PRODUCTIVE SYSTEMS AND THE STRUCTURING ROLE OF ECONOMIC AND SOCIAL THEORIES

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By

Frank Wilkinson
ESRC Centre for Business Research
The Judge Institute of Management
University of Cambridge
Trumpington Street, Cambridge, CB2 1AG, UK

Tel: +44 (0) 1223 765325
Fax: +44 (0) 1223 765338
Email: f.wilkinson@cbr.cam.ac.uk

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Abstract
The institutions of productive systems are structured by mutual interests and relative power. Securing mutually beneficial cooperation in production requires resolving distributional differences. These objectives are secured in liberal economic theory by the working of markets which mediate the power of individuals and reward individual success. The centrality of individuals and hierarchies in market theory contrasts with developments in labour management theory which identifies group activity and decentralised responsibility as productive factors and organisations as unitary. This neglects the separate interest that productive partners have and the role of institutions in resolving conflicts in productive systems to secure productive co-operation.

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1. Introduction

This paper represents further development of the ideas presented in ‘Productive Systems,’ published in 1983, in the *Cambridge Journal of Economics’* memorial issue to Joan Robinson. As Joan witnessed her life’s work swamped by the resurgence of neo-classical economics, she increasingly turned her back on what she came to regard as the pointless ‘logic chopping’ of economic theory and advocated an historical and institutionalist approach. It is in this spirit that ‘Productive Systems’ was written; and it is in this same spirit that it is being revisited.

The ideas embodied in ‘Productive Systems’ emerged and were developed against the backdrop of the economics profession’s mass exodus from Keynesianism. It was a strange time. As economists puzzled over the burgeoning crisis that was wrecking the Golden Age[1], they abandoned the Keynesian Revolution and returned the conventional wisdom in economics to its pre-Keynesian beliefs that money determines prices and that the market determines everything else. This *neo-liberal* revival rests on the belief in the existence of immutable laws of the market to which organisations and institutions must conform if economic welfare is to be optimised.

The starting point for ‘Productive Systems’ was that it is a fatal error to believe that institutions must comply with prior laws derived from theoretical constructs because institutions are the central driving force behind productive systems and the way they evolve. This is not to argue that economic theory has no part to play. In fact, the dominant economic beliefs are powerful institutional forces shaping productive systems and determining how they operate. The last sentence in ‘Productive Systems’ read ‘One traditional function of economists has been to provide justification for political answers and the necessary exercise of power that they entail: but that is another story’. One of the purposes for revisiting ‘Productive Systems’ is to tell that story.

2. Productive systems

Productive systems are where the forces of production combine in production. Their constituent parts are labour, the means of production, the social system in which production is organised, the structure of ownership and control over productive activity and the social, political and economic framework within which the processes of production operate.

i. Mutual interests and relative power in productive systems

There are two distinct elements in the organisation and structuring of production: mutual interests and relative power. Labour and the means of production are mutually dependent: the one cannot operate without the other. Therefore, there can be no doubt about the advantage of *co-operation* in production. It allows for the full exploitation of the technical complementarities inherent to production and facilitates the sharing of knowledge necessary for the effectiveness of production and its improvement.[2] Co-operation also fuels the learning processes by which new information and knowledge are created, incorporated and diffused, and by which new products, processes and organisational forms are developed.[3] The resulting *operational and dynamic efficiencies* are crucial determinants of the ability of organisations to compete effectively, and to respond flexibly to changing circumstances and new opportunities. These efficiencies are also important because they generate the value added by the productive system, which forms the basis for the income and employment security of its various stakeholder groups.

In production, relations have both technical and social dimensions. The *technical relations of production* are the functional inter-linkages between labour, equipment and materials within and between production processes, the exchange of technical and other information pertaining to production and the development of new products and processes. These relations are objective and impersonal associations, shaped by the technicalities of products and of the methods by which they are produced. By contrast, the *social relations of production* are the subjective and personal associations among the human agents of production. They form the social structure for the technical relations of production by which the production tasks of labour and the means of production are jointly undertaken. By directing, co-ordinating and controlling the forces of production so as to assure full cooperation, the social relations of production play a central role in determining the effectiveness of technical co-operation and hence operational and dynamic efficiency[4].

The centrality of co-operation and mutual interest in production, however, does not imply that labour and capital come together on equal terms. Although labour works jointly with capital in production, workers are much more immediately dependent on the relationship. Compared with capital, and with their needs, workers have very limited access to resources except through the market. Moreover, since the main asset they have, their labour, cannot be stored, it is difficult for individual workers to stand out for long for a better deal. Labour's inherent economic weakness is fundamental in determining the power of capital relative to labour, but it is not the only factor involved. Although, ultimately, workers can be coerced by need into compliance with employers' demands, they are not powerless because employers are dependent on workers for the use of their capital and for the realisation of its productive potential. This coincidence of mutual dependence and unequal economic power, which can be countervailed to some degree by control in production, is not confined to relations between capital and labour; it is ubiquitous in the network of supplier and customer relationships within which organisations operate.

Generally then, the relationships we are considering are based on mutual dependence so that each party is reliant on others to secure the best from production. But differences in economic power may give one side or the other bargaining advantage over the terms and conditions for cooperation, the exploitation of which could result in a retaliatory withdrawal from full co-operation and a consequent lowering of productive efficiency. In this respect, the social relations of production have a second crucial role to play, that of resolving disputes between the parties to production. Here, the distribution of the value added in production is of crucial importance: for however mutual interests may be in production, they are inevitably conflictual in distribution because what one gets the others cannot have.

ii. Mutual interests, relative power and institutions

Mutuality and power asymmetries are central forces structuring not only the internal social and political framework of productive systems but also the environment in which they operate. This is particularly the case when the role, interaction and evolution of broader institutions representing collective interests of productive system stakeholder groups (i.e. employees, managers, shareholders, customers, suppliers and society) are considered. Trade unions, employers' and trade associations, the state, international organisations and other agencies represent collective interests; but their form, actions and the outcome of negotiations reflect the power differences among their various constituent groups. Thus, trade unions and employers' associations are based on shared objectives of their members, but their internal organisations reflect the balance of power between sectional interests. In their negotiation, trade unions and employers' associations seek to regulate, often jointly, rates of pay and conditions of work, and to provide procedures for resolving disputes. This results from their mutual interest in the firm's and industry's prosperity and the continuity of production from which both profits and wages derive. But the outcome of negotiations also reflects the power balance both within and between the employers' and workers' organisations and the part this plays in the struggle over distributional shares.

Recognition of the co-incidence of mutual dependence and power differences is also important for interpreting the activities of the state. The provision of education, health, social welfare, law and order and the regulation of trade unions and business, can be seen as furthering the common interest by increasing production, and by curbing the destructive exercise of sectional interests. Alternatively, state activity can be regarded as serving the particular interest of capital or labour. The state may act on behalf of capital to curb worker organisation, provide services which individual capitalists are incapable of providing and make good the corrosive effect of capitalist rivalry on productive resources, including the workforce. For labour, the welfare state might shift the balance of power in favour of labour by lifting from it the burden of poverty, disease and ignorance. No doubt, all of these elements play some part in the formulation and administration of state policy, and are manifest in the legal and regulatory framework and in the other ways by which the state intervenes in class and sectional divisions.

At the international level, nation states conclude treaties and collaborate in international institutions designed to regulate trade, international payments and capital flows. Many of these institutions -- for example the IMF, World Bank, World Trade Organisation and European Union -- originated in the need of nation states to cooperate, to protect themselves from both the unregulated international movements of goods and finance, and the potentially destructive impact of unilateral attempts to control such flows. In this respect, international agencies serve the mutual interests of their member nation states by encouraging trade and financial interaction. However the form these institutions take, and the way they operate, reflect the relative power of different nation states, trading blocks and economic regions as well as the leverage of interest groups on national governments.

iii. The evolution of productive systems

The concept of productive systems outlined above has general application and provides a basis for analysis at any level -- the family, production units, firms, regions and nations. At each level, there is an internal and external network of mutually dependent relationships, the terms and conditions of which are settled by the interplay of the strength each party derives from their position within the relationship, and the strength each brings to the relationship by dint of their wealth, social, political and legal standing, and other means by which relative power is determined. Essentially, each productive system, its internal relations, those it forms with other productive systems and the terms and conditions for their formation and continuance are the unique outcome of its own history. Moreover, productive systems are subject to continuous change from the interactions among the technical, economic, social and political forces to which they are subject.

The evolution of a productive system is therefore a dialectical process in which economic and institutional elements dynamically interact. Change is generated by developments in products and processes, and with changes in productive and power relationships both within and between productive systems. These interact with the broader economic, social and political framework and both are modified in the process. Such forces can lead to the destruction or radical modification of productive systems and to the growth of new forms. This perspective suggests the notion of an economic process radically different from that of 'equilibration' of orthodox theory. What is implied is a *non*-equilibrium evolutionary process determined by the way productive systems, and their relations with other productive systems, mutate in response to innovation in techniques and organisational forms as well as shifting power balances. Such a process cannot be said to be tending to some pre-defined *optimum* because there is no standard of reference for defining what that *optimum* might be and no way of defining how it might be arrived at. The best that can be said is that certain productive systems are relatively successful while others are relatively unsuccessful.

A *relatively successful productive system* is one with comparative advantage in its overall economic, technical, political and social organisation. This does not mean that it is superior in each of these dimensions; rather the system's advantage derives from their combined effects A successful productive system is likely to be at the forefront of technical and organisational progress and to have evolved social and political structures conducive to effective production. The growth of productivity and the possibility of securing favourable terms from other productive systems with which it has dealings will serve to increase its wealth and help to reduce internal conflicts that could impede cooperation. These benign conditions have the potential to create a virtuous circle of increasing productivity, competitive success, growth in demand and rising prosperity. Examples of successful national productive systems can be found in nineteenth century Britain, in the US and Germany from the last decades of the nineteenth century and in Japan more recently.

A *relatively unsuccessful productive system* is one where the pace of technical advance is slow, productive forces are ineffectively utilised, and systems of management, control and industrial structure serve to reinforce competitive failure. The slow rate of wealth creation is likely to intensify distributional struggles, hindering cooperation in production and the ability of the socio-political system to find an effective solution through organisational and institutional reform. In this hostile environment, the productive system is under severe pressure but the resulting social, political and economic crisis is unlikely to resolve the underlying causes of degeneration. On the contrary, the struggle over distribution and control will tend to increase the system's inflexibility and hasten its relative decline. Currently, Britain might be considered a good example of an outmoded national productive system.

3. Mutual dependence and relative power in economics

The claim that productive relations are typified by mutual dependence and power, raising issues about co-ordination and distribution, is uncontroversial. What is perhaps less so is to identify the interaction between mutual dependence and relative power as the major force shaping productive systems and how they evolve. This section examines how the question of power and its possible effects on the cooperation needed for efficient production is handled in mainstream theories of markets and work organisation.

i. Markets and power

In liberal economics, the theoretical position on power in the market ranges from the static neo-classical view in which it is neutralised by the market or by organisational authority if markets should fail, to the more dynamic notion that the command by entrepreneurs over resources and their deployment in the market empowers entrepreneurial creativity in the interest of economic progress.

Liberal economics rest on the belief in *economic man*, that extreme individualist in whom property rights invest power over the assets he or she owns, and who is inherently driven by self interest. On the other hand, the division of labour is regarded as the central driving force of economic progress, so that increasingly specialised individuals are more and more inter-dependent. (Marshall 1947). The question then becomes: how can mutual dependence between inherently self-seeking individuals be managed so that the resources they separately own and control can be put to the most effective use in their common interest? Liberal economics offers two alternative solutions: (1) the invisible hand of the market; or, (2) the visible hand of managerial authority.

a. The invisible hand.

The core belief of liberal economics is that, assuming property rights are recognised, freedom of property disposal is guaranteed and contractual promises are honoured, the market co-ordinates the activities of individuals. Adam Smith's founding contribution to liberal economics was his insistence on the primary role of free exchange, both for driving the division of labour and for co-ordinating the increasingly specialised parts of the system. He argued that self interest provides the incentive for specialisation, exchange provides the opportunity and free markets co-ordinate individual production and consumption decisions.

This idea of the pivotal role of market forces for co-ordinating productive activity has been handed down to modern neo-classical economists. The *perfect* market based on the freedom of contract provides information and price incentives, ensures contractual compliance by providing opportunities for buyers and sellers to readily switch trading partners among a large number of equally well-qualified alternatives; and determines income distribution. The importance of a freely functioning market in the present context is the role it is given in neutralising individual power, thereby ensuring full co-operation among self-interested individuals.

But this beneficial effect is limited, argue liberal economists, if individuals and groups can marshal the power they have *in restraint of trade*. Trade unions, employers' organisations and other collective monopolies are suspected of restricting supply and fixing prices, and their close regulation is strongly recommended by liberal economists. They have, on the other hand, a much more ambivalent attitude towards dominant firms. As monopolists they are condemned for lowering economic welfare, but as the outcome of successful competition they are applauded for raising it.

b. The visible hand.

The neo-classical case for the beneficial effect of dominant firms was succinctly summarised by Coase in his seminal 1937 paper. He argued that 'an economist thinks of an economic system as co-ordinated by the price mechanism' and posed the question: 'having regard to the fact that if production is regulated by price movements, production would be carried out without any organisation at all, well might we ask why is there any organisation?' His answer was that organisations provide an efficient way of overcoming the market failure which stems from the propensity of trading partners to exploit any monopoly they might secure in supply or demand, control over specific assets, privileged access to information, and difficulties in monitoring performance to ensure that it lives up to contractual promise. The proposal is therefore that organisational power evolves reactively to neutralise that of trading partners who, by exploiting their monopoly power, increase transactions costs and lower economic well-being (Williamson 1986).

Other economists working within the liberal tradition have given the visible hand a more proactive role. Marshall stressed the central role of organisation[5] in the co-ordination of the increasingly specialised and mutually dependent productive activities. (Marshall 1947, Book IV, Ch.VIII). Thus whilst Marshall saw freedom of industry and enterprise[6] as a central motivating and integrating force, he also maintained that market success depends on increasingly effective industrial and work organisation, a process driven by the innovating entrepreneur who: ‘is the organiser in command of capital, who bears the uninsurable risk. He takes complex decisions with limited information. Superintendence is only a small part of this: co-ordination, imagination and risk bearing are fundamental’ (O'Brien 1990).

Within this tradition, Chandler (1980) identified superior managerial and production organisation and the economies of their large scale operation as explaining the emergence of large corporations; Hayek and his followers argued that market success and firm growth were the consequence of entrepreneurial ability in discovering new profit opportunities in a world of uncertainty (Kirzner 1997); and Schumpeter (1943) theorised that monopoly profits are necessary to encourage innovation. Such theories serve to justify the power exercised by large firms as fostering economic advance. They also extend the disciplinary and creative role of markets for, although large size may be the reward of success, big firms can only survive by generating the operational and dynamic efficiency by which organisations keep their feet in the market driven by ‘the process of creative destruction’ (Schumpeter,1943). These market benefits have been extended more recently to include the stock exchange which is assumed to operate as an efficient market for corporate control, the means by which share holders can punish inefficient and malfeasant managers and reward successful and reliable ones. In this way, hostile takeovers are theorised as serving the public interest (Deakin and Slinger, 1997).

Nevertheless, economists recognise that there are downsides to market dominance. The abuse of power in labour and product markets may have significant distributional effects; mergers and takeovers may be ways of eliminating competition; and corporate actions may threaten the social and natural environment. Regulation is therefore accepted as necessary to counter such *negative externalities* and to contain the destructive capabilities of competition. But, caution liberal economists, the urge to regulate must be tempered by the recognition that in the final analysis the market provides the best opportunity for individuals and society. And, whilst the market concentrates economic power it also yields important benefits for society in the form of technical progress and economic growth. What is good for business is also good for society, and although the excesses of dominant firms need checking, it would check progress if their market opportunities were unduly restricted.

The theories supporting such argument underpin what Berk (1994) described as *corporate liberalism*. He argued that

> "….corporate liberalism conceived property and economic development prior to the will of collective or democratic choice. 'The laws of trade' its adherents were fond of saying 'are stronger than the laws of men.' Thus, the modern corporation, like the liberal person, owed its existence first and foremost to private purpose. If the result of economic development rooted in such pre-social entitlement was to concentrate the market in huge monopolistic firms, this was deemed inevitable. The only economic role left to the democratic state was to redress the concentration of excessive wealth in the modern corporation through regulated monopoly. The goal of regulation, in other words, was to balance the interests of consumers in redistribution with those of the corporation in accumulation" (pp 13-14).

c. Summary

Underlying the theories of markets in liberal economic theory is the concept of *economic* man inherently driven by self-interest. Self-interest provides the driving force for economic activity in which respect it is creative; but, given the opportunity, its pursuit will become exploitative and destructive of economic well being. Markets therefore provide the outlet for the creative deployment of self interest and checks its misuse. They serve to mobilise privately owned resources, provide information, co-ordinate separate production and consumption decisions and guarantee the competition necessary to counter the exploitation of power for individual or group advantage. However, power also plays a positive role. It counters the negative effects of market failure and, by giving command of resources to innovating entrepreneurs, serves as a vehicle for economic progress. In this process, markets are the selectors of uses of power that enhance economic well-being.

ii. Work organisation and power

The distinguishing feature of work organisation is its positioning *beyond the market.* Labour is inseparable from the worker and although contracted for in the market it is utilised in the workplace under the control of management.

a. Work organisation and power in economics

The separation of contracting and performance is central to Marxist economics. Marx agreed with orthodox economists that the price of labour is determined by free exchange in the market. However, he argued that away from the market, and in the workplace under the command of the capitalist employers, value additional to that contracted for is extracted from labour and this constitutes profits.[7]

Traditionally, liberal economists ignored the special problems posed by the organisation of work. They supposed that labour markets functioned as any other by assuming that skills were general and abundant. Then, competition fulfils its traditional role and the threat of replacement acts as a powerful inducement on workers and employers to match contractual promise with performance. However, in more recent years, closer attention has been paid to the problem of managing the workplace when markets fail. In these circumstances, as in other branches of transaction cost economics, managerial authority emerges as an efficient alternative to the market. In *efficiency wage* and *insider/outsider* labour market theories, asset specificity, information asymmetry and other ways by which market forces are deflected give the whip hand to incumbent workers, who are then assumed to *soldier* (i.e. to opt for on-the-job leisure rather than work). Management counters labour's exploitation of power by close monitoring and discipline and/or by adding an *efficiency* bonus to the market wage to induce additional effort. This, as in Marxist theory, is made easier when the *reserve army of the unemployed* makes more effective the threat to the worker of being fired.

b. Labour management and power.

Away from economics and in the more practical and dynamic world of production management the problem of securing full co-operation from workers, as measured by productivity and profits, has remained a perennial problem. Addressing this has been the driving force for the evolution of the theories and practice of labour management. These have developed from the idea of *arbitrary* managerial control needed to discipline recalcitrant workers, through the application of engineering science to the *scientific management of work*, to *human relations management* inspired by the socio-psychological redefinition of workers from *economic* to *social* beings, and finally to *human resource management* which combines elements of scientific and human relations management.

Arbitrary management. With the move to factory production, close supervision and stern discipline were the dominant approaches to solving the problem of motivation and discipline (Pollard 1993). In exceptional cases, notably Robert Owen, factory employers believed that concern for the welfare, education and social development of their workforce offered the best way forward; but the vast majority used close supervision and harsh discipline to ‘force human character into a mechanical mode’ (Pollard 1993, p256). This had support from social and economic reformers who argued that workers needed to be poor and exposed to market forces to be driven to productive activity, ideas which also provided the justification for the legislative sweeping away of worker protection and any meaningful social welfare (Wilkinson 2001). Labour discipline was further tightened by the strengthening of the employers hands by the enactment of the Master and Servant Laws[8]. These laws built on and extended the employer’s disciplinary powers over their workforce entrenched in the Elizabethan, Statute of Artificers. As a consequence,

> ‘Inside the factory ….the employer is absolute law-giver; he makes regulations at will, changes and adds to his code at pleasure, and even if he inserts the craziest stuff, the courts say to the working man: “you were your own master; no one forced you to agree to such a contract if you did not want to, but now, when you have freely entered into it, you must be bound to it”’(quoted, with approval, from Engels, by Atiyah 1979, p.275).

The position of workers in the workplace was further weakened as the finer division of labour progressively simplified tasks, with mechanisation and with the growth of employer’s scientific, engineering and managerial knowledge. And, it was from this cumulative process that scientific management evolved (Hollway 1991).

The scientific management of work. The aim of scientific management was to systematise production. Frederick Taylor, a leading protagonist, was pre-occupied with the problem of worker ‘soldiering’. Solving this, he argued, required complete managerial control over the tasks of individual workers and how they were performed. To achieve this, the pioneers of scientific management proposed, managers should acquire workers’ craft knowledge, plan production in detail, precisely define each worker's tasks and carefully control every stage of production. The need to achieve these objectives, Taylor claimed, rested on the discovery and development of the scientific laws governing production.

Taylor made far-reaching claims for scientific management. He argued that it provided a rational basis for designing and standardising factory lay-out, equipment and industrial organisation, and for codifying worker knowledge. It provided the scientific basis for worker selection, vocational guidance, training, planning work to individual capabilities, ensuring workers' physical and psychological well-being, and designing wage payment systems to reward efficiency. In doing this, it raised workers' skill levels, stimulated them intellectually, promoted individuality and self-reliance, while at the same time increasing pay, cutting hours of work and improving employment security. Taylor also claimed that his methods improved labour management by creating a cadre of specialists to instruct, train and advise workers, and encourage involvement. Of particular importance, was the assertion that replacing a system of arbitrary managerial decisions by one in which managerial control of worker activity was governed by scientific laws would improve management/worker relationships, democratise industry and eliminate the need for trade unions and collective bargaining. Taylor claimed that:

> 'No such democracy has ever existed in industry before. Every protest of every workman must be handled by those on management's side, and the right or wrong of the complaint must be settled not by the opinion, either of the management or the workman, but by the great code of laws which has been developed and which must satisfy both sides. It gives the worker in the end equal voice with the employer; both can refer only to the arbitrament of science and fact.' (Hoxie 1915, quoted in Hollway 1991, p22).

If his blueprints were followed, Taylor claimed, combining managerial authority with science would remove the conflict resulting from the exercise of, and resistance to, arbitrary managerial power and clear the way for full cooperation.

However, the practice of scientific management proved different from its theory. In his detailed study of the practical application of scientific management, Hoxie (1913) came to quite the opposite view of its effects to those anticipated by Taylor. He found that scientific management mainly served to concentrate into management's hands the power to deskill, control and speed up work and to justify this in the name of science. The main problem, Hoxie argued, was managerial emphasis on short-term increases in production and profit by task and rate setting, without concern for the longer-term reform of technical and organisational structures required for full-blown scientific management. As a result, the weight of change fell on workers who experienced it as work degradation, speed up, increased alienation and loss of power.

While recognising this, neither Hoxie, nor the unions he consulted, opposed the principle of the application of science to industry. The problem, as they saw it, was not so much with the *application* of science so much as the way it was applied. On the democratisation of industry, Hoxie wrote:

> 'It is a noble ideal, as old at least as St. Simon, and the time may come when it is capable of realisation. Before this however, the science of psychology must make long strides, industry must attain a much greater degree of regularity and stability than at present exists, and the type of man who is supposed to discover and voice the dictates of science-and stand thus as the just judge between employers and workers-must be very different from the present general run of time study men and task setters.' (Hoxie 1915, quoted in Hollway 1991, p103)

Human relations management. The long strides in the application of psychology to industry began at the end of the 19th Century when the mass poverty and degradation of work in the Victorian labour market led to a growing emphasis on the *human factor* in industry. In this, Joseph and Seebolm Rowntree, chocolate manufacturers from York, played a leading role (Biggs 1964). The Rowntrees believed that business efficiency required humane personnel policies and good industrial relations. Concern for the health and well being of their workers and for their quality, motivation and commitment resulted in the Rowntrees taking a lead in paying wages high enough for an adequate diet,[9] in cutting hours to combat fatigue and encourage leisure time activities, in providing health and welfare services for their employees and in designing workplaces to high environmental standards. They also provided remedial and continuing education, high levels of training; improved communications; and encouraged worker participation, collective bargaining and industrial democracy. The Rowntrees' zeal for reform was driven by their Quaker views regarding the organisation of society. But, it was also guided by practical business concerns about the negative impact of poor nutrition and fatigue on worker performance, the advantage of using psychology to improve worker selection and training and the effect on worker motivation and performance of their well-being and job satisfaction. (Biggs 1964; Rowntree 1938).

The inter-war years were characterised by a rapid growth in employers' interest in the role of human relations in industry and the potential to improve such relations by applying psychological and sociological research findings to work organisation. Increasing attention was paid to matching workers to jobs by means of psychological methods in selection and training, the use of such techniques as ergonomics to fit jobs to workers, and of counselling to improve their mental well-being. Later, after the Hawthorne experiments, even greater emphasis was placed on the importance of human emotions and feelings in determining the effectiveness of group activities and labour-management relations (Hollway 1991).

These developments in human relations were designed to improve management rather than to challenge its authority or the extent and definition of managerial responsibility. They were largely remedial and targeted at increasing efficiency by making the employment systems more worker-friendly, by fitting workers better into work systems and by providing treatment for their physical and psychological defects. In this process:

> ‘A new conception and practice of the worker emerged. This had as its objective to ensure that the bond linking the individual and the enterprise and also the individual to society would hence forth not be solely economic. The wage relationship and the power of the boss would be supplemented by a personal bond that would attach individuals to the lives they lived in the world of work, to their co-workers and bosses, and to society as a whole. It would be possible to conceive of administering the working environment in such a way as to ensure simultaneously the contentment and health of the worker and the profitability and efficiency of the enterprise’ (Miller and Rose, 1998, p53)

After the Second World War, the importance of the *remedial* benefits of human relation continued to be emphasised as important for operational efficiency. However, the attention of industrial psychologists and sociologists, and the managerial practice they informed, shifted to the idea that human relations was a *productive* factor contributing to dynamic as well as operational efficiency. War-time experiments at the Tavistock Institute, targeted at the rehabilitation of servicemen suffering psychological disorders, demonstrated the creative possibilities of directly involving individuals in collective activities (Slinger 2000). After the War, this research was developed collaboratively by an international net-work of research institutes which fostered its industrial application (Trist and Murray 1993). In Norway, for example, the Industrial Democracy Project explored the benefits of improved worker/management relations and developed and diffused participatory socio-technical systems, especially in Sweden (Trist and Murray 1993).

These developments went far beyond the notion that human relations could raise the performance of traditional work systems closer to their real potential. The argument became that greater employee involvement contributes to dynamic efficiency, an important requirement of which was the resolution of the long standing problem of antagonism between workers and managers. To overcome this emphasis was placed on the benefits of inter-personal skills in labour management, democratic leadership and participative small groups. The reluctance of workers to respond to the new style of management extended the area for reform to include job redesign. The agenda was furthered broadened by the development of theories of organisational behaviour and organisational change, together with an emphasis on corporate culture as an integrating and motivating force. (Hollway 1991).

Human resource management. Two broad strands in the historical development of work organisation and labour management theories and practices can therefore be identified. The first stems from scientific management and has its roots in engineering science and in the traditional economist's assumption of *economic* man. The second strand developed from the application to the work situation of psychology and sociology, with their emphasis on *social* man. The increasing weight given to this latter strand shifted the focus in labour management from labour as a *factor of production* to be directed and cajoled by hierarchical management, to labour as a *productive resource* with creative capabilities to be developed by inter-active management. The expectation was that employers would reap the rewards of greater worker motivation, increased job satisfaction and improved job performance by greater operational and dynamic efficiency and higher profitability. These objectives are seen as requiring the enlarging and enriching of jobs, more challenges and opportunities, new skills and more effective incentives. With this change in management objectives and style came a modification in nomenclature from ‘personnel and industrial relations management' to 'human resource management' (HRM).[10]

HRM has been defined 'as a set of policies designed to maximise organisational integration, employee commitment, flexibility and the quality of work' (Guest 1987); and hard and soft versions have been identified. *Soft HRM* is 'a method of releasing untapped reserves of 'human resourcefulness' by increasing employee commitment, participation and involvement' (Blyton and Turnbull 1992, p4) and has a greater emphasis on human relations. *Hard HRM* is designed to maximise the economic return from labour resources by integrating HRM into business strategy. Although it usually incorporates *soft* HRM practices, hard HRM has a broader engineering base and is strongly oriented towards meeting market requirements by means of greater production flexibility and product improvement (Appelbaum and Batt 1994). Key objectives in hard HRM, which have a clear affinity with Taylor's vision of scientific management, include continuous improvement in quality and performance, just-in-time inventory systems, and statistical process control designed to iron out variation in quality, create consistency in meeting standards, locate inventory savings and eliminate waste. Broadly speaking, the purpose of HRM is to foster a pre-emptive rather than re-active approach to operational efficiency, quality control, and innovation by shifting responsibility and accountability for decision making towards the shop floor. Its adoption testifies to a shift in labour management practice 'from coercion to the attempted production of self-regulated individuals' (Hollway 1991 p20).

However, despite recognising the sociological and psychological needs of workers, the importance of democratic management and the central role of worker self-regulation and involvement in management as mechanisms for securing full-co-operation, the proponents of human relations have been no more sympathetic to workers' independent representation than liberal economists or the scientific management school. The idea of democratising industry goes no further than Fredrick Taylor's view that this purpose is served by the enlightenment of management by knowledge of scientific laws, except that the science needed extends beyond that of production to include the psychology and sociology of the producers. From this perspective, the power to manage serves as a proxy for representation and a vehicle for efficiency and equity.

iii. Human relations, independent representation, partnership and power

The early case for human relations was that the diagnosis and effective treatment of socio-psychological problems would improve the well-being of group members, the cohesiveness of the group and therefore its productive performance. From this standpoint, conflict was considered dysfunctional. Elton Mayo, of Hawthorne fame, believed that:

> ‘Conflict was neither inevitable nor economic. It was the result of the maladjustment of a few men on the labour side of industry. Even after Hawthorne forced Mayo to grow, he remained firm in his conviction that conflict was an evil, a symptom of the lack of social skills. Cooperation, for him, was symptomatic of health; and, since there was no alternative in the modern world, cooperation must mean obedience to managerial authority. Thus collective bargaining was not really cooperation, but merely a flimsy substitute for the real thing.’ (Baritz 1975, pp332-333).

Social scientists have also argued that wage demands mask ‘more real and human needs for appreciation, understanding and friendliness;’ and they have gone further by identifying the need to join trade unions as a symptom of low intellect and psychological disorders (Baritz 1975, p332).

More recently, advocates of human resource management have stressed the importance of unity of purpose and values. Total Quality Management (TQM) has been characterised as an organisational form in which ‘employees can be trusted and empowered to take on more responsibility in a context of HRM practices which ensure a homogeneity of values.” (Sewell and

Wilkinson 1992). Traditional ‘pluralistic’ industrial relations (where a diversity of interests are recognised) are effectively ruled-out and collective bargaining becomes ‘integrative’ rather than ‘distributive’ (Walton and McKersie 1965). In this context, the role of trade unions is to co-ordinate the strategic process and facilitate the achievement of managerial objectives, which are assumed to forward the mutual interest of all the firm’s stakeholders (Konzelmann Smith 1996).

Following this trend, the ‘New’ Labour Government, elected in 1997, endorsed labour-management co-operation and ‘partnership’ as an effective approach for improving economic performance. In interpreting the Government’s position, Wood (2000) identified the requirements of the new system as:

> ‘one of partnership at work … associated with the kind of model of HRM … focused on the achievement of a particular role orientation on the part of employees so that they are flexible, expansive in their perceptions and willing contributors to innovation.’[11]

He went on to suggest that

> ‘Partnership is a matter of employers having the right to ask employees to develop themselves in order to accept fresh responsibilities whilst they themselves must take responsibility for providing the context in which this can happen’

In this formulation of partnership, the strong emphasis is on the need for workers to make largely unconditional commitments to their employer’s business interests and objectives, and to mould themselves to its needs. In this way, workers provide additional and improved resources for the firm’s managers to manage more effectively.

This position was neatly summed up by Tony Blair, the New Labour Prime Minister, when he laid out the Labour government's primary industrial relations objectives. [12] They required, Blair argued, 'nothing less than to change the culture of relations in and at work'. He stressed the need for the new culture to be 'one of voluntary understanding and co-operation because it has been recognised that the prosperity of each (employer and employee) is bound up in the prosperity of all;' and he emphasised that 'partnership works best when it is about real goals – part of a strategy for instance for doubling business. Or bringing employee relations in line with market re-positioning. Or ending the often-meaningless ritual of annual wage squabbling.' It should be carefully noted that Blair made no reference to the *ritual* of the continuous squabble over the distribution of dividends between managers and shareholders or to the constant insistence on better terms for consumers orchestrated by the Government. Rather, what Blair clearly had in mind was the need for workers recognise the needs of business and their customers by meeting both their production and distributional demands. And, as we have seen, the weight of expert economic and labour management opinion comes down in favour of the government's unitarist line and lends credence to it. However, the validity of this support ultimately depends on the objectivity of the body of knowledge upon which it rests.

The claim of objectivity is important for protecting the expert from responsibility for any negative outcomes from the advise they give and for lending weight to managerial strategies and objectives. But 'knowledge concerned with people at work ……is not objective or true in any simple sense. It is an historical product of the interests and power relations in practice' (Hollway 1991, p9). This echoes doubts repeatedly expressed about the objectivity of expert knowledge as applied to markets and production.

Marx dated the demise of scientific objectivity in economics as being the accession to power of the middle-classes with the electoral reforms of the 1830s. After that, it was no longer a question of whether ‘this or that theorem was true, but whether it was useful to capital or harmful’ (Marx 1976, p97). This view was echoed by Galbraith (1987), when he argued that the supposed subordination of economic agents to the market disguised the central importance of power in economic life. He noted that “Power is much enjoyed, and its economic and political exercise can also be pleasingly remunerative. Nothing serves it better than a theology that disguises its exercise” (p.xiv).

The objectivity of the research underlying scientific management and human relations has also been challenged on the grounds that it has traditionally been undertaken on behalf of employers or strongly relies on their support. Researchers have not been completely free agents; and the employer orientation of the research has determined its scope and focussed its attention on productivity, profitability and employee loyalty. But this is not to imply that researchers have been obliged against their will to accept managerial values. Researchers are commonly of the same mind as managers so that: ‘Most managers have had no trouble in getting social scientists to grant managerial premises because such premises have been assumed by the social scientists.’ (Baritz 1975, p334). Bearing this in mind, Wilbert E Moore, in 1947, warned sociologists that the ‘persistence of managerial assumptions underlying so much of their work would reduce their profession to a refined type of scientific management dedicated to exploiting labour’ (Baritz 1975, p335).

In this sense, by becoming dependent on the powerful and accepting their premises, and by proposing models of markets and production in which power is assumed to be neutralised or to operate only in the general interest, the scientist and the science they practice become servants of power. As a consequence, by arguing that workers are subject to the laws of the market, production and socio-psychology, as identified respectively by economist, engineers, and sociologists/social psychologists, experts could proposed that it was to worker’s advantage to go along with management provided they were managed in accordance with those laws. It follows from this that any attempt by workers to organise in their own sectional interests would at best have no beneficial effect and at worst would be counter-productive. But the record does not show unambiguously that what is good for business is necessarily in the best interest of the worker they employ.

4. Markets and systems of work organisation in operation

There is now a considerable body of literature suggesting a positive link between the use of HRM practices and performance, particularly when such methods as flexible work assignments, work teams, skill training, effective communications, and incentive pay schemes are used in combination.[13] The superior performance of close worker involvement and co-operation compared with arms length market relations and hierarchical management has also been demonstrated by the product market success of what Best (1992) described as *new competition.* This bought to the market improved design, greater variety, high quality, more rapid product innovation as well as keener prices.

The *new competition* originated with European and Japanese producers, many of whom combined leading edge HRM and close relations with suppliers and customers[14]. Within these more competitively successful productive systems, work organisation was participatory and non-hierarchical and inter-firm links were close and co-operative rather than hands-off and antagonistic[15] The result has been a more effective mobilisation of the commitment, skills and knowledge of workers and trading partners, serving to raise efficiency, improve quality, and generate a faster rate of product, process and organisational innovation. The effect of *new competition* has been to create a competitive environment in which top priority is given to the design of organisations such that they can fully exploit the co-operative nature of production.

Such organisational redesign has proved very difficult in Anglo-American productive systems. Rather than radically reforming their work systems, employers in the US and UK have generally attempted to incorporate degrees of worker involvement and other HRM practices into existing managerial structures and forms of corporate governance (Deakin et al. 2001). Moreover, even when these changes have been successfully implemented, they have proven difficult to sustain (Konzelmann and Forrant 2001). Consequently, little has been done to change ‘the fundamental nature of the production system or threaten the basic organisation or power structure of the firms’ (Applebaum and Batt 1994, p22). Concurrently, neo-liberal macro-economic policies, and globalisation have intensified competition in increasingly buyers’ markets to the advantage of consumers; whilst deregulation has shifted the balance of power in the labour market in favour of capital and, in the capital market, in favour of shareholders.

Firms have responded to growing product and capital market pressures by passing on costs to suppliers, sub-contracting, cutting jobs and increasing the use of temporary and casual workers. But the main burden of securing higher performance at lower costs has fallen on the core work force. This has been driven by the changing market demands *and* the additional burdens imposed on the survivors by downsizing and the delayering of management. Workers are required to be more responsive and co-operative, to acquire greater skills, to intensify effort, to accept greater responsibilities, and become more flexible. But, while employees have generally welcomed opportunities to take more control over the planning and execution of their work, distrust of management is widespread and the perception is that pay levels have failed to adequately compensate for the extra responsibility, accountability, work-load, working hours and effort that workers are expected to bear. (Burchell et. al. 2001)

5. The logic of the market versus the logic of production

At the heart of the problem is a fundamental contradiction between the logic of markets as an efficient mechanism for allocating resources and distributing income (as conceptualised by liberal economic theory) and the logic of the management of production as a process for effectively combining and exploiting productive forces. (as conceptualised by human resource management). This contradiction has been wished away by supposition that the market is an efficient co-ordinating mechanism ruling out the need for human agency. In his book, *The Fatal Conceit: The Errors of Socialism,* Hayek argued that direct co-operation within groups was an instinctual *primitive* trait superseded by individualisation and the ordering principle of the market (1988, Chapter 1). What Hayek failed to understand (as no doubt primitive man succeeded in understanding) was that the essence of production is technical co-operation, requiring supportive social relations in order to ensure that those involved in production work effectively together.

The task of recovering the ground lost in understanding between primitive man and Hayek was left to management theorists, who drawing on engineering, psychological and sociological research, concluded that productive efficiency required close co-operation between those involved. What has been rediscovered is that the *primitive traits,* identified by Hayek as a hindrances to the development of markets, is actually essential for production. The human relations school learned that social and psychological well-being are crucial for creating the environment necessary for efficient production. What they failed to sufficiently recognise (or reveal) was that although meeting socio-psychological needs are important, well-being also has a material side. This omission had its advantage because it helped to steer the proponents of human relations away from the thorny question of distribution and towards the pretence of a total singleness of purpose of employers and their employees. However, while it may be true that workers do not live by bread alone, a sufficiency of bread is nevertheless important. And, moreover, it is not unreasonable to suppose that workers might not be content with leaving the determination of that sufficiency solely to the whim of the market or to the unilateral decisions of management.

It cannot therefore be simply assumed that workers are either wholly *economic* (relentlessly pursuing their own interest), or wholly *social* (satisfied if their socio-psychological needs are met). Rather than assuming that workers blindly and relentlessly pursue their own selfish interests or, providing their psyches are appropriately massaged, that they pursue those of their employers, it would seem more reasonable to suppose that workers have a complex set of social, psychological and economic needs. It also seems reasonable to suppose that workers are *reflexive* in attempting to satisfy these diverse needs, and that they respond negatively or positively, in terms of co-operation in production, depending on how they perceive the fairness of the terms and conditions of employment and their treatment by their employers. (Sabel 1992).

It follows from this that there are two stages to determining fairness in employment: the formal contract, which lays out the explicit terms and conditions, and more implicit commitments, which go beyond the formal contract and determine the productive effectiveness of the relationship. These less formal terms have been described as the *psychological* contract, but could perhaps be better described as the *human relations* contract. They capture the commitments made by workers and their employers to work effectively together. The operation of the human relations contract requires workers to be fully committed to their employers' business in exchange for fair pay, job and income security and a good working environment. A breach of this contract risks inciting a retaliatory withdrawal from full cooperation with an adverse effect on productivity and competitive performance. Effective co-operation therefore depends on agreement on both the explicit and implicit terms of the employment relations, together with the expectation by both sides that commitments made will be honoured.

In a complex economic system, however, the ability to honour commitments is not entirely in the hands of those making them. It is necessary therefore to consider the environmental conditions in which relationships are formed as well as the nature of the relationships themselves. To set the scene for this discussion, it is worth re-examining, in somewhat stylised terms, the nature of work systems.

6. Work systems and the terms and conditions for cooperation

The essence of work systems is that employers and workers have shared and separate interests. Both have a stake in total value added, which is generated by their cooperation in production; but each claims a share which limits what the others can have.[16] The claim to a share that either side makes is likely to be tempered by the necessity of ensuring that the other side continues to cooperate effectively so as to secure the highest level of operational and dynamic efficiency. The important point here is that in production, each party must take into account two different types of incentives: 1) their own and 2) that needed to get their partner(s) into full co-operation with them. However, the sequence of events is that the decision to co-operate is taken prior to the realisation of the benefits from co-operation. In effect, in deciding the extent of their co-operation, individuals give a hostage to fortune, the outcome of which depends on how their partners respond. The choice being made is therefore between short and long term interest: whether to take a larger slice now and risk a smaller pie later or visa versa. What that choice ultimately depends upon is the promises others make and whether or not they can be trusted to keep them.

i. Co-operation and trust

The essence of trust in production it that it provides a guarantee that the agreed terms will be kept and that what is promised will be carried out to required specifications and quality standards, described by Sako (1992) as *contractual* and *competence* trust. But it goes beyond contract fulfilment to include *goodwill* trust. This includes a willingness to share information and ideas, honouring informal understandings and being ready to renegotiate contracts and, in a more social sense, being willing to give and take, to help in an emergency and to forgive occasional faults. (Burchell and Wilkinson, 1997) Goodwill trust gives the assurance that someone is so dependable that they can be trusted to take initiatives without the risk that they will take advantage (Sako 1992) and is essential for full co-operation within productive systems.

The hallmark of high trust systems is therefore that individuals and organisations working together provide open ended commitments to co-operate, the returns from which are realised over an uncertain, long time period. Mutual trust acts to reduce uncertainty by increasing the confidence in truth, worth, and reliability of people required to work together. The greater the trust each side has in the others, the greater will be the certainty that commitments made will not be abused. Trust, therefore, enables individuals to share expectations about the future, reducing uncertainty and allowing them to co-operate more effectively. (Lane and Bachman 1996, Luhmann 1979).

Uncertainty, though, is not confined to the unpredictability of the behaviour of those with whom there are close relationships. It extends to the environment in which the relations are formed and maintained. It therefore may prove impossible to maintain trust, not so much because of unreliability within the relationship, but also because of uncertainty about the environment may make it difficult to make and keep commitments. Environmental uncertainty can be divided into social and economic uncertainty. *Social uncertainty* arises from the social relations which pervade production and exchange, and the social and political environment within which these relations are formed and reformed. *Economic uncertainty* results from economic forces, such as changes in technology, resource availability, and consumer tastes. Risk associated with social uncertainty can be moderated by expanding contractual and less formal arrangements to include a wider range of relationships; or by establishing rules, standards and norms that rule out practices which create uncertainty. But economic uncertainty is much more profound because economic change it is often difficult to predict and impossible to reverse. Economic change may also be destructive of existing relationships and institutions and the greater certainty they engender. The countering of economic uncertainty may therefore require more radical adjustments and more broadly based institutions

ii. Institutional foundations for trust

The importance of building trust in a relationship for any individual or group can be expected to be influenced how dependent they are on the relationship and how long they expect it to last. For casual workers, each employment relationship is transient. As a result, they may believe that putting effort into building trust is not worthwhile. By contrast, establishing trust in an employment relationship may be much more important to a worker with highly specific skills, expectations of long-term employment and whose livelihood is highly dependent on the job. The sharing of such high levels of commitment with employers also contributes to an environment favourable to building trust. However, commitments in employment relations are often asymmetric.

Take for example the employment relationship in one of the plants in a multi-plant corporation. Workers, plant managers, corporate managers and shareholders all have a stake, but the importance of the stake to each of them varies. The well-being and future of workers and, perhaps to a lesser extent, plant managers, are tied up with the particular plant in which they work. On the other hand, the commitment of corporate managers is to the whole corporation. Its future, and that of its managers, may require plant closure in which case the interests of those employed there and the corporate mangers are diametrically opposed. The commitment of shareholders, is even looser than that of corporate management. Head count has become an important indicator of the value of shares and this puts jobs at risk. Moreover, the ready exit by shareholders via the stockmarket confronts corporate managers with the possibility of a takeover and concentrates their attention on *shareholder* value at the possible expense of other stakeholder's interests. In this example, it is the level of the commitment of the least committed stakeholder which determines the level of certainty at the shop floor and hence whether workers can afford to trust. Thus whilst the performance of an organisation depends on co-operation, which in turn depends on trust, the possibility for generating trust may determined by those with the smallest commitment. More generally, although the success of productive activity requires all the participants to be trustworthy, the importance of trust, the degree of dependence and their ability to respond to a breach of trust may vary between the participants.

The capability of building trust within an organisation also depends on conditions in its external relationships. [17] The ability to conclude effective internal agreements both influences and is to a degree dependent on relationships within supply chains. Costs, prices, credit terms, and speed of payment determine the financial capabilities of firms to meet the competing incomes claims of managers, workers and shareholders; and the quality and surety of delivery impinges on the firm's ability to meet customer requirements. In turn, the certainty that buyers will take delivery at agreed-upon terms is a major determinant of the supplier's ability to plan production and provide employment guarantees. Long-term trading relationships and the knowledge that customers will not switch suppliers (and visa versa) also make it easier to offer employment guarantees.

The nature of market competition is similarly an important determinant of the quality of productive system relationships, both internally and within supply chains. The use of market power to secure favourable price, credit and delivery terms is not conducive to the establishment of high quality trading relationships, nor is the disruption of supply and demand by unlimited price competition. In both cases, resultant low trust relationships can be expected have a cumulative effect as poor standards in employment and business relationships are extended throughout the productive system by protective and retaliatory responses.

This degenerative process, and the uncertainty it engenders, can be countered by the creation of generally applicable behaviour and performance standards to which individuals and groups are expected to subscribe. An example of this, is the effect of the interaction between the legal code and the private ordering of business relations through trade associations in Germany. (Lane and Bachmann, 1996) German trade associations regulate against such practices as late payment and unfair pricing. They arbitrate disputes and organise countervailing measures against excessive market power to which members may be collectively subjected. They also establish quality and product standards, and collect and disseminate technical and cost information. Generally, ‘by providing a common stock of knowledge and a shared set of norms for production and exchange, they co-ordinate expectations and remove ambiguity from inter-firm relationships’ (ibid, p18). The workings of trade associations are supplemented and strengthened by the German legal code which requires firms to trade in good faith, to establish just prices, and to engage in fair competition. This is further reinforced by the Standard Contract Terms Act, enacted to protect the weaker party to contracts. On the employment front, institutional and legal arrangements establish the rights to representation and collective bargaining, minimum terms and conditions of employment, effective health and safety protection and training; these citizen rights are furthered and protected by Germany’s works council system and sector level collective bargaining.

As a consequence, the industrial environment in Germany is characterised by norms, rules and standards which are either legally binding or made *de facto* obligatory by the wide and systematic involvement of the industrial community. These, and the code of business ethics they foster, constitute expected behaviour to which business people conform more as a matter of course than as a matter of business strategy. In turn, this helps to create an environment in which conflict is contained, performance is assured and information is provided; where markets are stabilised by trading standards; and where the ability of smaller and weaker companies to survive and prosper is not unduly threatened by unfair terms and conditions imposed upon them. Such an environment supportive of trust has been created in Japan by closely dependent buyer-customer relations backed up by supportive industrial policies and legislation (Sako 1992). In Italian industrial districts, a similarly high trust environment has been created by rather more voluntary means (Sengenberger, Loveman and Piore 1990). In each of these cases institutional power contains the abuse of individual power and create the conditions for trust in business and employment relations (Backmann, 1999).

In their study of the quality of inter-firm relations, Lane and Bachman, (1995) drew a useful distinction between *systems trust* generated by laws, rules, norms and standards and the more *personal* trust which exists within and between close relationships. Similarly, Dei Otatti (1994) distinguished between *collective* and *personal* trust, treating collective trust as capital in which productive systems invest and which creates an environment in which high standards are expected. Collective trust both enhances and is enhanced by personal investments made by individuals in the building and sustaining of trusting relationships with each other. The importance of these organisational and institutional structures is the social certainty they generate. The more effective they are in this respect, the more successful they will be in improving the availability of resources and information; reducing conflict and the need for monitoring; and increasing the scope for co-operative productive relations. The important point is that an environment is created in which there are mutual obligations to find solutions which take into account the interests of all parties involved and provide incentives for each party to co-operate fully in these objectives.[18]

Nevertheless, periods of fundamental change and growing economic uncertainty can put excessive strains on organisations and institutions and the trust they foster. For example, *collective voice* at the level of the firm or the sector may not be enough in periods of rapid industrial transformation, especially if the changes require radical industrial reorganisation (Dei Ottati 1997). There can be little doubt that such economic uncertainty is exacerbated by mass lay-offs and bankruptcies, the fears of which can trigger and sustain destructive competition. Breaking such a cycle in order to secure an orderly recovery, replace obsolete technology or restructure industry may require competition-limiting co-operation such as price-fixing, order-sharing and equipment scrapping. In Japan, for example, the consolidation of ownership or the creation of "crisis cartels" have provided an effective means to these objectives (Best 1992). Protection of labour standards by industry wide wage agreements has also proved to be an important mechanism for preventing erosion of the skilled labour force and for stabilising markets by taking wages and other employment conditions out of competition.

Effective representation and the related acceptance by unions and their members of responsibility for change played a central part in the evolution of the Swedish *model* and the co-operative environment it engendered. An early settlement between capital and labour at the national level established the rights of managers to manage, the rights of unions to organise and represent their members, and the rights of employees to share in the benefits of technical change. Swedish trade unions combined strong representation, a commitment to technical progress and *wage solidarity* by which wages were fixed by national bargaining so that poor performance by firms could not be compensated for by low pay. The political wing of the Swedish labour movement responded to the high levels unemployment in the late 1920s by accepting the state’s responsibility for joblessness and from this commitment developed the welfare state. The Swedish government also came to accept responsibility for the high rate of job displacement resulting from rapid technical change and developed active labour market policies combining high quality training, job creation and measures to encourage labour mobility.

In the 1960s, the disruptive effects of rapid economic progress and the growing shop floor opposition to Taylorist work organisation led to the enactment of a series of measures designed to limit managerial prerogative. These included the outlawing of unfair dismissal, the protection of the physical and psychological health of employees and the establishment of rights to paid leave for education. New legislation also introduced co-determination which gave unions the right to negotiate local agreements for the joint control of hiring and firing, work assignment and disciplinary matters. Involvement by unions and their members in the introduction of innovations in technology, improvements in work organisation and the work environment contributed significantly to the development of socio-technical systems in which job satisfaction, responsibility and learning were an integral part of the social relations of production. The beneficial effect of these developments was reflected in growing employer support for them as well as recognition of their positive impact on competitiveness (Persson 1997).

What the Swedish example demonstrates is that there are points beyond which firm and industry level measures cannot go. Moreover, institutions and organisations themselves may be victims of technical and other forms of economic change. In such cases, what are required are procedural, behavioural and performance standards designed to encourage the development of new industries, new forms of work organisation, training and retraining, industrial and occupational flexibility. But these broader objectives must be cast within the context of policies designed to secure full-employment and environmental protection, and trade and capital movement regulation aimed at preventing unfair competition, disruptive price fluctuations and global uncertainty. Increasingly, these questions need to be addressed at the international level where as yet the democratic interests of the vast majority of populations are not sufficiently well represented.

7. Summary and Conclusions

The conventional wisdom in economics and other social sciences, the accepted body of knowledge of how economies work, is a powerful force structuring productive systems and how they operate. The conventional wisdom is legitimated by the claims made by its proponents to have discovered scientific laws regulating economic and social activities. These claims rest on the objectivity of the underlying research which is compromised by the power context within which the knowledge is accumulated and the ideas refined and implemented.

Two main streams in the development of conventional economic wisdom have been identified: theories of exchange and theories of the management of production. Liberal economics, which evolved with capitalism, rests on the belief in egocentric *economic* man. Exchange provides the opportunity for self-seeking individuals to develop their capabilities; and competition in free markets both prevents the exploitation of power over resources and optimises economic well-being. With the increasing concentration of economic power, the liberal story has been modified, deployment of that power being justified by the theoretical argument that the markets work to select and foster those forms of power which benefit economic performance. However, any suggestion that such benefits can arise from collective action is denied on the grounds that they restrain the market forces which generate efficient economic outcomes. Liberal economics therefore serves to legitimise the power of large corporations whist illegitimatising the power that workers and small organisations can mobilise by working together. The incorporation of the logic of the market into law and policy in the Anglo/American system means that there are few inter-mediating institutions and organisations between large corporations and individuals.

Within liberal economics the immutable laws of the market are assumed to operate in the spheres of both exchange and production. However, from the late 19^{th} Century onwards the practical need to improve production efficiency led to the development of theories of the management of production which ran counter to liberal economics. The first stage was the elaboration of *scientific management*. This persevered with the notion of *economic man* but claimed to have discovered scientific laws of production which if properly implemented would provide management with the tools to efficiently organise work, provide incentives for full co-operation and serve as an impartial arbitrator for resolving the conflicting interests of managers and workers. The subsequent incorporation of socio-psychological knowledge into management of production theories by the human relations school challenged the idea of *economic man* and replaced it with the idea of *social* and *sentimental* man. Initially, human relations theory was concerned with identifying the physiological and social needs of workers and using this knowledge to improve the performance of Taylorist forms of work organisation. Further development led to the proposition that the greater involvement of workers in the planning and execution of work as part of a group activity improved their socio-psychological well-being and released their creativity.

Thus, in the development of the theory and practice of work organisation there has been a progressive shift away from the notion of the 'invisible hand of the market', through the idea of the 'visible hand of management' guided by engineering science, to view that hand of management requires more covert guiding by psychology and sociology. In this transformation, management's role has been redefined from that of authoritarian, however benevolent, initiator, organiser and director of work to that of a democratic 'facilitator' of a participatory, cooperative and self-regulating system. In this process, workers have been reconceptualised from *factors of production*, compelled when necessary into compliance with contractual promise, though passive participants in centrally planned and regulated work systems, to full partners in co-operative production. This evolution in the roles of management and workers has been accompanied by a redefinition of the workplace from being 'pluralistic', where interests of the two sides are separate and potentially conflictual, to being ‘unitary’, where their interests are in common. In general, while developments in liberal economics have justified the increasing centralisation of power, developments in theories of production have required an increasing decentralisation of responsibility for production.

These separate developments of the logic of the market and the logic of the management of production have had quite contrary effects. The distributional interests of business prioritise the logic of the market whilst competitiveness in product markets prioritises the logic of the production management. Moreover, at the policy level, especially in the Anglo/American system, the distributional interests of business predominate so that the logic of the market dictates labour market, industrial, competition and corporate governance policy. The prioritising of the logic of the market in this way means asymmetry in commitment, for whereas the pre-eminence of the market means that employers can only make conditional commitments to their workers, the efficient management of production requires workers to make unconditional commitment to their employers. The unconditional demands made by management require workers to be totally committed to organisational objectives and to collectivise their effort, while the conditional promises made by managers mean that workers are readily disposable and that risk is individualised. In Wood’s words (see above), there is no evidence that workers have failed ‘to develop themselves in order to accept fresh responsibilities.’ Rather, the evidence is that neither employers nor governments have ‘taken the responsibility for providing the context in which this can happen’.

Meanwhile, sandwiched between the needs of the market and the needs of production, the new forms of work organisation have thus become new forms of exploitation, made more sophisticated by worker involvement in the process. But as with more traditional forms of exploitation, the new forms are counterproductive. Increased work intensification and employment uncertainty have served to lower trust, reduce morale and motivation and turn stress into a major industrial disease. Not surprisingly, the greater involvement of workers has not diminished their sense of need for trade union protection, or the importance of representation, independent of management, in their working lives (Burchell, et al., 2001).

The central problem is the clash between the conditions for promoting co-operation and the way markets operate. This is not to suggest that co-operation in production and markets are necessarily incompatible. The problem is that markets, as with other institutions in productive systems, serve two separate and conflicting purposes. Firstly, they serve creativity by providing the opportunity for developing competitive strategies based on improved products, processes and organisational forms so that superior forms of work organisation can better meet consumer needs. In this way, markets provide the means by which the mutual interests of consumers, owners, managers and workers can be realised. But, secondly, markets also provide the opportunity for the exercise of relative power and the securing of advantage in distribution. In this, the interests of consumers, capitalists and workers are sharply divided and unrestrained rivalry is potentially destructive of the co-operation in production upon which creativity depends.

Expressed in the terms of the productive systems analysis, the mutuality of interest inherent in production has found its expression in theories of production management whereas theories of markets encapsulate the conflict inherent in distribution. However, the relationships of power within which the theories have been formulated have led to a denial of any significant misuse of capitalist power in markets or production, and consequently any need for countervailing forces. Thus, rights of corporations to pursue their interests in markets and managerial prerogative in the management of production are couched in terms of their service to the public interest. Any hindrance to market forces or the exercise of managerial prerogative is then deemed inherently anti-social, effectively ruling out the possible development of institutions and organisations by which the contradictions between mutual and separate interests can be resolved.

In European, Japanese and other productive systems, where the management of production has played a more central role in policy making, the polarisation between corporate interests and those of workers and small organisations is much less than in the Anglo/American system. Rather, institutions and organisations have emerged to mediate these interests and to protect the weaker stakeholders. In this way, *institutional power* (Bachmann, 1999) has been deployed to curb individual power and this has given greater scope for the realisation of mutual interests and for the development of high road production and marketing strategies. A major threat to this enlightenment is the neo-liberal revival following the inflationary crisis of the 1970s. This has revitalised the logic of the market and strengthened the powers it serves. In the Anglo/American system, this has increasingly polarised income and wealth and added to the difficulties of reforming production. In turn, the pressure for international standards of trade and finance has become increasingly globalised. This has extended the influence of liberal economics, and the threat it poses to the institutional and organisational framework supportive of the realisation of mutual interest in production. As a consequence, despite the superior competitive performance of the countries which took the lead in demonstrating the competitive advantages of co-operative forms of production they are currently being pressed to deregulate their labour and product markets and a scale down welfare provision. This no doubt resonates with the economic powerful in those systems with most to gain from deregulation, and those serving their interests, so that support for neo-liberal solutions is gaining ground. How far the countries which showed the benefits of decency and trust follow the US and UK's route will determine whether or not the world progresses further into a new dark age - of extending and deepening inequality, poverty, exploitation and production inefficiency. But that is another and unfolding story.

Notes

[1] The Golden Age refers to the 1950's and 1960's when there was unprecedented economic growth, high levels of employment, and growing general prosperity in developed countries plus an accelerated rate of progress in the less developed. The Golden Age was bought to an end by the inflationary crisis of the 1970's. See Glyn, Hughes, Lipietz and Singh, 1990.

[2] This is worked out in detail in Wilkinson 1998.

[3] O'Sullivan 1998; Lazonick 1991.

[4] For development of these ideas see Biracree, A., Konzelmann, S. and Wilkinson, F (1997)

[5] Which he considered to be the fourth factor of production together with land labour and capital.

[6] A term Marshall preferred to `competition' because of the need for a term `that does not imply any moral quality, whether good or evil, but which indicates the undisputed fact that modern business and industry are characterised by more self-reliant habits, more forethought, more deliberate and free choice' (1947, p. 9-10).

[7] Marx 1976, Chapter 25 and, especially, pp. 762-772.

[8] Under the Master and Servant Acts the Justices of the Peace were empower to punish workers for any 'misdemeanour, miscarriage, or ill-behaviour' and quitting employment before the end of the agreed time by abating wages, discharging them from their contracts or by imprisonment. The magistrates sat daily so that the Master and Servant Acts so they could be speedily enforced. Prosecutions never fell below 7000 a year between 1854 and the repeal of the Acts in 1875 and peaked at over 17000 in 1872 (Deakin 2000)

9 When choosing as the minimum standard of living for his study of poverty in York a physiological minimum based on labour efficiency. Rowntree linked his anti-poverty campaign to industrial performance' (Biggs 1964).

10 Blyton and Turnball (1994), Towers (1996) and Applebaum and Batt (1994) provide surveys of the HRM literature and debates about its deployment. Cully et al (1999) reports on the use of HRM practices in Britain as does Wood and Menezes (1998).

11 Wood (2000) p. 130.

12 Foreword to the White Paper, *Fairness at Work* Cm 3968 (1998), at p. 3.

13 For review of the evidence of the effect of clustering HRM strategies on company performance see Slinger (2000) see in particular Ichniowski, et al (1997).

14 Applebaum and Batt (1994) in their extremely valuable study identified 4 main systems of cooperative production: Japanese lean production; Italian flexible specialisation; German diversified quality production; and Swedish sociotechnical systems. The Japanese and Swedish systems are more firmly rooted in Taylorist mass production than the German or, particularly, the Italian. But what the four systems have in common is the importance given to high levels of worker training and the success they have achieved in closely involving workers at all levels in the organisation and management of production, in product and process innovation and in the development of organisations and institutions designed to facilitate cooperation working relationships.

[15] Inter-firm relations in the Anglo-American Britain have been typified as “adversarial dealings between short-horizon contractors, each party seeking out its immediate advantage”; market individualism which has traditionally driven English law of contract. (Brownsword 1997, p.255).

[16] Total value added can be taken to include material and socio-physic component. But one side gets in non-material terms is unlikely to limit what the other side can get.

[17] For discussion of this see Konzelmann Smith (1996).

[18] For the development of these ideas see International Contributions to Political Economy, Volume 7 and Wilkinson (1999)

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