations has been insufficiently emphasised by others, he argues. In his view, the existing account has "ignore[d] the workers as living human beings," and as members of social forces, because of its exclusive focus on the impact of competitive pressures on the work place (Harvey, 1982: 124). Accordingly, Harvey wants to redirect enquiry to discover the circumstances in which workers may become authors of their own history. How can they alter the impact of technological change, and what are the limits on their agency? (Harvey, 1982: 115) With regard to these limits, we can be sure, Harvey writes, that if labour gets more than its share and wages move above those paid by competitors so that they threaten the firm's profits, so "pressure will mount to introduce technologies that save on labour power and induce unemployment" (Harvey, 1982: 124). Consequently, he argues that the politics of the labour process must be seen as an ebb and flow between workers' struggles for governance over production, and the exigencies of business competitiveness, which he identifies as the "terrain of compromise" between business and labour (Harvey, 1982: 117).

This article evaluates some of the likely implications of recent initiatives to move the Terrain of Compromise equilibrium in favour of business. The recent research examined here is focused on technological and organizational change, as these seem to have been the most significant areas of recent labour process innovation.<sup>1</sup> Three major considerations are foremost when evaluating this literature in subsequent pages. First, what are the likely impacts on working life? This is the *conditions* dimension. Second, is the direction of change increasing or lessening the autonomy of operatives? This is the *control* dimension. Finally, to what extent have corporate strategies modified the basis of workers' solidarity? This is the *organization* dimension.

### Technological Innovation

This section discusses the implications of improvements in technology for the labour process. What does new technology mean for work-

1. Although this article is not explicitly concerned with the gender implications of these innovations, the focus here on industrial situations implies that the workers in question are primarily men. For a discussion of similar innovations in office settings, and their specific implications for women, see Irwin (1991).

ers' conditions, control, and organization? Rustin argues that on the basis of new research, there are grounds for a

significant revision of the classical Marxist models of the labour process. The importance of technical innovation and development was insufficiently understood by Marx, who mostly saw the process of production as a zero-sum conflict between labour and capital, not as a positive-sum process in which all might sometimes gain (Rustin, 1989: 66).

Rustin's view is an open perspective because new technology is thought to have both positive and negative implications for workers. Murray shares this view, as cited in a paper by Tetsuro and Steven. He suggests that the direction of technological development is towards general-purpose machines that will produce a variety of products. Workers will require many skills to operate these new machines, which will enable them to win control over the labour process and assume many of the mental tasks formerly reserved to management (Murray, 1989; Tetsuro and Steven, 1989: 8). This view is at odds with the orthodox critical analysis of technological innovation in the work place, which has followed in Braverman's footsteps (Braverman, 1974). Based on classical Marxist assumptions about the power inequalities in relations of production which involve private ownership, they argue that new technology is typically introduced in a capitalist context to further erode the position of workers in relation to the work process.

Windolf's very comprehensive study of the introduction of industrial robots in the German automobile industry was concerned with this debate (Windolf, 1985). He reveals the significant role of the pre-existing balance of forces between business and labour, and the importance of institutions. The institutional framework is important because

Legal rights both provide opportunities for action and limit the range of alternatives available to workers' representatives. The institutional framework influences the way in which losses and gains are redistributed among different groups or generations of workers and thus shape the consequences of new technology (Windolf, 1985: 460).

Rights to co-determination are a feature of the German institutional framework. Co-determination is the participation of workers' representatives in the enterprise's decision-making process. A feature of this process is the Works Council, which represents all the workers in a particular plant. Windolf argues that these councils are important in the introduction of new technology because German law only allows for redundancies in special circumstances: firms either negotiate with the councils or face costly litigation from the affected workers (Windolf, 1985: 460-461). As a consequence, adjustment most usually occurs through the internal labour market, in which worker co-operation is secured via the tacit agreement to favour internal applicants for vacancies, and to provide income security for some period of time to workers moving to lower skilled work. Most workers are found a job at similar skill levels within this period of insurance. When applied to the introduction of new technology, this framework ensures that the workplace implications must be negotiated with the Works Council (Windolf, 1985: 464). The equilibrium of this Terrain of Compromise is such that

Management offers relative job security and abstains from exploiting opportunities in the external labour market. In exchange it receives relative discretion in moving workers from one job to the next (Windolf, 1985: 464).

Windolf also shows that the impact of technology on workers has to be understood historically. If the labour process which robots are introduced to is already highly automated, impact on skill and autonomy will be low. In Windolf's Plant C, one whole stage in automation had been skipped and the labour process jumped from hand welding to robotized welding. This produced much greater opportunity for gains or losses on the Terrain of Compromise than in the other two cases he examined, in which innovation was not so great.

Windolf shows how deskilling and downgrading of job descriptions is not the result of any necessity of technology itself, but of the social organization of the labour process. In the case of Plant B,

The job structure [after the introduction of industrial robots] reflects the traditional division of labour. Painting and welding,

which used to be skilled jobs, are now performed by industrial robots. Programmers and maintenance workers are the winners in the rationalization process; production workers are the losers. There is no mobility chain leading from [production work] to [setting and maintenance work] (Windolf, 1985: 481).

The deskilling evident in this case "is not necessarily incompatible with the management view that new technology requires more skills" (Windolf, 1985: 482). However, based on Windolf's evidence, it appears that the new skills required in this case were concentrated in a small section of the plant's labour force as a result of the maintenance of rigid job demarcations, despite the introduction of new techniques which made those work rules obsolete (Windolf, 1985: 482). Accordingly, he concludes that

there is no direct relationship between new technology and a flexible work organization. New technology may be implemented within the traditional division of labour as well as within relatively autonomous work groups. Working conditions and skill levels do not depend on the technical equipment but on the social organization of the work process (Windolf, 1985: 491).

Windolf's research tends to support the tradition linked to Braverman, while also helping to discredit technological determinism. Despite the opportunities for gains by workers in conditions, control, and organization provided by technological innovation, the Terrain of Compromise in question did not significantly change in workers' favour. Stability of employment and management control of the internal labour market remained the trade-off accepted by workers and managers alike.

Adler and Borys focus on the form of control over the labour process in numerical control (NC) machining (Adler and Borys, 1989). In NC, the machine/machinist combination is replaced by machine, computer, operator and programmer. Instead of the machinist controlling the machine, under NC he or she simply operates the machine, which is now directed by a computer programmed by someone else. Adler and Borys also argue that the implications of new technology are not determined by the technology itself, based on their observation that

deskilling and other negative implications for workers have resulted from *strategies* pursued by managers to secure control of the labour process, and to reduce wage costs. Accordingly, in the case of NC machinery, they agree with Braverman's expectation that an NC labour force would be generally less skilled than a craft one, not as a result of the inherent tendencies of the machinery, but as he thought, because of "the specifically capitalist usage of machinery" (Adler and Borys, 1989: 380). However, Adler and Borys argue that there is a determinism of another kind in Braverman's work. They contend that he assumes that the pressures of competition are overwhelming for capitalist firms, and that industrialists always win their struggles with workers. But as Adler and Borys note, "Machinists, like other workers, especially unionized ones, often resist subordination and loss of autonomy in their jobs" (Adler and Borys, 1989: 380). Most importantly, Braverman's linkage of skill and control is also subject to their criticism because he

assumed... that craft workers, by virtue of their "autonomy", wield more power (or wield power more effectively) than do less-skilled operators. However, the rationalization of the labour process can and does produce new control problems. Workers' machine-tending responsibilities often put them in a position to exercise considerable power, since they "control the controls" (Adler and Borys, 1989: 381).

Adler and Borys consequently reject Braverman's adoption of the craft worker as the norm by which to judge the impact of technology on workers in contemporary firms. This assumes, they argue, that craft workers were widespread prior to industrial capitalism. However, in their view, "craft has never been the form of more than a small minority of occupations" (Adler and Borys, 1989: 381). Therefore, the work relations enjoyed by craft workers should not be used as a standard by which to judge the implications of new technology.

Adler and Borys present their own findings on the effect of technological innovation on skill levels and worker control. They assume that "since skill is a scarce and productive factor owners will in general pay a premium for more highly skilled workers" (Adler and Borys, 1989: 381). Their study, which examined 80,000 machining jobs suggested

that NC operator wages are not significantly different from the highest grade machinists and are significantly higher than some lower grade machinists. If their assumption about the relationship of wages to skill levels is correct, their findings suggest that NC has raised the overall skill level amongst the various grades of machinists. They also found that the overall level of wages paid in a work place rose rather than fell with the introduction of NC, because the average hourly rate for operators and programmers was higher than for craft machinists. This suggested to them that the reason employers invest in NC is not so much to lower wage costs, but to raise productivity (Adler and Borys, 1989: 386).

What are the implications of these findings? The most significant result seems to be that Braverman's conception of skill needs to be revised. Adler and Borys argue that an outdated conception of skill is taken to be the determinant of worker control and high wages in Braverman's account. For Braverman and the school that developed in his wake,

the concept of skill is traditionally bound up with craft mastery - that is to say, the combination of knowledge of materials and processes with the practiced manual dexterities required to carry on a specific branch of production (Braverman, 1974: 443).

What is wrong with this conception of skill? Adler and Borys' argument is that the conception of worker autonomy implicit here is both too broad and too narrow: too broad because there are probably other aspects of a job that give autonomy in addition to knowledge of materials and processes; and too narrow because it assumes that if autonomy is reduced by horizontal interdependence between workers, this would amount to deskilling (Adler and Borys, 1989: 392). Adler and Borys suggest thinking of skill in quantitative and qualitative dimensions. In the quantitative dimension, skill should be thought of as the result of "human capital," which they equate with expenditure on training. However, this training occurs only to create the qualitative dimensions of skill. The first qualitative dimension they consider is operator *responsibility*. NC operators are responsible for the integrity of the whole production process because of the complexity and interdependence of numerical control machining. Outputs rather than inputs

are the appropriate measure of this form of responsibility. These workers cannot just work harder but must view their actions in a holistic framework and "work smarter". Second, this new responsibility framework also implies a more *abstract* frame of thinking about processes on the part of the operator in order to recognise problems and prevent down-time on machines. Less emphasis need be placed on dexterity as the operator becomes a monitor rather than a labourer. But this does not necessarily imply a loss of skill by the worker, and the theorist should be sensitive to the difference. As Adler and Borys note, "That some conventional machinists might feel such a shift to be a loss even if others see it as a challenge is entirely understandable; for the theorist to side with [dexterity and manual labour] over [monitoring and intellectual labour] seems to betray a romantic conservatism" (Adler and Borys, 1989: 393). Finally, increased automation also affects horizontal interdependence between workers in different aspects of the production process. This development may call forth greater *social skills* from workers in order to facilitate co-operation with others (Adler and Borys, 1989: 394). They conclude that some elements of these skill criteria are likely to be raised by a programme of technological innovation in the workplace and others are likely to be lowered. Overall, unidimensional frameworks, such as Braverman's, ignore the subtle effects that occur with any new technological development (Adler and Borys, 1989: 394). Accordingly, it may be difficult or impossible to predict the implications of any specific technical innovation for a group of workers prior to its implementation.

Setting aside this last qualification for a moment, and presuming their evidence suggesting the tendency to skill upgrading is well founded, there are certain policy implications that emerge from Adler and Borys' observations. First, as the complexity of tasks grow, firms will have an incentive to capture plant-specific skills by creating effective internal labour markets, as seems to occur in Japan (Adler and Borys, 1989: 397). These will provide workers with opportunities for promotion within the firm. This could have implications for labour organization as workers come to identify themselves increasingly with the firm. Second, the increases in responsibility engendered by automation require the eliciting of a higher degree of commitment on the part of workers. Adler and Borys suggest that management may

concede participative decision-making here, but other possibilities include incentive pay and executive-type benefits which betoken the privileged status of these workers. These will also tend to individuate workers. Finally, the abstractness of technological work, in which workers monitor and set-up, but do not create, may sap worker motivation precisely when output criteria require much greater attention to quality control. Adler and Borys do not develop this point, but it would seem that unless this is just a transitional problem the level of intersubjective alienation and its attendant behavioural problems are likely to rise in those industries where automation is the dominant tendency.

Shaiken, Herzenberg and Kuhn (1986) also examine the implications of programmable technology. They argue against Piore and Sabel's flexible specialization thesis, which suggested that workers' skills will become more important with programmable technology. Shaiken, Herzenberg and Kuhn consider that technology is a resource that business is intent on utilizing to remove the constraints on managerial authority vested in worker skill and autonomy. According to Shaiken, Herzenberg and Kuhn, while managers

clearly recognise the need for the flexibility to change the product mix or retool rapidly in uncertain markets, they often pursue strategies which fail to take advantage of the complementarity between programmable technology and skilled shop-floor workers. Instead, U.S. managers [and presumably others as well] apply computers in a way which centralizes control of production and attempts to reduce the unpredictability associated with worker autonomy (1986: 168).

What is the authors' evidence for these claims? Their empirical work, conducted for the United States Office of Technology Assessment (OTA), examined the introduction of new technology in the aerospace, agricultural implements, automobile assembly, and metal-working industries. Programmable technology allows for quick design changes, speedy retooling and the production of a variety of different items by the same equipment. This reduces the scale of production necessary for profitability by making the costs of flexibility or variety much lower than before, lessening the economy of scale con-

straint. As discussed above, NC utilises a computer to control the way a machine tool cuts metal. However, there remains the question of who will write the control programme. Will it be the machinist with a personal computer, or a full-time parts designer with control over many machines? Accordingly, "where between the two possible extremes responsibility for programming lies reflects a managerial choice" (Shaiken, Herzenberg and Kuhn, 1986: 171). In Shaiken, Herzenberg and Kuhn's view, the flexible specialization thesis implies that this decision would fall largely in the operator's favour because "the premium placed on quality and fast delivery would require that technology and shop-floor skill be used in a complementary fashion" (1986: 172). However, the situation in the workplaces seen by the authors does not support this prognosis. In most cases the extent of operator control consisted of using manual overrides in the event of a problem. According to Shaiken, Herzenberg and Kuhn, "this is not the same as editing the programme. The overall execution of the job - order of operations, cutter path, etc. - remains outside the machinist's control" (1986: 172-173). This judgement is backed by the managers and former skilled machinists spoken to by the authors, who explained that operator intervention does not utilize worker skills as much, or give workers the same control over the process as they had previously (*ibid*). Workers were rarely allowed to write programmes. A study undertaken by Hicks, and cited by Shaiken, found that only 21 percent of 1,172 shops reported that operators were usually responsible for writing NC programmes (Hicks, 1983; Shaiken, Herzenberg and Kuhn, 1986: 173). Why does management choose to centralize programming? According to the managers interviewed, while the intervention of operators is essential to cure problems, they feared that allowing routine editing by operators would undermine their supervision and coordination. It was not clear to what extent these were calculable fears based on problems such as variability in editing, or whether they represented simple fear of worker control. However, none of the plants had made any effort to study the costs and benefits of either strategy. It seemed that management liked the idea of taking control from workers, on the assumption that the workers had an incentive to slow the pace of production (Shaiken, Herzenberg and Kuhn, 1986: 173-174).

## Organizational Innovation

Dohse, Jurgens and Malsch note that discussion of the organization of production has been dominated in the 1980s by the so-called "Japanese challenge" (1985: 115). Rather than attempt to compete with American industry by developing new technology, Japanese business has become more competitive on the basis of a "special management system" (Dohse, Jurgens and Malsch, 1985: 116). Given the advantage this has brought to Japanese industry, there have been initiatives in the West to obtain commensurate cost savings by adapting Japanese strategies to local conditions. In Britain, Ford has experimented with an "After Japan" programme, while in the United States Ford and General Motors have built new plants based on Japanese ideas. This section examines work by Dohse, Jurgens and Malsch, Kenney and Florida, and Sayer, which evaluates some of these strategies.

Dohse, Jurgens and Malsch want to know whether Japanese work organization is an alternative paradigm, and therefore transferable to the west, or the result of particular historical circumstances in Japan, and therefore non-transferable. According to them, the literature on Japanese productivity identifies the following as the significant factors enhancing their competitiveness: use of time; flexibility in labour use; alternatives in the division of labour; work effort; and the innovative potential of employees. In the case of greater use of work time, they observe that the differences between American and Japanese workers are primarily due to less vacation time and lower absenteeism in Japan. Moreover, Japanese workers do not take all the annual leave they are entitled to. By contrast, European and North American workers take all their paid leave. Labour deployment is more flexible in Japan: workers in the other advanced countries generally operate under detailed job classifications that prevent them from being required to do a variety of tasks. The division of labour also differs in Japan, where workers take on quality control and repair functions that normally are done by specialized workers in the west. This saves Japanese industry the cost of those additional workers. Dohse, Jurgens and Malsch agree that these factors contribute to the productivity advantage enjoyed by Japanese business. However,

the systematic conditions with which these factors are linked have largely been neglected. There is no satisfactory theoretical analysis of the potential transferability of the Japanese model and of whether it represents an alternative organizational paradigm to Fordism (Dohse, Jurgens and Malsch, 1985: 121).

Dohse, Jurgens and Malsch discuss three ways of explaining the linkages between the elements of the Japanese model: the cultural approach; the human-relations view; and the production-control perspective. The cultural approach argues that the relatively late transition from feudal to industrial society in Japan has left a legacy of traditional values and behavioural traits conducive to obedience and diligence (Dohse, Jurgens and Malsch, 1985: 122). The human-relations school emphasises the usefulness of worker creativity in the production process. This creative capacity of workers is thought to have been stifled by the separation of mental and manual labour central to mass production systems dominant in the West. In Japan, workers supposedly acquire a sense of responsibility for quality of output rather than merely their individual input. On the rewards side, Japanese workers obtain some measure of security and are paid on a seniority basis, removing many of the fears that might otherwise hinder innovative thought (Dohse, Jurgens and Malsch, 1985: 125-126). The production-control perspective stresses the form of production as the key to explaining Japanese productivity, rather than the ideas of those involved. This school argues that Japanese industry has adapted Fordism to the local situation in the form of "Toyotism". Toyotism secures the co-operation of workers in the re-organization of work, which Fordism failed to do. However, as the authors show, co-operation has a new meaning under Toyotism. Among the major components of Toyotism are the "no-buffer principle" and the "visualization of underutilization" (Dohse, Jurgens and Malsch, 1985: 132). The no-buffer principle involves exposing the work force to the consequences of the irregularity of demand, failure of machines and the like, so that workers must co-operate in order to complete their own tasks. By shifting the costs of adjustment onto workers, "the social pressure of the work group [becomes] a functional part of production control" (*ibid*). This process is made continuous by constant rationalization of resources so that

innovation becomes a feature of daily life for workers (Dohse, Jurgens and Malsch, 1985: 126-129). No relief manpower pool is maintained, and given that Japanese firms typically operate at 97 percent of complement, the remaining 3 percent must be made up by extra effort (Dohse, Jurgens and Malsch, 1985: 130). The visualization of underutilization is used to expose situations where extra effort is not constantly required of the worker. Toyota tries to expose these circumstances by requiring workers to stand still during any time not actually required for production tasks. Another way in which underutilization is visualized is through monitoring the system of warning lights workers have available to them to signal problems on the line. According to the Schonberger study cited by Dohse, Jurgens and Malsch, at the Kawasaki plant in Lincoln, Nebraska, as in plants in Japan,

a situation in which no warning lamp is on... [signals] to management that there is a personnel or working time buffer on the line and hence the possibility of withdrawing personnel from the line (Schonberger, 1982; Dohse, Jurgens and Malsch, 1985: 131).

In Dohse, Jurgens and Malsch's view, neither the cultural, the human-relations, nor the production-control approaches explain the willingness of workers to go along with the Japanese system. Why, for instance, do workers tolerate the no-buffer principle rather than collectively resist the added pressures? They argue that these three approaches ignore the history of post-war labour unrest in Japan, and the subsequent era of state-sanctioned union busting and company union formation (Dohse, Jurgens and Malsch, 1985: 134-135). Accordingly, in their view

The "harmonious labour relations" found in Japan by the Human-Relations approach and Cultural theorists are... the consequence of the defeat of a militant labour-union movement and can only be adequately understood in this context. The present day "harmonious" structure of relations was achieved in a struggle by management (1985: 135).

Subsequent to the management victory, a set of initiatives secured

the new equilibrium in the Japanese Terrain of Compromise. Life-long employment is interpreted as a workers' victory by the human-relations school. In fact, Dohse, Jurgens and Malsch argue, life-long employment creates a dependency relationship in which the worker is unable to exit the firm's internal labour market because firms will only hire at the recruit level. This contrasts with the situation in the West in which workers have relative freedom to move from employer to employer. Other significant features of the Japanese system that explain the workers' apparent willingness to go along with the historical shift in the equilibrium point include management's almost total control over promotion, allowing for no collective appeal provisions. This makes workers anxious to show their loyalty to the firm. The extremely individualized wage system is important too, because in Japan incentive pay can be up to 50 percent of a worker's wages. This can lead to very large differences between workers doing the same job. This contrasts with the traditional rate for the job in the West. According to Dohse, Jurgens and Malsch, the incentive pay system

has an enormous impact on the individual that is overlooked by those theoreticians who emphasize the motivation of the employees through employment security or group orientation. By disconnecting the wage system from work assignments Japanese management has solved the problem - as it exists in the Western automobile industry - of relatively limited chances for advancement due to the truncated qualifications structures. It has developed an independent system of wage careers that promotes ambition and competition among the work force without requiring any changes in the skill pyramid (1985: 137-138).

Why have Japanese workers not organized to reject these conditions? One answer is that Japanese unions lack autonomy from management. Supervisors are often union delegates. Moreover, the lack of secret ballots has provided an opportunity for management surveillance, with attendant possibilities of prejudice in promotions and personal assessments (Dohse, Jurgens and Malsch, 1985: 139). As Dohse, Jurgens and Malsch note,

The Japanese management system may be superior to the

American and European systems in productivity, but it is only possible in an industrial-relations environment in which there are hardly any limits to management prerogatives (Dohse, Jurgens and Malsch, 1985: 140).

Accordingly, it is not possible, argue the authors, to evaluate industrial governance in Japan in isolation from the wider context of social relations, which advocates of Japanese practices imply when they propose the transplantation of the Japanese paradigm to the West.

Kenney and Florida have also published research on the labour process in Japan (Kenney and Florida, 1988). In general, they are sympathetic to Piore and Sabel's framework. However, they are less concerned with flexibility in itself. As far as they are concerned, flexibility

must be enmeshed within relatively stable social institutions that bind production and innovation together, giving rise to *structured flexibility*. Without such a structure, flexibility can be economically disruptive, a sign of weakness as well as strength (Kenney and Florida, 1988: 122).

Kenney and Florida dispute the argument put forward by Dohse, Jurgens and Malsch, in which Toyotism is characterised as a speeded-up version of Fordism. They agree with Dohse's historical narrative, but consider the post-war conflicts to have led to an accord in which workers took a more secure place on the Japanese Terrain of Compromise than Dohse, Jurgens and Malsch suggest. A major example Kenney and Florida use to support their view that Toyotism does not have exclusively negative implications is Just-in-Time (JIT) production. JIT differs from the Just-in-Case (JIC) system of coordinating the variables of production in the West. In JIT, the labour process is fed by many suppliers in close proximity and constant communication with the final assembly plant. Under a JIC regime, production is decentralised, leading to greater inventory holdings. According to Kenney and Florida, the argument for JIT is not that it increases the pace of work but that it raises productivity through better utilization, minimal waste, and lower storage costs which reduce inputs per unit of output (Kenney and Florida, 1988: 135-136).



Other scholars do not share Kenney and Florida's optimism that structured flexibility will have positive implications for workers. Shaiken, Herzenberg and Kuhn, when considering JIT, argue that the purely technical advantages of JIT do not explain its introduction. For them,

An equally important managerial rationale for Just-in-Time stems from its ability to regulate the flow of subassembly or batch production work. In traditional batch or subassembly production, work stations produce a batch in a fixed period of time, or a given quota of parts in a day. Holding in-process inventory equal to a few hours' production decouples the pace of each station from further operations. By minimizing inventory and configuring operations in series, however, managers create assembly line pacing (1986: 177).

They also emphasize other ways in which JIT contributes to speed-up and furthers managerial control and cite work by Abernathy, Clark and Kantrow which charts the increased stress on workers produced by JIT's overriding imperative to solve production problems quickly. As Abernathy, Clark and Kantrow state, JIT does improve production levels because "it is wonderful how a little bit of fear and danger can clear the mind" (Abernathy, Clark and Kantrow, 1983: 76; Shaiken, Herzenberg and Kuhn, 1986: 176). So much for Kenney and Florida's secure workers! In the OTA study mentioned earlier, Shaiken, Herzenberg and Kuhn observed these implications first hand. In a major auto production facility a subassembly process had been automated so that workers would in future be required to work at the pace of the machine. To break the monotony they previously were able to work up banks of completed work. When interviewed, all eleven workers said they preferred the situation prior to automation "because the workers controlled their own work pace" then (Shaiken, Herzenberg and Kuhn, 1986: 177). Sayer also investigates JIT (Sayer, 1986). He finds, as did Adler and Borys, that amongst other things, workers require greater social skills in order to cooperate in the more interdependent JIT work process. This has the positive implication for workers of

making the firm less mobile in its investments than JIC firms where workers are seen as standard, substitutable, low-skilled inputs into fairly standard production set-ups (Sayer, 1986: 52).

However, the intensity of work increases with JIT because with automation the worker must constantly be ready to set-up the next machine. To illustrate this Sayer cites Suzuki, who reports the case

of a Toyota worker who handled 35 different production processes in a cycle lasting 8 minutes and 26 seconds (plus or minus 2 seconds) and who walked 6 miles a day in the process! (Suzuki, 1985; Sayer, 1986: 53)

Nevertheless, Sayer is unclear as to whether progressive or regressive implications of JIT dominate from a worker's perspective. While increased access to management is likely to be received positively by some workers and to trigger greater productivity from them, Sayer emphasises the dark side to JIT that includes the manipulation of peer pressure by management and the phenomenon of workers foregoing holidays. Sayer concludes that

whether there is anything progressive for labour in the new practices depends on the form they take or the form which labour lets them take. For example, provided that they do not lead to company unions, single union plants have at least the potential to overcome the divisions in the workplace formerly supported by multiple union plants (Sayer, 1986: 69).

## Conclusion

This article has evaluated some of the implications of recent competitiveness strategies for the Terrain of Compromise, in which industrial governance arrangements reflect an ebb and flow between the interests of workers and those of the managers of businesses. These strategies were considered in terms of three dimensions of the compromise: conditions; autonomy; and organization. Inevitably, this was only a partial appraisal of businesses' recent strategies and their implications for workers, and without question advances on the terrain by

either-side in some places have been matched by retreats in other locales. However, some themes were encountered repeatedly in these studies which suggests that they are of more general significance. These have been elaborated into five conclusions.

First, institutional and organizational factors have been crucial in the recent Terrain of Compromise struggles. Windolf makes this point, and it recurs in Dohse. In Windolf's study, the co-determination required by German law helped the cause of German workers who would otherwise have been much easier to disorganize with the introduction of new technology. Dohse points to the role of post-war industrial struggles in breaking down worker resistance to business initiatives in Japan. Without these historical and institutional developments the subsequent competitiveness strategies would have met quite different responses on the Terrain of Compromise. Accordingly, analysts of industrial governance must put aside their tendency to produce overly parsimonious accounts of the labour process based on universal behavioural norms, and focus instead on the circumstances, particular constraints, and opportunities in diverse industrial governance contexts.

The second conclusion is that the political, rather than the technical organization of productive life has dominated these recent business strategies, in the sense that business organizes productive life on other than strictly productive criteria. Evidence for this position comes again from Windolf's work and from that of Shaiken, Herzenberg and Kuhn. Windolf found that despite new technologies making old structures of control and demarcation between workers obsolete, business often chose to continue these because they had the effect of furthering divisions amongst workers. Shaiken, Herzenberg and Kuhn found a similar concern with social control in NC. This contestation over control implies that skills are politically determined from the start, and reflect management strategies to maintain hegemony over the labour process at least as much as productivity enhancement. Accordingly, worker strategies to counteract deskilling should focus on the reorganization of work around technology, rather than on opposition to the new technology itself. If skills are politically defined in the labour process, as this research suggests, there may be more opportunities for modification of competitiveness strategies, and thus for shifts in the Terrain of Compromise in labour's favour, than the rhetoric surrounding the

development of a global economy appears to allow for.

The third conclusion, and one that is closely related to the second argument, is that there is a narrowness to the definition of skill used by researchers of the labour process, and that skill needs to be understood in a variety of ways depending on the circumstances of diverse Terrains of Compromise. This follows from the argument made by Adler and Borys, who contend that Braverman's focus on worker control and knowledge does not represent an adequate conception of skill in a flexible production context in which interdependency between workers is rising, in which workers are responsible for outputs not just inputs, and work is increasingly abstract in nature. In this new world of work, the ideal of the isolated artisan is inappropriate as a model of empowerment with which to compare the capacities of the contemporary worker. This argument, which stresses the historical specificity of skill, reinforces the observation that the emerging flexible economy contains both risks and opportunities for shifts in the Terrain of Compromise. Nothing is predetermined in this new economy, least of all skill levels.

Fourth, some of the research examined in this article concluded that the new competitiveness strategies are designed mainly to increase productivity, while the scholars working in the tradition that began with Braverman agree that the new strategies are very much about increasing the average effort required at work. What those more open to these innovations seem to have ignored is that productivity enhancement can either be utilized by management to get more out of an existing workforce (presuming growing sales) or to lower the costs of producing a set amount of product (presuming a stable market share). Of course, this second utilization of productivity implies surplus labour (unemployment). In the absence of significant economic growth in the early 1990s, how this strategy can be interpreted as having positive implications for workers' is unclear.

Finally, one of Western businesses' major concerns in the last decade or so seems to have been to hinder or disrupt workers' organizations in an effort to obtain malleable, self-sacrificing industrial functionaries. The paradigmatic case here, of course, is Japan, which has in recent years become the model for Western business leaders. In the absence of the Japanese social system, and its particular history of

labour/business conflict which underpins the contemporary Japanese form of industrial governance, it is likely that competitiveness strategies will continue to emphasize individual worker/firm relationships in the West, and to downplay collective arrangements. A continuation of the marginalization of labour unions as they have traditionally been known in the West seems the most likely scenario.

Although many other conflicts have emerged in recent years, especially those having to do with the environment, gender and ethnicity, the labour process continues to be a context in which significant political struggles can be identified. These struggles are political because they, like these others, concern not simply narrow technical issues, but governance over the rules of the situation in question. This is necessarily the case in the labour process because the skill levels of workers, and therefore the remuneration and conditions they enjoy, are defined by the location of the equilibrium point on the Terrain of Compromise between the interests of labour and those of business. The equilibrium reflects the history of struggles by either side, and as we have seen, is not technologically determined. The development of the global political economy, and the advent of "economies of flexibility" has disrupted the pre-existing equilibrium, creating opportunities for favourable shifts in this point for those prepared to develop the necessary strategies, and considerable risks for those unwilling or unable to do so.

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## Re-Reading Barrington Moore: on the Social Origins of *Social Origins of Dictatorship and Democracy*

*William Walters*

Barrington Moore's *Social Origins of Dictatorship and Democracy* (1966) stands as a pioneering attempt to provide a comparative historical materialist account of the transformation of agrarian societies into modern industrial ones. Published in the latter half of the 1960s, it presented a challenge to the orthodoxy of its time which held that after economic "take-off", all societies would basically follow the same route to the "modern world". For the so-called modernization theorists whose claim this was, this modern world was characteristically industrialized, complex and differentiated in its social structure, and liberal democratic in its politics. For the sociologist Talcott Parsons—whose work built on classical sociology and in many respects laid the foundations for modernization theory—the modern society upon which all developmental paths were to converge was ostensibly modeled from Britain and the U.S..

*Social Origins*, however, argued that there had been essentially three routes to the modern world—but only the one characterized by "bourgeois revolution" had culminated in industrialization and liberal democracy. Modernization/industrialization had also been possible in the context of fascist "revolutions from above", as well as "peasant-mobilizing communist revolutions" from below. Moore explained

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