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**THE CONCEPTUALISATION OF INDUSTRIAL RESTRUCTURING: THEORETICAL  
UNDERPINNINGS AND PROSPECTS.**

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# The conceptualisation of industrial restructuring: theoretical underpinnings and prospects

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## The conceptualisation of industrial restructuring: theoretical underpinnings and prospects

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**Abstract** In this paper a contribution is made to the growing debate surrounding contemporary industrial change. Beginning with a definition of economic restructuring, attention then moves on to a consideration of the labour and production process transformations which are associated with major periods of restructuring. The focus then shifts to an investigation of the explanatory frameworks which have been offered to account for such shifts, and concludes that new insights are to be gained by drawing upon a spectrum of theoretical approaches which have perhaps hitherto been neglected within restructuring analysis.

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Industrial geography has recently undergone a period of theoretical questioning in the light of accumulating evidence for a fundamental shift in the British, indeed western, economies. Now more than ever explanatory frameworks are being scrutinised and criticised in a search for theoretical progress. However, many questions remain and the discipline continues to be strong in its diversity and challenging in its controversy.

In this paper an attempt is made to outline the evolutionary nature of change within capitalist economies, and to argue that a new regime is emerging within the U.K. economy, one which is changing both its organisational and spatial configuration, and one which is as yet little understood. This most recent

change represents a new period of restructuring within the British economy, since while there are certainly elements of continuity, some quite radical shifts are also manifesting themselves. Attention then moves to an investigation of the explanatory frameworks which have been offered to account for contemporary change. While the analysis of economic restructuring has typically been couched in structuralist terms, it is suggested here that new and more profound insights into the dynamics underlying economic change are to be gained by drawing upon a spectrum of theoretical approaches which have perhaps been neglected within restructuring analysis.

#### Defining the notion of restructuring

Firstly, an attempt is made to define exactly what the term 'restructuring' means, since it is an oft-alluded to notion, yet one which is rarely rigorously spelt out. It is important to differentiate between major periods of restructuring, and more gradual and ongoing adjustments which all firms undergo, but which do not warrant the use of the term restructuring. Economic change comprises a variety of processes which involve greater or lesser degrees of reorganisation and realignment, in both spatial and organisational terms, in an attempt to improve profitability and competitiveness. Restructuring is more than this, however, and implies a series of changes which in sum constitute a new and different productive regime, a markedly different spatio-organisational configuration to that which has gone before. Aptly expressed by Walker and Storper, the restructuring process is rather like "rolling up the carpet from behind", with the survivors of each transition being

"A new breed in terms of scale and organisation..bearers of a new breed of products and processes. Conversely, old products, obsolete processes and uncompetitive plants and firms

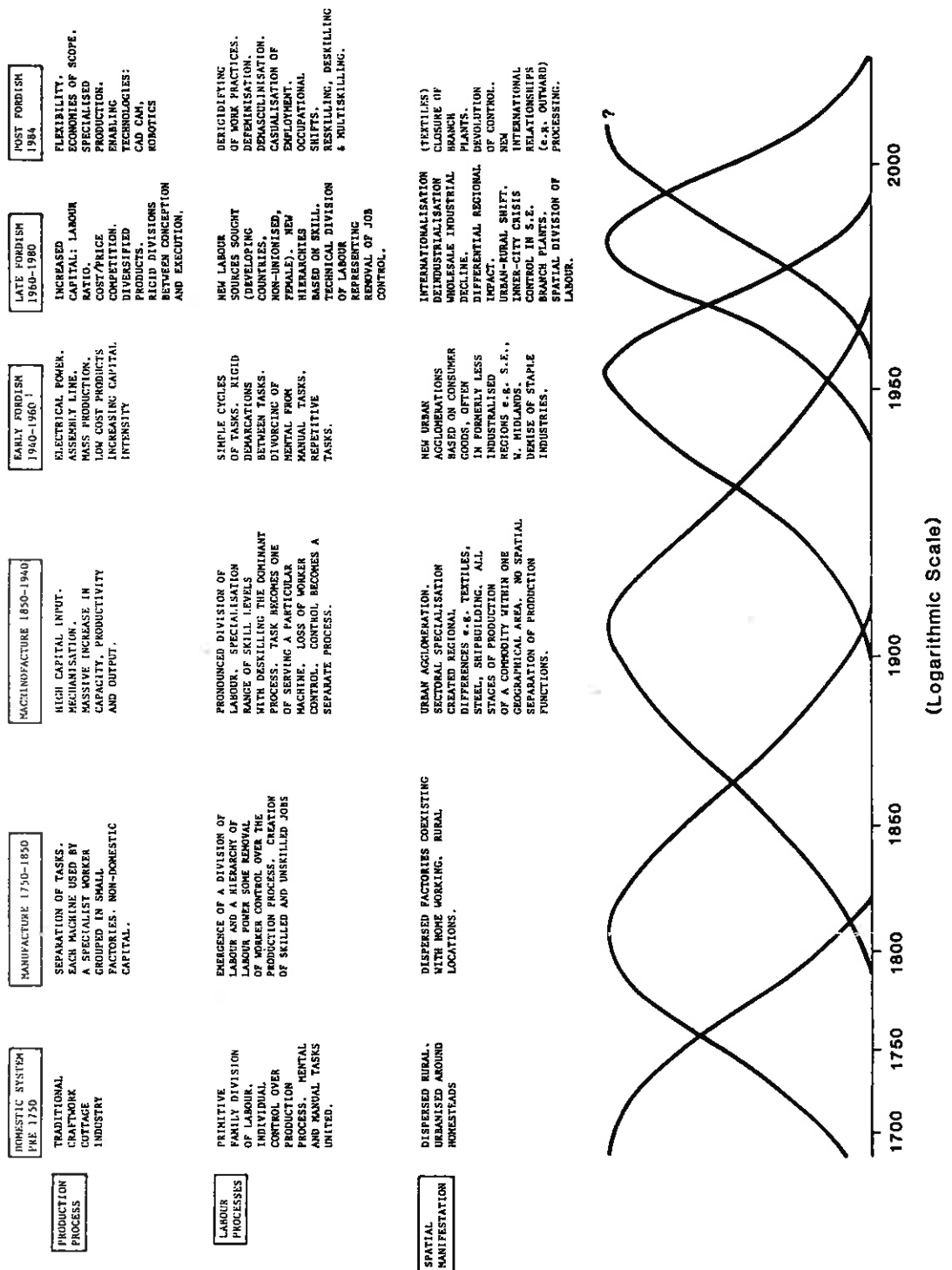
disappear".  
(Walker and Storper 1981).

It is possible to identify historical shifts within capitalist societies, from one major type of labour and production process to another. Such shifts represent a transition from one established regime to another, and imply a restructuring and reordering of production in both spatial and organisational terms. Each phase represents a new and different way of combining labour and capital in order to increase profitability or competitiveness, in accordance with the capitalist imperative of accumulation. While it would be an oversimplification and misrepresentation of reality to rigidly delimit the times at which such transitions occur, it is nevertheless possible to identify several distinct periods within the evolution of the British economy. The basic point is that restructuring should not be seen as a 'once and for all' transformation, but is an overlapping process, with each new 'order' building upon what has preceded it to form a deep palimpsest.

Figure 1 identifies the series of phases of capitalist development, in Britain. Each new stage has initiated an increasing spatial and functional division of labour, with the spatial patterns that emerge being a reflection both of the requirements of production and of the inherited characteristics of an area (Massey 1984, Perrons 1981).

Interesting in this respect is the striking similarity between these periods of development and the waves of economic development postulated by Kondratieff, and later, by Schumpeter (1982), who argued that the economy develops in a series of 'long waves' driven by innovation. Simply stated, a period of recession is followed by a depression, during which time unemployment is high but product innovation is also high.

**Figure 1. Changes in the production and the labour process and their spatial implications.**



The latter leads the economy into recovery, followed by a period of prosperity which is associated with high growth, high process innovation and low product innovation. Ultimately, excess capacity forces the economy back into recession, with this long wave 'clock' being said to revolve every 50-55 years. Evidence here suggests that the revolution of the clock may be accelerating. The diagnostic features of each wave are now discussed, firstly in structural, and then in spatial terms.

#### **Changes in the production and labour process**

**The domestic system :** this system, evident in the pre-1790 era, was essentially a rural organisation in which domestic industry and agriculture were combined to create a cottage industry system. This was a domestic organisation which involved all members of the family unit. Since they worked as a team, each member of the family could specialise on just one stage of the production sequence, such that a primitive division of labour was exercised. Nevertheless, freedom of control over the production process was the dominant characteristic of the domestic system, with mental and manual tasks being united within the labour process, such that workers were craftspeople who were responsible for the production of their goods.

**Manufacture:** this system is characterised by the amalgamation of formerly independent labour into a factory system, which was a slow and piecemeal affair, occurring throughout the nineteenth century. The early factory system was characterised by the co-existence of homeworking or 'putting out' alongside factory work. What was formerly the product of one individual craftsman became the product of a number of workers who completed only part of the task and increasingly came to be located under one roof in the factory. The emergence of this system revolutionised individual working patterns, as workers became part of a team,

'The factory becomes...an engine, the parts of which are men' (Marx, Penguin version 1978a) It was at this time that the division of labour became marked, and a hierarchy of labour power developed:

"The various operations of the hierarchy are parcelled out among the labourers according to both their natural and their acquired abilities" (Marx, Penguin version 1978a).

Herein lies the early differentiation between skilled and unskilled workers, the latter performing the simplest of tasks and effectively being divorced from crafted work. Crucially, what early manufacture allowed was the removal of decision making within the production process from the workers, who became functioning 'cogs' within a wider system which was under the control of the owners of capital.

"The habit of doing only one thing converts him into a never-failing instrument, while his connection with the whole mechanism compels him to work with the regularity of the parts of the machine" (Marx, Penguin version 1978a).

**Machinofacture:** this phase is characterised by the application of mechanisation to factories, which reversed the relationship between workers and the means of labour:

"Instead of wielding tools, the workers became appendages of the machines" (Aglietta, 1979).

The gradual mechanisation of the production process dramatically altered the nature of paid work: the invention of more complex machinery required not only a more pronounced division of labour but also some specialisation, since the machines differed from one another and needed different operational skills. The introduction of mechanisation into the production process therefore overthrew the former division of labour, remoulding it and transforming the nature of the labour process:

'in manufacturing the workman makes use of a tool, in the



factory the machine makes use of him...the lifelong specialty of handling one and the same tool becomes the lifelong specialty of serving one and the same machine' (Marx, Penguin version 1978a).

The widespread introduction of mechanisation occurred not simply by virtue of its greater efficiency, but because it enabled yet further removal of workers' control over the production process, rendering them vulnerable by virtue of their dispensability. Since production was dictated by the machinery not by the worker, a person could be replaced by another quickly and easily, and with minimal disturbance to production. Work was also deskilled and robbed of its interest and intellectual challenge, with workers being continually reminded of their subordinate position:

"The factory operatives should be kept in wholesome remembrance of the fact that theirs is really a low species of deskilled labour..the master's machinery really plays a far more important part in the business of production than the labour and skill of the operative, which 6 months education can teach and a common labourer can learn"

(The Master Spinners and Manufacturers Defence Fund, 1851, quoted in Gorz, 1976).

Crucially, by making control a separate function, the factory system was instrumental in denying the workers any choice regarding the conditions and methods of production.

Fordism: while this term applies strictly to a revolutionary mass production technique pioneered by Henry Ford at the beginning of the twentieth century, it has been extended to generically refer to an industrial era which reached its most dynamic expression in the post-World War II boom days when Britain has 'never had it so good' (Harold Macmillan). From then on, the Fordist system began its gradual decline, to be ultimately replaced by an economic configuration which was more appropriate for a world economy moving towards the twenty-first century. Nevertheless, it is true to say that Fordist mass production techniques and all that went with them persisted as a

major mode of production until the 1980s. For analytical purposes, two chronological sub-divisions of the system can be identified.

The modernisation era: early applications of Fordist mass production techniques. Fordism refers to the development of assembly line processes which regulate the pace of production and achieve economies of scale. Referred to as the 'modernisation era' by Cooke, this phase was conceived by many as a golden age of growth and full employment:

"industrial restructuring was often looked upon...as a positive sum game. Productivity could be achieved without tears; firms would be more efficient; workers would achieve higher incomes". (Cooke and Morgan 1985).

Fordist techniques of mass production were hailed as the panacea for firms trying to fight damaging competition in mass markets: large volume, low cost products were envisaged as a means of cutting costs and increasing revenue. Such new technologies radically transformed production through a process of extreme division of labour. Production workers were given simpler cycles of tasks to perform, with the aim of intensifying the production process through continuous or semi-continuous machine running. Such mass production techniques tended to be labour saving process innovations rather than being aimed at product innovation, and herein lies one of the earliest roots of the failure of Fordist mass production techniques and their subsequent demise.

In terms of the labour process, routineised mass production implied the homogenisation of tasks. Jobs were broken down into their component parts and were redesigned by work study specialists, to become essentially a set of repetitious movements. Workers became immobile, performing simple tasks on products which passed them along the line. Rigid demarcations

were constructed around exclusive job descriptions, and there occurred a divorcing of mental from manual tasks, the latter being transformed from skilled craft occupations to essentially deskilled tasks, which came under close control from a centralised and hierarchical bureaucracy.

The deindustrialisation era: extensions of Fordist mass production principles. While many of the features outlined below are not specifically diagnostic characteristics of Fordism in its narrowest sense, they were nevertheless made possible by the continuation of a Fordist productive regime. The mass production processes which had become widespread during the 1950s and 1960s led to new spatial and organisation structures being developed on a greatly enlarged scale which transformed the nature of the national and international economy. It was at this time that

"The...capitalist economy was heaving itself into a new position, a new international division of labour was asserting itself, and the British economy was both changing its role and losing out".

(Massey, 1984).

An important feature of the late Fordist regime was the concentration and centralisation of capital into the hands of very large enterprises which were increasingly multi-product, multi-functional and multinational in character. (Massey, 1984, Taylor and Thrift, 1982). Such giant firms increasingly came to operate within an international framework and investment and disinvestment decisions took as their basis the global frame of reference. Thus, while in 1950 most multinational corporations (MNC's) were in fact only barely multinational, by 1970 this had changed dramatically: of the 135 large MNC's base in the U.K. and Europe in 1970, 75 had subsidiaries in 6-20 countries, while 29 had subsidiaries in more than 20 countries. (Taylor and Thrift, 1982). Such global corporations were able to fragment their

production process and locate different stages of production at different locations in order to maximise corporate profitability and efficiency. Alongside this process of multinationalisation, the growth of large corporations through organic growth and acquisition and merger processes resulted in an increasingly high concentration of corporate headquarters within the south-east, while the 'branches' were located within the regions, such that former problems of dependency upon one or two major industries within a region during the machinofacture phase, gave way during the 1960s and 1970s to the problems of branch plant economies depending upon external control:

"Industry ..(in South Wales)...is now largely controlled from elsewhere".  
(Humphrys, 1972, quoted in Watts, 1981).

It was within the branch plants that routineised and increasingly automated production methods were concentrated, while the strategic corporate decisions relating to investment and disinvestment decisions, and crucial research and development functions, were generally absent, often being confined to the corporate headquarters. In the specific case of Scotland, Firn (1975) argues that rapid increase in external control during the 1970s meant that the long term strategic decisions on investment, production, purchasing, sales and personnel were increasingly being made outside the Scottish economy, with the effect that

"The plant managers in the regional subsidiaries are reduced to...'competent calculating machines'. Thus, much of the drive, enthusiasm and invention that lies at the heart of economic growth is removed, reduced or at best suppressed" (Firn, 1975).

Structural weaknesses however were beginning to emerge across a wide range of industries during the 1960s. Although many traditional industries such as shipbuilding and textiles had been losing jobs since long before the 1960s, the important feature of

late Fordism is the wholesale nature of industrial decline. Not only did traditional industries continue on their downward spiral, but newer industries such as mechanical and electrical engineering, which had formed the basis for the early application of Fordist techniques during the post-war boom period, also began to shed labour. It is this absolute as well as relative decline in manufacturing employment which is here referred to as 'deindustrialisation', a process which is now well documented (Blackaby 1979, Cooke 1980). It was to continue throughout the late Fordist era with differing intensities, and although the traditional areas of industrial specialisation, such as the north-west of England, bore the brunt of the process, the important point to recognise is the generality of manufacturing decline, from which few regions were exempt.

The emergence of giant multinationals, operating at an international scale, had important implications for the labour process and employment more generally. New reservoirs of labour were sought with particular targets being rural areas, non-unionised segments of the workforce, and workers in less developed countries. The stimulus to this was an attempt to cut labour costs, to gain even greater control over the workforce and to reduce the likelihood of industrial action. Instrumental to these changes was the existence of pools of female labour, which were tapped by virtue of their lower labour costs and lower levels of unionisation, the result being that the social composition of the labour force changed, as a process of 'feminisation' of manufacturing took place, with females coming to represent a growing proportion of the workforce. Providing these alternative reservoirs remained, the Fordist mode of production could be sustained.

This tapping of new labour sources, alongside the erection of

rigid divisions between the conception and execution of tasks, provided the foundation for a new set of hierarchies and disparities, predicated upon skill and levels of job control, which came to characterise large organisations during the 1960s and 1970s (Massey 1984). Changes in the production process, standardisation of commodities and automation resulted in a deskilling process as the need for many skilled techniques on the factory floor diminished. At the other end of the spectrum, the changing structural composition of the economy and heightened competition increased the importance of skills in management and in research and development. The latter emerged as particularly important during the 1970s, as the pace of innovation and technical change quickened. The division of labour which emerged comprised low level assembly workers at the lowest tier in the hierarchy, followed by skilled non-automated employment with its critical characteristic being its decreasing quantitative importance, as standardisation and automation reduced the need for pools of labour with traditional skills. Yet other stages of the production process required research and development teams, jobs involving high levels of conceptualisation. Finally, heading the hierarchy was the corporate control centre, employing top level decision makers taking strategic investment and disinvestment decisions. These changes created occupational shifts as non-manual employment grew relative to manual work, and traditional craft skills went into decline while white collar and managerial positions burgeoned.

#### **Spatial implications of the restructuring sequence**

The transformations in the production and labour process outlined above also incorporate an explicitly spatial dimension as both firms and labour are realigned in space. Indeed, space can be

envisaged as the geographical manifestation of the processes at work: restructuring does not occur in a vacuum and firms are not faced with an undifferentiated geographical surface; rather, they positively use spatial variation and relocate production and labour in accordance with the opportunities available for the realisation of profit. In this way the spatial configuration of production has changed through time as locational imperatives alter (see Figure 2).

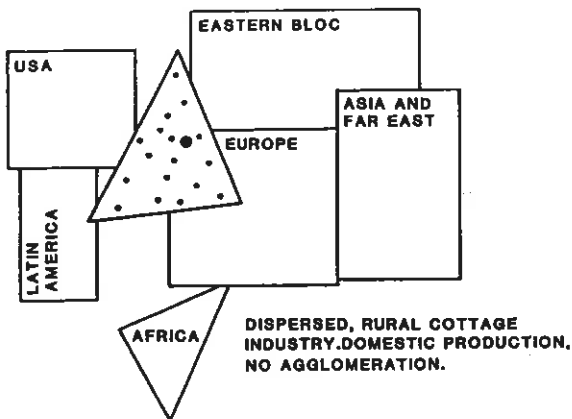
**The domestic system:** the individual homestead comprised the production unit within this early form of spatial patterning, with the cottage industry system implying the organisation of production around the individual rural homestead (stage I). The spatial patterning therefore was widely dispersed.

**Manufacture:** the configuration of production during this stage was characterised by spatial dispersion of factories which co-existed with homeworking. The reasons for such a spatial patterning were said to be 'to avoid guild restrictions and higher labour costs in towns and also to obtain access to water power' (Perrons 1981) (stage II).

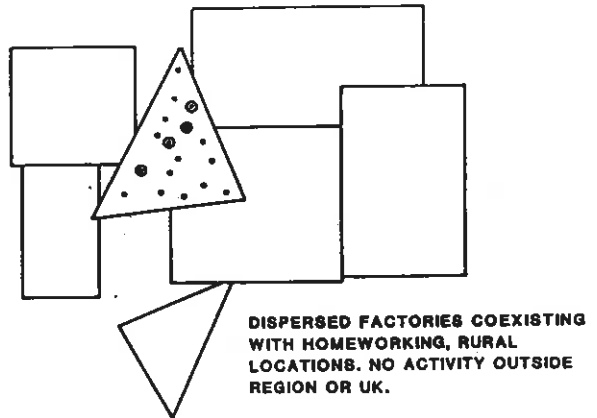
**Machinofacture:** in spatial terms, the application of mechanical principles and power, alongside the need for sophisticated infrastructural support systems meant that production shifted from rural locations towards towns. The newly emerging industries were not faced with an undifferentiated geographical surface, and concentrated production in areas most propitious in their provision of the requirements of production, and in particular power. The result was that accumulation centres became polarised on the basis of sectoral specialisation (Massey, 1984), such that regional differences based on industrial structure was the characteristic feature. This was the era of the 'coal regions' of South Wales, the West Yorkshire wool textile region, and the

Figure 2 Spatial implications of the restructuring sequence

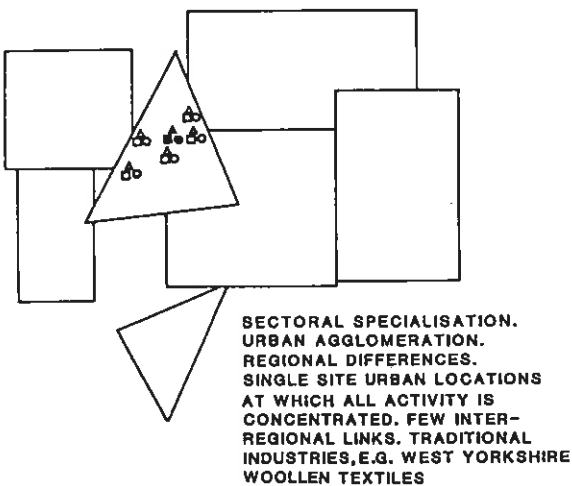
**I DOMESTIC SYSTEM**



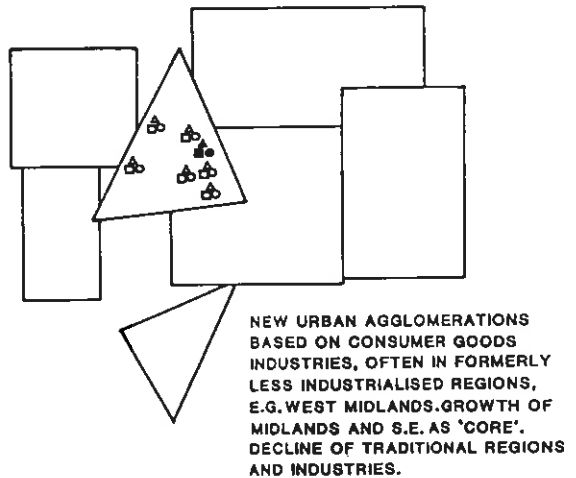
**II MANUFACTURE**



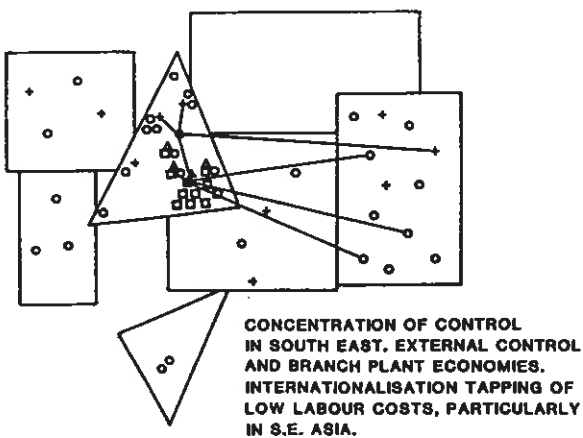
**III MACHINOFACURE**



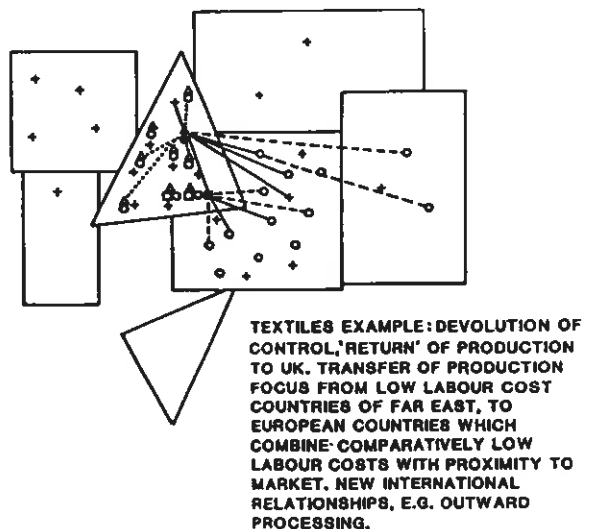
**IV EARLY FORDISM**



**V LATE FORDISM**



**VI POST FORDISM**



**KEY**

- HQ/CONTROL
- ▲ MANAGEMENT FUNCTION
- PRODUCTION FUNCTION
- ✦ SALES
- NEW INTERNATIONAL RELATIONSHIPS, E.G. JOINT VENTURE
- ..... NEW INTER-FIRM RELATIONSHIPS, E.G. SUB CONTRACTING
- ONE ENTERPRISE'S THEORETICAL SPATIAL CONFIGURATION



Lancashire cotton areas (Stage III). All parts of the organisation were spatially concentrated such that there was no spatial separation of production functions.

**Early Fordism:** this stage is associated with the emergence of 'new' industries such as electronics in the Midlands and the South East. The geography of the U.K. was profoundly changing, as manufacturing activity, freed from its dependence upon basic raw materials, located itself within the 'core' regions of the country, while traditional regions such as the South Wales and the North West became increasingly 'peripheralised'. The decline of staple industries such as coalmining and shipbuilding implied the decline of the regions within which they were typically concentrated: South Wales, Clydeside, the North West, as 'sectoral decline brought with it specifically regional decline' (Massey 1978) (stage VI). Yet at the same time, the emergence of new agglomerations allayed concern over the 'regional problem'. Regional disparity as a political issue was effectively 'brushed under the carpet' by the euphoria of the post war boom period when Britain had never had it so good.

**Late Fordism:** during this era a new set of spatial structures came to characterise the British economy. While traditional industries continued on their downward spiral during the 1970s and 1980s, they soon came to be joined by the newer industries such as light engineering, typically associated with the post-war boom. Few areas escaped the deindustrialisation process, so that regional differences in manufacturing performance appeared to 'converge' (Keeble 1976). However, this did not imply an end to regional inequality. Rather, the form of inequality was changing, such that a different set of indicators needed to be used to capture the newly emergent configuration of spatial inequality, as former regional divisions were replaced by intra-regional

disparities. The mid-sixties can be seen as a watershed in this respect (Keeble 1976).

(i) Firstly, in earlier decades growth had been concentrated in 'core' manufacturing regions such as the West Midlands and the North West, whereas from 1966 onwards a reversal of these trends became apparent, as formerly underindustrialised regions grew at the expense of the the industrial core. While manufacturing employment change between 1965 and 1975 was -15% in the West Midlands and the North West, the comparable figure for East Anglia was +19% (Keeble 1980).

(ii) Simultaneously, there occurred an urban/rural shift as the industrial concentrations of the conurbations declined in favour of rural areas (Fothergill and Gudgin 1979, Keeble, 1980).

(iii) Finally, at the finest level of resolution, the mid-1960s witnessed a decentralisation of production out of metropolitan cores, which ushered in the inner city crisis by favouring more suburban locations, the beneficiaries of inward investment under the auspices of government regional policy during the 1960s:

"The inner cities have become candidates for intensive care as the new generation of companies has withdrawn the life-support of new investment...hardened arteries of congestion, obsolescence and a worn-out infrastructure"  
(Lloyd and Dicken 1983).

While the decline of manufacturing activity had important spatial implications, so too did the organisational changes which typified the late Fordist era. The emergence of giant multinationals meant that companies could invest or disinvest at an international scale, such that the locational pattern extended beyond the developed to the developing world by the 1960s in order to expand markets and to tap comparatively cheap labour sources which were available within less developed countries. This was particularly the case with labour intensive industries such as

clothing, and gave rise to the new international division of labour theory (Froebel et al 1981), whereby labour utilisation is conceptualised as being increasingly organised on an international basis.

Alongside such an international division of labour, there emerged a new spatial division of labour within the U.K. Large multi-plant enterprises adopted investment and disinvestment strategies which enabled the divorcing of different components of the production process and their spatial separation, such that a spatio-technical division of labour emerged. Different parts of the labour force therefore themselves came to act as 'locational' factors. A sequence of stages of production which representing varying degrees of removal of job control and deskilling arose (Massey 1984). Low level assembly workers involved in the mass production of standardised commodities in branch plants were typically assimilated in areas suffering from the collapse of a previously dominant industry such as mining or shipbuilding, or in rural areas, where female labour was available without former experience of capitalist wage relations in employment. Typical examples include the clothing industry within the north east, where women were employed, often in part-time or temporary work. The next tier in the spatial division of labour comprised skilled non-automated employment which typically came to be located in old areas of skilled labour such as the large conurbations, with its critical characteristic being its declining importance. The tasks of research and development were again spatially divorced from other stages in the production sequence and tended to be located in selected metropolitan areas, largely in the south and south east, where contact with other research agencies was facilitated and where a pool of highly skilled technical staff was available. Indeed, Buswell and Lewis found

that more than 49% of the UK's private industrial research establishments were concentrated in south east England in 1968 (1970).

Finally, the headquarters location of the enterprise, typically located in the south-east, and predominantly in London, was where top-level corporate decisions were taken, and where face to face contact between top executives was necessary.

Clearly, this sequence constitutes a new spatial restructuring of the economy which was enabled by the changing nature of organisations during the 1960s and 1970s. This late Fordist restructuring era represented a radically different shift to that which had been experienced in earlier decades: the old sectoral division of labour had gone into accelerated decline and in its place had arisen a spatial division of labour resulting from the inter-regional spatial structuring of production in individual industries. Crucially, the former sectoral spatial specialisation associated with the machinofacture phase only produced a regional problem when the sector went into decline. In contrast, geographical inequality is inherent in the spatial structure which emerged in the 1970s. This new utilisation of space is actually predicated upon spatial inequality: it requires it and necessarily reproduces it (Massey 1979). Crucially, the form and nature of the inequality ushered in during the decade of the 1970s was integral not only to decline but also to growth. Every one of the standard regions now included within it enormous variation, all carved into by the dereliction of the inner city. The signs were that the dynamics inherent in the restructuring of the 1960s not only entrenched the United Kingdom in a highly uneven geography, but also sowed the seeds for further inequality, albeit in a different form.

The dawning of a new era?

The decade of the 1980s has witnessed the inauguration of yet another switch from one established order to another, which is as yet in a turbulent and embryonic form, but which nevertheless represents a departure from much that has gone before. Although there are certainly elements of continuity, some quite dramatic shifts have occurred which are combining to radically alter the spatial and organisational configuration of the U.K. economy:

"Restructuring remains high on the agenda in the 1980s, but...its forms are now very different from those of two decades ago; indeed, many now emerge as mirror images of what was happening in the 1960s" (Cooke and Morgan, 1985).

The rigidities of Fordist mass production techniques are giving way to a new flexibility in a variety of guises. Firstly, the nature of the corporation is changing. The former processes of corporate growth and diversification through acquisition and merger are now set alongside corporate retrenchment and specialisation upon the most profitable activities. The once diversified conglomerate giants are being forced to reorganise their operations to become sleeker, more flexible concerns which can readily cope with the new demands of a changing international order. As Hymer recognised as early as 1972, such conglomerates were simply unsuited to the new economic climate, they were 'like dinosoars, large in bulk but small in brain' (Hymer 1972).

Secondly, in the sphere of production specialised products and services, customised designs and high value added products targeted at particular markets are coming to replace the mass production of standardised products. Late differentiation and rapid response have emerged as strategies to allow producers to flexibly and rapidly respond to the market. Indeed, there has been a marked shift of emphasis as firms have become more oriented towards sales and marketing, and it can be speculated that the

market is perhaps emerging as a new dynamic driving the system. The production process is now becoming vertically disintegrated with multi-skilling and the de-rigidifying of work practises coming to replace individual repetitive tasks and the strict division of labour associated with Fordism. Economies of scope allowing flexibility of action and permitting variety of response possibilities have replaced economies of scale, non-price competition has taken over where once price competition was paramount, with the focus of competition now being design, quality, performance and delivery rather than price. Such changes are radically transforming the nature of manufacturing.

A crucial factor within this emergent transformation has been the development and application of enabling technologies. Automated production lines have given way to a variety of new technological innovations such as Computer Aided Design and Manufacture (CAD/CAM), Computer Integrated Manufacture (CIM), robotics and computerisation of the production process. Preliminary research findings from a variety of researchers are indicating that such technological developments are having a quite dramatic impact upon a variety of industries (Guy, 1985, Camagni and Rabellotti 1988, Milne, 1988).

Such a restructuring of production is having far-reaching ramifications upon the labour market: while the 1960s was characterised by the feminisation of manufacturing and the deskilling of employment, the decade of the 1980s is witnessing not only the continuation of male employment loss in manufacturing, but also the emergence of female job loss as an important process along with a variety of quantitative and qualitative shifts in employment. Flexibility in the deployment of labour is becoming an increasing priority for firms and is emerging as a major plank in the drive towards the maintenance

or growth of profits. In essence, 'flexible manning' (Atkinson, 1984) involves firstly functional flexibility in the deployment of labour, including multi-skilling; secondly, numerical flexibility through altering the headcount in accordance with fluctuating demand. This may involve such schemes as temporary employment, zero-hours employment, the employment of government-subsidised workers on short courses, and short contract workers. Finally there is financial flexibility in adjusting wages in line with changes in the demand for labour, and also financial agreements which effectively undermine employees wage rights, examples of which include homeworking, which has been exhaustively studied by Allen and Wolkowitz, (1987), and also by Mitter, (1985) in the specific case of the clothing industry. Such forces are combining to dramatically transform traditional conceptualisation regarding the nature of waged work.

The spatial configuration of industry also appears to be changing. In the 1960s and 1970s attention was focused upon growth and investment, as manifested by foreign direct investment, domestic investment in 'green field sites', the opening of branch plants and a merger and acquisition boom. The emphasis now is on survival strategies necessitated by an era of recession and fierce competition both at home and abroad; and also on corporate deconcentration initiating sub-corporate autonomy, organisational devolution of control and the emergence of profit centres, by the firms at the forefront of this restructuring process. Moreover, internationalisation is taking a new form: cheap labour costs no longer dominate the production location decision, whilst new factors such as flexibility and proximity to market increase in importance. A variety of new inter-firm relationships such as joint ventures between different firms in different nations are emerging as means of maintaining international connections by

forging links which are in the mutual interest of both countries involved. Moreover, new linkages are becoming important between organisations, with unequal power relationships of dominance and dependency increasingly coming onto the corporate agenda, as sub-contractors become locked into contractual relationships, and the power of the retailer becomes an ever more potent force (Gibbs 1987). The forging of new relationships between suppliers and customers are essentially attempts to maintain control over production, whilst relegating risk to the next tier down in the productive hierarchy. Hence the increasing importance of sub-contracting. Such relationships simultaneously offer control over production on the part of the retailer whilst ensuring that producers have their 'fingers on the pulse' of changing consumer demands. An analysis of such changes appears in Crewe (1989).

Clearly, then, the new restructuring of the 1980s appears to be ushering in a process of employment casualisation and the undermining of worker rights. While the terms rationalisation, investment and technical change may still be useful indicators of the restructuring process, they mask a wealth of complexity, a mosaic of intricacy which can only euphemistically be termed 'flexibility', since while current processes may indeed be flexible according to the demands of capital, they clearly imply precisely the opposite for many of the victims of the battery of strategies dictated by a free-market economy.

#### **Economic restructuring: the theoretical underpinnings.**

Having documented in some detail the features associated with the different stages in the evolution of the U.K. space economy, it is appropriate now to focus upon the explanations which are offered for such dramatic reorganisations and to trace the causes of the shifts, recognising that while outcomes are fairly



easy to identify, the processes which give rise to them are far more difficult to unravel. Perhaps the major problem when trying to document causes is that a variety of forces are simultaneously at work, thus defying attempts to establish a typology of dominant causes. Moreover, the factors at work do not operate in a discrete or simplistic 'cause and effect' manner, rather, the chain of events are inter-related and weave complicated patterns of interdependency at a variety of scales, thus combining to produce a complicated and dynamic series of processes which are not amenable to systematic categorisation. Nevertheless, some form of explanation is clearly necessary if one is to progress beyond the mere documentation of events.

The different stages in the evolution of the British economy have in turn inspired different sorts of theoretical explanation, such that theoretical understanding has to some extent paralleled the evolutionary changes occurring in the economy and society more generally. Certainly, economic geography has, as an integral characteristic, a tendency towards paradigm shifts, as dominant modes of analysis replace each other through time.

The roots of such theoretical developments are to be found in both endogenous factors relating to the growing dissatisfaction and disillusionment with perceived modes of explanation, and in exogenous factors relating to the politico-economic context from which it emerged.

In this context, early statements regarding the nature of industrial change took as their basis neo-classical economic approaches, the aim being to move towards an understanding of the emerging industrial configuration associated with the manufacture-machinofacture phases. Neo-classical location theory represents a thread of theoretical understanding which

identifies the components of production and models the ways in which these create spatial and structural configurations. In an attempt to understand the locational rationale underlying the newly emerging centres of industrial agglomeration, Weber argued for the importance of transport cost minimisation as the central concern within the decision making process. This fundamental insight was refined through time by the introduction of other influences such as agglomeration and labour economies into the model. Later, others such as Hotelling (1929), Losch (1954) and Smith (1981), brought new insights into the original, somewhat inflexible model by incorporating notions of locational interdependence and satisficer locations, to replace the rather unrealistic assertion that a single point, least cost location will always be sought.

More recently, the neo-classical approach to location has been brought alive through the analytical powers afforded by Wilson and Birkin (1984a 1984b), who are developing theoretical and modelling methods of analysis to explore the potential of classical approaches. The ultimate intention is to integrate industrial location theory with other urban models such as residential models through dynamical systems modelling.

While the neo-classical approach has persisted as an important thread of explanation within human geography, by the 1960s external conditions had changed, and dissatisfaction with extant modes of explanation grew. Heavy industry declined in absolute importance and transport costs, for so long the dominant variable within locational models, declined in relative importance. Under the Fordist regime the giant organisation was born and new spatial configurations were ushered in.

The search for a more realistic appraisal of economic change manifested itself firstly in behavioural theory, which brought

the large organisation and its decision makers to the forefront of explanation. Pioneered by Krumme (1969), Wood (1969) and Townroe (1972), this approach focused upon the structures of control within firms and how these structures influence the behaviour of the organisation, in relation to goals such as profit making, and innovation, and translating these into spatial changes such as firm openings, closures, expansion and contraction. The approach rests on the complementary examination of two interacting contexts, the firm and its environment, and recognises the power of many large organisation to exert considerable influence over the environments in which they operate, environments which were becoming increasingly international in scale. In empirical terms Watts (1980, 1981) achieved much in forwarding our understanding of the issues of external control and branch plant economies, while Taylor initially focused more explicitly upon the issue of linkages between a firm and its environment, and studied the complete set of a firm's linkages which were believed to define the spatial context within which a firm operates and the area within which location decisions are made. Using data from the West Midlands ironfoundry industry, this spatial context is divided into three elements, an action space defined by material linkages; an information space defined by information flows; and a decision space reflecting the filtered information from all sources upon which a firm acts, (Taylor 1975, 1978). In an attempt to remedy the undertheorised nature of behavioural theory, Taylor then introduced an organisations perspective, arguing that useful insights can be gained by combining the principles and concepts of organisation theory with the empirical generalisations of geography (McDermott and Taylor 1982). Further insights were offered by incorporating the concept of power networks within an

organisations approach, recognising that organisations are unequal participants in webs of interaction which comprise controlling, competing and complementary organisations (Taylor 1982a). This reinterpretation of industrial linkages as the operational manifestations of power relationships is a particularly important concept, and one which has great contemporary validity. Particularly important in this respect was the structural contingency model (Taylor and Thrift 1979), which views the firm as functioning within a hierarchy of environments, with the success of its operations being contingent upon forces transmitted from these environments. What this approach recognises is that there is an integrity within the economic system, and that it is important to recognise all scales of activity, from the local, firm level to the international scale.

A further contribution was made by Taylor in his introduction of the notion of a segmented economy (Taylor and Thrift, 1982), in which a particular pattern of segmentation is conceived as "a number of business organisations with similar characteristics which are both the cause and effect of their membership of particular economic niches" (Keys and Thrift 1980). The argument is that the pattern of segmentation will change during periods of restructuring which will coincide with crises of accumulation, when the segments become less stable. Central to the present pattern of segments is a basic dichotomy comprising two major sets of enterprises, the small(er) firm and the large business organisation segment. Within each there are leader, intermediate and laggard companies.

The behavioural approach was eminently suitable as a framework with which to analyse the changes introduced during the Fordist era, since it recognised the importance of the processes of

acquisition and merger, and of external control at a variety of different scales. Moreover, while the earliest statements within this school of thought were criticised on the grounds that they were theoretically weak, the incorporation of many ideas from organisation theory, and in particular the introduction of the structural contingency model by Taylor and Thrift (1979) did much to elevate the behavioural approach to a position of theoretical respectability.

However, in more recent years, external conditions altered once again. Deindustrialisation emerged as an overwhelming feature of the British economy, the development of new spatial divisions of labour and the emergence of new disparities and inequalities across a variety of criteria, highlighted the fact that both traditional theory and newer behavioural approaches were inadequate frameworks with which to understand many of the profound changes confronting the British economy. There thus emerged a structuralist location theory, which was a reaction against the theoretical weakness of behavioural 'theories' and against the rigid assumptions inherent within neo-classical approaches.

The essential Marxian insight is that industrial change emerges as a result of the two crucial features of accumulation and class struggle which, very simply, can be conceived as the domination of labour by capital, whereby a class of capitalists are in command of the work process, and organise the latter for the purposes of producing profit. Through time, the capitalist class have re-organised the production and labour process along the lines of an increasingly fine division of labour, and the subdivision of the production process and the separation of conception from execution has ensured that control over the production process rests in the hands of the owners of capital.

Capital accumulation is the dynamic which drives the system, and is the fundamental conceptual building block upon which the structuralist mode of explanation hangs. The gist of the approach is that capitalists create a restless drive to expand the reproduction of capital and to develop the forces of production, which in turn entails the sorts of spatial and structural adaption and reorganisation which typify the process of restructuring. The argument follows that the focus for study must be this underlying structural dynamic, rather than either location, industry or any combination of them. New change processes are vital to ensure survival under the economic rules which prevail, and in this respect restructuring can perhaps be more accurately conceived of as adaptations to the existing mode of production in order to react and respond to changing external conditions, and thus to ensure the continued expansion of accumulation.

One crucial feature of this structuralist model of economic development is that it offers a coherent account of the crises which periodically hit capitalist economies, and which usher in periods of dramatic change such as that which typifies both the 'modernisation' era and the introduction of Fordist techniques of production, and also its recent demise and the emergence of a 'post-Fordist' regime. Briefly stated

"Capital accumulation periodically runs into barriers which, if not overcome, force the economy off a sustainable growth path and ultimately into open crisis (recession)".  
(Walker and Storper 1981).

The principal causes of this relate to the dynamic features of accumulation, namely, that capitalists as a body tend to overinvest and to invest too rapidly, due to the competitive nature of investment. The time-lag involved in such investments mean that the system is unable to adjust automatically, the

effect being an overaccumulation of capital and a resultant devaluation of excess capital. This situation, it is argued, ushers in a variety of short term crisis resolution strategies, which result in the development of new processes, techniques and methods of organisation, such that the system is in a constant state of flux. Such crises, then, stimulate vigorous efforts to revalue capital and restore profitability, by such means as corporate merger and the introduction of new techniques.

Simply stated, the logic of accumulation drives the capitalists towards certain goals which ultimately control the nature and scale of change. Most important among these are the desire to cut costs, to increase revenue, to increase sales and market share, and to control the production and labour processes, thereby reducing risk and uncertainty. In attempting to achieve such goals, use is made of a variety of 'levers of accumulation' (Marx, 1978b), which refer to ways of promoting the expansion of capital, and include the centralisation of ownership, and the replacement of labour by machinery (Marx, 1978a).

It is in order to achieve such goals that the variety of restructuring processes must be contextualised. In the specific case of the Fordist mass production era, the concentration and centralisation of capital through the merger and acquisition boom of the late 1960s, emerged as a means of consolidating ownership and control, of obtaining economies of scale and thereby increasing market share and cutting costs.

Such changes in the structure and organisation of industry also created the pre-condition for its internationalisation, which represented another means of increasing market share, fighting damaging foreign competition which was threatening

profitability of domestic operations, and cutting costs by a variety of methods including tapping new sources of labour and materials. Moreover, such 'corporate globetrotting' strategies were not the only efforts made towards cutting costs and increasing revenue: a variety of new investment strategies were simultaneously introduced, such that the very nature of these emerging international corporations was changing, as they diversified horizontally as well as spatially, venturing into related products and markets, thus spawning the growth of the giant conglomerate.

Alongside this concentration and internationalisation of capital, domestic production has been restructured in various ways: falling profit rates coupled with international competition and the severe erosion of economic competitiveness resulted in various attempts to restore profitability by cost cutting. In effect, this manifested itself via the drive to rationalise, with productivity gains being sought by 'slimming down' domestic operations and 'shaking out' labour on a large scale.

Clearly, then, it can be seen that the locational requirements of production stem both from the allocation of factors to their optimum location and from the demands of capitalist production, namely the continued expansion of accumulation. Restructuring change, it is argued, can only be understood in relation to the changing demands of the production process as it fights damaging exogenous forces over which it strives to have some control, and regional inequality is inexorable and inevitable under such circumstances.

However, while the structuralist model is a coherent mode of explanation, in so far as the capitalist imperative dictates the rules of play, it is argued here that this approach is not



without its inadequacies, and it is these shortcomings which make more urgent the need to elaborate and extend restructuring theory. Firstly, the structuralist perspective is problematic regarding its treatment of scale: the approach tends to be polarised between the macro and micro levels of analysis, focusing upon either the macro political economy scale, or upon case studies of individual sectors or localities, which are essentially micro-scale levels of enquiry. Meso level investigations, as defined by inter-organisational and inter-industry investigations, are sadly neglected. Secondly, many of the notions which are central to structuralist analysis have become somewhat stereotyped. In particular, the assumed inexorability of the international division of labour concept is one which must be challenged. Similarly, many of the concepts forwarded by structuralists do not have a particularly high 'goodness of fit', for example the division of the labour market into segments such as the primary and secondary sector (Gordon 1972), and into spatially discontinuous labour markets (Cooke 1981) is an oversimplification of reality, which is particularly ironic given that unrealistic rigidity was one of the major weapons of the radical critique against neoclassical theory.

Thirdly, it can be argued that the importance of the market, so central to neoclassical explanations, has been eclipsed within structuralist analysis, which has tended to subordinate the role of the consumer to the over-arching power of capital. This is a particularly important omission given the assertion that the market may be emerging as a new dynamic which may be driving the contemporary economic system (discussed further in Crewe, 1989).

Finally, a gulf exists between structuralist theory and

empirical work, such that the approach is empirically questionable: any empirical findings have tended to be sectorally specific (Morgan and Sayer, 1985) or locationally specific (Boddy and Lovering 1986, Cooke, 1986). This criticism is perhaps the opposite to the one levelled at behavioural approaches, suggesting that the fusion of the particular strengths of different approaches would be a profitable goal for future research.

#### **An alternative conceptualisation.**

The suggestion is made here that a more meaningful understanding of the restructuring process can be achieved through reference to a variety of theoretical viewpoints. While recognising the critical value of the insights offered by structuralist analysis, the argument is against the demarcation of rigid boundaries around various modes of explanation, suggesting that different theoretical viewpoints do not represent discrete, compartmentalised 'black boxes' but, rather, should represent different ways of looking at essentially the same problem. Careful scrutiny of all three approaches reveals a number of issues of common concern. In particular, the issue of linkages is one which is picked up by a variety of authors working within different schools of thought: early neoclassicists recognised that there was more than the sum of the parts to be gained through agglomeration and linkage with other firms (Weber 1909). Similarly, what structuralists refer to as micro/macro linkages between firms and the political economy are essentially synonymous with the firm/environment linkages studied by behaviouralists. Indeed, it is worth remembering that Weber himself was the first to recognise that it is necessary to simultaneously consider both the firm and the broader political economy of which it is a

part, in order to understand locational patterns (Weber, 1929). Such a commonality of emphasis must surely be indicative of the potential which exists for integration and recombination of different theoretical approaches.

The real challenge now becomes the formulation of a coherent explanation for contemporary processes with reference to a variety of theoretical viewpoints, the argument being that there are different strands of particular theories which remain durable and useful, yet which have been hitherto neglected or ignored due to the dominance of a uniquely structuralist interpretation of events. Neoclassical location theory has many elements which are useful in furthering our understanding of the restructuring process, yet which have come under attack from the structuralists. Firstly, Weber himself introduced the idea of 'critical isodapanes', which 'permitted a broadening of vision from the single point of locational optimality to the spatially differentiated surface of transportation cost' (Smith, D. 1987), thus rendering the model less inflexible than that which focuses upon a single, optimum spatial location.

Secondly, it can be argued that the concept of profit maximisation and cost minimisation are precisely those features of production which dominate the location decision making process, whether at an international, a local or a national scale. Thus, the the global dispersal of the clothing industry in order to tap cheap labour cost differentials is a perfect example of the case in point. As Dicken recognises:

"I believe it is possible to argue that least cost location theory still has some relevance for helping us to understand the spatial organisation of activities...at a greatly enlarged organisational scale. In other words, I would argue that such theory is relevant in precisely those circumstances of

corporate organisational structure which are held to have rendered it impotent".  
(Dicken, 1977)

Finally, and perhaps most importantly, what neoclassical economic theory permits is the inclusion of the market as an important element within the decision making process- a feature which has been eclipsed (or perhaps even obliterated) within structuralist analysis, yet one which, it is argued here, deserves to be resurrected from the theoretical archives and restored perhaps to a position of supremacy.

In a similar manner, it is here argued that behavioural approaches also have an important part to play in furthering our understanding of restructuring processes. Firstly, attention is focused upon the firm as a complex functioning entity with its own internal logic and set of priorities. Moreover, the firm is contextualised within a broader framework, with attention being directed towards firm-environment interactions, which is an important development since it recognises that while firms are influential entities in their own right, they nevertheless function within the constraints of a broader structure. The structural contingency model is particularly relevant in this respect since it offers the tentative beginnings of a resolution of an eternal problem facing economic geography; that of reconciling macro and micro scales of analysis. The model adopts a hierarchical framework, which has the macroenvironment at the head, conceptually followed by the organisational domain (the complete set of organisations with which a focal organisation might potentially interact), and finally the task environment, which comprises the firms with which the focal organisation actually interacts (Taylor and

Thrift 1979). Such a framework is important since the notion of the organisational domain allows the explicit consideration of inter-industry (and inter-sectoral) linkages, so important in the contemporary context, yet so neglected by structuralist approaches. Moreover, it takes on board the existence of profoundly uneven and asymmetric power relations between firms, a feature which is increasingly coming to dominate the contemporary economic arena. Indeed, elsewhere, one of the authors goes on to demonstrate the importance of such linkages both within and between firms (Crewe, 1989). Finally, Taylor's notions of a segmented economy are useful in that the approach begins to resolve the problem of scale in geographical analysis, since segmentation involves at all scales of operation. Moreover, inappropriate boundaries of manufacturing are discarded and the approach allows the reintegration of certain areas which have strayed beyond the realm of industrial geography.

It is here argued that it is crucial to dismantle the inappropriate boundaries which exist at a variety of scales: between manufacturing and services; between industries; and between firms, since any progressive approach to studying the dynamics of the contemporary space economy must recognise that such boundaries are not only arbitrary, but are in a constant state of flux. Many 'manufacturing' organisations now enter the realms of 'tertiary' activity, and new inter and intra firm relationships are increasingly coming onto the corporate restructuring agenda. It is this early recognition of fluctuating boundaries between and within organisations which renders the behavioural approach so relevant to contemporary understanding of economic change.

The real crux of the argument is that new explanations are

needed to account for the most recent spatio-economic shifts occurring within the U.K., since what restructuring implies is 'not only a different landscape to describe, but a new logic of industrial location to comprehend' (Walker and Storper 1981). The challenge is to regard all three theoretical approaches as acting simultaneously, each offering partial explanations of different aspects of the restructuring process, which in sum combine to offer a uniquely eclectic understanding of contemporary economic change processes. It is argued here that there is some room for viewing organisations as responding to structural imperatives yet with some degree of freedom of action. The suggestion that new linkage structures may be at the heart of the new restructuring of the economy, and that consumer power may be emerging as the motor which is driving the system, represents new insights which have themselves been stimulated by an appreciation of different theoretical approaches.

This review has served to expose a number of dichotomies and demarcations: between theoretical standpoints; between macro and micro scales of analysis; between agents and structure; between industries; between firms. These boundaries are both unrealistic and inappropriate to any progressive understanding of contemporary economic change, yet they continue to condition theoretical and empirical understanding. Having identified some of these divisions, the next logical step is to cross the boundaries and to unpick and reconstruct the restructuring process in new and more meaningful ways. The task ahead is to attempt such a reconstruction, one which is informed by deeper understanding of contemporary economic processes. An attempt is made in this direction in Crewe, 1989.

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