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## Editorial

The theme for this first volume of *International Studies in Sociology of Education* has been chosen in the light of the extensive changes that have been, and still are, taking place in education in many different countries during the past decade. This has resulted, for example, in changes in the working conditions of teachers, the introduction of new curricula and the reforms in the way schools and higher education are organised, resourced and managed. In all these spheres the question of the role of the State has become increasingly significant.

Within such a context sociology of education has not remained unaffected. In some countries both the numbers of sociologists of education and the significance of such work have been reduced and seriously undermined. Paradoxically, the opportunities have been generated for old questions to be revisited and new areas of analysis and research to be undertaken.

At an international level, therefore, a substantial amount of sociological enquiry is taking place in relation to policy and practice in education. The refereed papers in this volume are a reflection of some of the work and an indication of the resilience of the discipline and of the extent to which further research and analysis is required.

This journal has been created in order to provide a forum in which ideas, debates and findings within sociology of education in an international context can be engaged. It is hoped that this will offer a further means for the development of more rigorous and effective work. It will have the added advantage of focussing on national and international studies and of creating the possibilities for comparative studies.

The original intention behind the establishment of this journal was to provide an annual outlet for some of the papers given at the *International Sociology of Education Conference*, held each January in Britain. However, following this year's first volume, and due to the extensive interest expressed by people from many countries, we have now modified the original plans. The journal will from 1992 appear as two issues per annual volume. Contributions are welcome: those to appear in any one year must reach the Editor by 1st February in that year. All papers will be read by two referees; where there is a dispute the paper will go to a third referee. Please note the guidelines for contributors on the inside back cover of this issue. The theme for the next volume will be *Democracy, Citizenship and the Role of the Teacher*.

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## Education, Economy and Social Change

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**ABSTRACT** In advanced industrial societies the educational system has been identified as making a major contribution to national economic prosperity. In this paper we examine how the educational system should be organised to meet the social and economic challenge of the late twentieth century. In asking this question the intention is to redirect current debates towards a more thorough going discussion about the interrelationship between education, economy and society. It will be argued that this broader perspective is essential if we are to fully grasp and understand the implications of the changing social and economic conditions of the late twentieth century, as well as the likely consequences of recent policy reforms.

### Introduction

In this paper we will argue that the formal system of education in Western industrial societies are increasingly inappropriate to the social and economic conditions of the late twentieth century. In recent decades Western societies have been experiencing a major transformation heralding a new era which writers have variously described as post-industrial, post-modern, post-fordist or in terms of the rise of the 'information society' (Piore & Sabel, 1984; Harvey, 1989; Kumar, 1991). This transformation was signalled by the first 'oil shock' in the early 1970s and has been the result of a number of factors including the technological revolution in communications, computers and robotics; globalisation; and the rising competitive force of Pacific Rim countries.

In 'ideal typical' terms we can suggest that Western industrial societies (and this would equally apply to the Soviet Union) confront choices between trying to adapt the rigid hierarchical division of labour, and the low skill and low trust relationships which characterise 'fordist' societies such as Britain,

to new condition, or shifting to systems of flexible production and organisation based on flatter hierarchies, adaptable and highly skilled workers, and a breakdown of the divisions which currently exist between mental and manual labour and learning.

The sense of unease about social change in the late twentieth century has been accompanied by a universal crisis of confidence about the aims and purposes of education. In Britain and the United States of America the New Right have responded to the turmoil of recent decades by arguing that "we may no longer know what kind of society this is, but *we do know* that it is a market economy, and the best way to make a market economy work is through a minimum of government interference" (Block, 1990, p. 3). This attitude has characterised educational decision-making in both countries over the last decade. The education system has frequently been discussed in terms of how it can be organised to conform to the imperatives of the market.

Sociologists and educationalists opposed to the moral and political foundations and consequences of the 'free market', have tended to channel their energies into describing and evaluating its consequences for the future of the welfare state. However, this focus has delayed the development of new theoretical and empirical studies of post-fordist possibilities. A task which has become all the more important given firstly, that the descriptive and analytical powers of theories of industrial society and its social institutions, which have informed sociological insights throughout the twentieth century have been seriously weakened, and secondly, given recent events in Eastern Europe and the Soviet Union, the foundation of alternative forms of social arrangements to capitalism have also been subjected to serious re-examination.

As a result it has been difficult to present a coherent programme of reform hinged to a new vision of society. As Block has also noted: "Those educational reformers who succeeded in linking their proposals to widely shared views of the direction in which the society was moving tended to be more successful than those who were unable to connect their reform proposals to the master concepts of social science." (p. 8)

The sociologist of education must urgently address these broader issues if s/he is to develop a clear and viable vision of the educational system at the end of the millennium. Moreover, unless their criticisms of free market policies can be integrated into a viable strategy for economic renewal they are likely to count for little in the present social climate. The perceived economic benefits of education have historically provided a powerful political lever for educational investment and reform. This is why it cannot be ignored by those who are interested in social justice and democratic renewal.

In this paper we will explain why current educational policies in countries like Britain and the United States of America are hopelessly inadequate in the attempt to activate the changes we believe to be necessary. The creation of a free market for education and training is likely to reinforce,

if not intensify the rigidities and inequalities which already exist in these societies.

We will argue that the 'trained capacity' of different social groups into predictable and clearly demarcated positions in the hierarchical division of education, training and employment is increasingly a source of 'trained incapacity' (Brown & Lauder, 1991). In our view the Right's response represents a low skill and low trust solution, which will fail to improve the quality of working and social life for most people and fail to win a competitive advantage *vis-a-vis* leading industrial nations. Therefore, if we are to develop a more imaginative and viable educational response built on relations of high trust and high skill, we are forced to challenge much of the received wisdom about education, markets and economic efficiency.

The problems concerning the aims and organization of educational systems in the late twentieth century cannot, therefore, be understood simply in terms of the political fortunes of the Left or Right. In many ways Thatcherism and Reagonomics were a consequence rather than a cause of a deep-rooted crisis in the social and institutional structures of Western industrial societies.

#### *The Rise of 'Bureaucratic' Education [2]*

Since its inception, mass schooling has been shaped by a variety of competing interests and interpretations of its purpose. It has never resembled a simple 'correspondence' to the requirements of the economy as suggested by neo-marxists such as Bowles & Gintis (1976). Brown (1990) has argued that in the 'first wave' of socio-historical development [3], which occurred in the industrial nations of the nineteenth century, the educational system was seen primarily as a means of differentiating elites from the masses. Education for the privileged few provided entry into a select, culturally superior world. It was a badge, distributed according to an accident of birth, which represented and reaffirmed the privileges of the economically and politically powerful. Education was also organised to reinforce the patriarchal relations which existed in both the public and private spheres of social life. However, as industrial societies develop the reproduction of the non-manual workforce could not be achieved by restricting 'education' exclusively to middle class men, given the increased demand for 'white collar' workers. The perceived nature and consequences of the rapid social and economic changes which confronted all Western industrial societies, especially following the Second World War, had a powerful impact on the direction of educational change, because the need to provide a suitably trained and motivated labour force has proved a powerful argument for removing educational barriers to working class mobility. In Britain the educational barriers which have perpetuated gender inequalities have only recently been linked to the question of economic efficiency (Weiner, 1989).

It was commonly assumed that the structure of education had to be transformed radically in order to impart the basic skills, select the necessary talent, and promote the appropriate attitudes required by modern industrial societies. As Halsey & Floud (1961) noted: "Education is a crucial type of investment for the exploitation of modern technology. This fact underlies recent educational development in all the major industrial societies... education attains unprecedented economic importance as a source of technological innovation". (p. 1)

The intensification of efforts to make the educational system reap economic returns for the society as a whole, as well as for its recipients, coupled with a growing concern to provide greater equality of opportunity for all, created the foundation for the 'second wave' in the socio-historical development of educational systems in industrial societies, which involved a shift from the provision of education based upon what Dewey called the "feudal dogma of social predestination" to one organised on the basis of individual merit and achievement. The most conspicuous consequence of these ideas was the shift to 'comprehensive' systems of education.

Yet, because the educational system is an institutional expression of societal attitudes and power relations, its organisation and development has been shaped by the more general processes of bureaucratisation, which has been the dominant form of social organisation throughout this century. Indeed the growing importance attached to systems of education has partly been a result of the need for a formal system of 'socialisation' and 'selection': "The bureaucratisation of the high school is... a manifestation of the general trend toward the rationalization of daily activities in all spheres of contemporary life. With the progressive differentiation and specialization of functions in modern society, we expect an intensification of attempts to maximise the efficiency of identifying and developing the talent within the population." (Cicourel & Kitsuse, 1983, p. 139)

The second wave in the socio-historical development of education systems in industrial societies has, therefore, been premised on a set of rules, procedures and practices which conform to the principles of bureaucratic organisation. Weber described the characteristics of bureaucracy in terms of a "...form of organization that emphasizes precision, speed, clarity, regularity, reliability, and efficiency achieved through the creation of a fixed vision of tasks, hierarchical supervision, and detailed rules and regulations." (Morgan, 1986, pp. 24-25)

At the turn of the century, Weber viewed bureaucracy as a reaction against the personal subjugation, nepotism, cruelty and subjective judgement which passed for managerial practices in the early days of the Industrial Revolution (Bennis, 1972, p. 107). He also argued that if these principles of bureaucracy are followed it is possible to attain a high degree of efficiency and an organisational structure which is superior to any other form in its precision, stability and reliability.[4]

As well as providing a social technology which can create a set of predictable outcomes, bureaucracy is intimately related to the idea of a

'meritocracy' because it treats individuals according to 'objective' criteria. In education this means that individuals are, in principle, treated according to ability rather than on the basis of ascribed characteristics such as social class, gender or race.

The organisation of formal educational systems according to bureaucratic criteria therefore provided a rational means of social selection for expanding public administrations and capitalist corporations. School and college credentials provided a useful screening device for employers who were concerned that future employees should be inculcated into the appropriate forms of rule-following behaviour, as well as having the appropriate knowledge and skills for their place in the techno-structure.

However, given the demand for large numbers of low-skilled workers with little room for individual autonomy, the educational system throughout its second wave of development, has had to confront the problem of offering greater equality of opportunity whilst limiting the aspirations and ambitions of the majority by defining them as academic failures. This contradiction at the heart of bureaucratic education - of seeking to promote a 'talented' few while attempting to 'cool out' the majority - has consistently presented a problem of legitimation and resulted in various forms of working class resistance.

### The Bureaucratic Legacy

The Bureaucratic nature of education has been shaped by a number of factors which deserve further elaboration (see Brown & Lauder, 1991). Here we will limit our discussion to three areas which are germane to our argument, these are: (1) the view of intelligence as unchangeable, as measurable and as a scarce resource; (2) the organisation of the timetable and the textbook; and (3) the use of formal academic qualifications as a means of recruitment to the hierarchical division of labour.

### Intelligence

The idea that individual intelligence is relatively fixed and unchangeable has served to shackle our understanding of human abilities to bureaucratic demands. Such ideas have been used throughout the twentieth century in both capitalist and state socialist societies to support the early selection of educational talent. A system of bureaucratic education needs a way of identifying and grading its inputs, IQ tests provide just such a mechanism - a single score which summarises the potential range of an individual's achievements. Such a test is quick to administer and economic in the way it communicates the results. It is significant that the original IQ test developed by Binet was never intended to 'fix' individual's intelligence in this way. Indeed he saw the test as a means of establishing a benchmark for future progress. In other words, the IQ test was rather like having a physical fitness exam before being given a conditioning programme.[5] However, when

Binet's concept of the IQ was translated into English it came to be interpreted quite differently. It was assumed that the test could be used as a way of predicting an individual's intellectual capability and subsequent occupational level.

In 1923 the American psychologist Terman wrote that IQ tests could be used to predict the level of work that an individual could accomplish: "preliminary investigations indicate that an IQ below 70 rarely permits anything better than unskilled labor; that the range from 70 to 80 is pre-eminently that of semi-skilled labor, from that of 80 to 100 that of the skilled or ordinary clerical labor, from 100 to 110 or 115 that of the semi-professional pursuits; and that above all these are the grades of intelligence which *permit* one to enter the professions or the larger fields of business... This information will be of great value in planning the education of a particular child and also in planning the differentiated curriculum here recommended." (1923, p. 27-28)

A similar view was taken by the English psychologist Burt in his 1943 paper *Ability and Income*, in which he argued that measured ability could be used to predict subsequent income.

In effect what Terman and Burt did was to "make nature herself an accomplice in the crime of political inequality" (Condorcet) for they argued that the major component in any IQ score was determined by inherited genetic factors. Both men and the psychometric tradition they represent have been largely discredited and their work revealed as little more than an apology for the interests of the middle class in the society's from which they came (Evans & Waites, 1981). Yet while their work had the effect of legitimating the position of the middle classes it gained its potency from the wider bureaucratic mechanisms of which it was a part, because it provided a 'rational' basis for social selection into a rigid hierarchical division of labour (Bowles & Gintis, 1976). Despite the discrediting of this view of intelligence, its legacy has been to create a deeply embedded cultural myth which will remain as long as bureaucratic education is considered the most efficient means of promoting rationality and efficiency.

When we come to examine the content of so called 'intelligence' tests we find a further sense in which they can be considered the servant of bureaucratic education. For as Lacey (1988) has pointed out, IQ tests represent an attempt to measure skills and talent but: "Skills and talents are concerned with solving problems *within* already existing paradigms and systems of knowledge. Intelligence has to do with understanding the relationships between complex systems and making judgements about when it is appropriate to work within existing paradigms and when it is appropriate to create new courses of action or avenues of thought". (pp. 93-94)

This view of IQ tests as measuring skills and talents within pre-existing paradigms is entirely consistent with the process and content of bureaucratic education.

#### *Timetable and Textbook*

Weber argued that the administrative power of bureaucracy has at least two sources. The first concerns knowledge: "The primary source of bureaucratic administration lies in the role of technical knowledge... This is the feature of it which makes it specifically rational... Bureaucracy is superior in knowledge, including both technical knowledge and knowledge of the concrete fact within its own sphere of interest". (pp. 337-339)

The second source of power is derived from discipline: "The content of discipline... is nothing but the consistently rationalised, methodically trained and exact execution of the received order, in which all personal criticism is unconditionally suspended and the actor is unswervingly and exclusively set for carrying out the command". (p. 254) [6]

The timetable and the textbook fuse Weber's notions of knowledge and discipline into an indivisible set of bureaucratic rules, rituals and procedures. The timetable divides knowledge into epistemologically arbitrary subjects and discrete units of time. [7] The textbook, as Kuhn (1970) has pointed out inculcates students into pre-existing knowledge paradigms; they deliver to students a received view and they do so for all levels of the education system. It provides a means of standardising knowledge which is largely determined by the demands of assessment for professional training. The effect of this technology is to create a pedagogy conforming to the hierarchical structure of a bureaucracy in which the pace and content of learning is determined by decisions made by a political and administrative process in which the room for manoeuvre of both teachers and students is severely constrained. It also acts to separate what is to be credited as 'education' and 'knowledge' from what is learnt informally at home or through the mass media.

#### *Credentials*

If IQ tests came to determine the way individuals were to be processed as 'inputs' into bureaucratic education, credentials have come to symbolise the quality of the output. They also provide a simple summary score of an extraordinarily complex set of cognitive and social processes. Like the IQ score, the gaining of a credential is often based on the outcome of one performance in an examination, hence it is relatively quick to administer and straightforward for employers to understand.

What is striking about the role of credentials, in determining the allocation of life chances, is the minimal amount of information they convey about the credential holder. [8] This is one of the reasons why employers have continued to emphasise other characteristics such as 'suitability' and 'acceptability' (Jenkins, 1986), and why there has been an increased use of 'student profiles'.

Critics have pointed out that credentials have had as much to do with the maintenance of privilege as the articulation of knowledge and skills with

the structure of work (Collins, 1979; Murphy, 1988) and that knowledge represented by a credential often has little to do with the knowledge demanded at work (Berg, 1970).

Moreover, given the rigid division of labour and learning, early selection for different certified routes into the labour market has facilitated a massive wastage of talent. The "problem" with credentials, in the development of a post-fordist economy, is that the overt information they convey, through the knowledge they are assumed to represent, is too limited for the complex cognitive and social skills which will be demanded from an increased proportion of the workforce.

Given that the organisation of work during this century has been founded upon 'fordist' principles involving the fragmentation of work tasks and attempts to exclude room for human initiative in the labour process, some of the problematic aspects of bureaucratic education outlined above can be seen as the rough edges of a system which worked reasonably well in the past, but in a post-fordist world they are likely to become counter-productive.

#### The Third Wave: the development of free-market education?

In countries including Britain, the USA, Australia and New Zealand there is evidence of a third wave in the socio-historical development of educational systems (Brown, 1990). In its nascent form it is premised on 'free market' policy solutions, given an implicit recognition that bureaucratic education is inappropriate for the social and economic context of the 1990s. Consequently, the 'new right' (Gamble, 1988) have initiated fundamental changes under the rubric of promoting greater freedom and choice for parents and making the educational system at all levels more responsive to market forces as a means of improving educational standards and maximising the economic returns accruing from educational investments.

The idea that education should be organised on the principles of the 'free market' is supported by two related arguments:

#### *A Theory of Human Capital and Education Markets*

The New Right espouses a form of human capital theory which argues that individuals are motivated to: "become capitalists not from the diffusion of the ownership of corporate stock, as folklore would have it but from the acquisition of knowledge and skills that have economic value". (Shultz, 1968, p. 15)

Fundamental to the New Right's version of Human Capital Theory is the belief that individuals are driven by the rational pursuit of self-interest where the goals are wealth and status (Hughes & Lauder, 1991). In the modern world a clear route to these ends is through the acquisition of credentials. This theory enables the New Right to apply the theories of the free-market to education because it is assumed that human motivation in

education is the same as that found in the market for other commodities. It also creates the theoretical space for them to argue that education is essentially a private good which primarily benefits those who invest in it, and therefore should be paid, in part or wholly, by those who stand to gain from receiving educational services.

The New Right also argue that state provided goods and services, including education, are inefficient because they are not subject to the disciplines of the market. In particular state provided goods and services are likely to be run in the interests of the providers rather than consumers because state monopolies are protected from the forces of market competition.

As a consequence it is suggested that inequalities are created because parents are denied the opportunity to make educational choices, which is why parents become apathetic and disinclined to participate in their children's education.[9] As a result of this absence of parental choice, standards are likely to decline, because it is assumed that excellence is always a direct consequence of market competition. To support this argument New Right theorists point to the credential success of private schools which are subject to the market forces they believe are necessary for an efficient education system.

The problem with this argument is that it conflicts with the weight of evidence that has been accumulated over the past thirty years. We know, *contra* human capital theory, that educational aspirations are significantly influenced by social background, race, and gender.[10] Moreover, it is not private schooling but the social class mix of students within a school which is the crucial factor in school performance (Lauder & Hughes, 1990). Of course the New Right may accept this evidence and still argue that the creation of an educational market will service to equalise school mix and boost the educational performance of working class and female students.

There are in turn two counter arguments that the New Right can mount. The first, and weaker argument, is to link the notion of choice to parental participation. It can be suggested that where parents have to actively make choices about their children's schooling they will become more interested and involved in their education.[11] The more involved they become the more they will provide the kind of parental support required for their children's educational success. As it stands, this argument is weak because choice is seen to involve little more than a 'one-off decision about what school to send one's child. In contrast, if participation is to be educationally effective it requires active involvement for the duration of a child's education. Moreover, it can be objected that there are active barriers to the involvement of working class parents in education in terms of the differences in material and cultural resources between the middle and working class. In Bourdieu's graphic expression (1977), the middle class exert 'symbolic violence' over the working class.

The second and stronger argument is that the creation of an educational market serves to shift power away from the middle class

producers of education to working class consumers, thereby breaking the monopoly that the middle class has on cultural capital. An example of this line of argument is presented by the Hillgate Group in Britain: "The aim... is to offer an independent education to all, by granting to all parents the power, at present enjoyed only by the wealthy, to choose the best available education for their children. This aim can be accomplished only by offering schools the opportunity to liberate themselves from Local Authority control" (Hillgate Group, 1987, p. 1).

However, there are strong objections to be mounted against this view. The underlying disparities in material and cultural resources between the educationally successful and unsuccessful are likely to ensure that the "best" schools remain the monopoly of middle class parents and their off-spring. What is likely to happen is that there will be some degree of competition within a segmented market for education; working class schools will compete against each other as will middle class schools but the inherently unequal nature of the competition will ensure that the educational provision for the less privileged members of society will not improve. Indeed, if schooling was to become determined by the wealth and preferences of parents, able students from poorer backgrounds may find themselves even more educationally disadvantaged than in the recent past because their own efforts and abilities are secondary to financial considerations. The key issue here is that different class, race and gender groups in our society enter the market on vastly different terms. Since this is the case we can expect the educational market to behave like most other markets. If it does, schools, credentials and the status attached to them are likely to become sharply differentiated, creating elite schools for the rich and a gradation of less prestigious and less 'successful' schools beneath them. These less 'successful' schools will inevitably provide an inferior education creating the personalities for a low trust, low skill economy.

#### *A Theory of Educational Standards and Economic Productivity*

The New Right also suggest that a free market system of education would not only offer greater freedom of choice and raise standards, but that it would also improve existing levels of economic productivity. These claims run into difficulties at both a conceptual and empirical level. As Torrance (1991) puts it: "definitions of 'standards' are changing, and necessarily so. We are becoming more ambitious in what we are trying to achieve. The problem with expanding definitions of standards and achievement in this way is, of course, that they are exceedingly difficult to then measure and report in succinct fashion".

Not surprisingly, if the definition of standards is constantly shifting, it is difficult to make valid comparative claims about a rise or decline in standards. That has not deterred the New Right from repeatedly making the claim but what evidence there is in Britain and elsewhere, is either equivocal

or points to an increase in standards (Lauder & Hughes, 1990; McPherson & Willms, 1987; Wright, 1983).

New Right notions of standards also harbour the debilitating consequences of standardisation - the selection and packaging of knowledge into arbitrary, narrow, and discrete subject areas; the selection and rating of students in terms of their competence in these subjects; and the accumulation of qualifications as symbols of academic excellence. These are precisely the features which have characterised bureaucratic education throughout the second wave and which we now believe to be in need of major reform. Indeed, the attempt to establish a market system of education reinforces this kind of standardisation, precisely because of the need to provide consumer information about the relative performance of different schools. In secondary schools success in examinations has already become the main criterion used by parents to differentiate between schools, while in primary schools, benchmark tests have been proposed to give parents an indication of a school's quality. There is, however, widespread agreement that the latter are of little educational value (Nuttall, 1989; Torrance, 1991) and will simply serve to de-skill teachers and lead students to cram for the narrow range of skills that will be demanded by the benchmark tests.

If the claim over standards is problematic, the proposition that educational standards are directly linked to economic success and failure, is even more so. What the precise connection between educational standards - as defined by the New Right - and economic decline is, has not to our knowledge been fully explained anywhere, yet the assertion of such a connection has repeatedly been made.

The educational realities of a free market are that rather than generating a more open and competitive education system the only entrepreneurial spirit manifest among middle class parents, will be in their willingness to invest financially to pay for or manipulate access to private or elite state schools, given a belief (which is largely correct) that educational credentials offer a way of reducing the social risks of downward social mobility for their children.

Despite all their claims to be 'radical', the educational proposals of the New Right are profoundly conservative both in their appeal and consequences. They clearly take a very dim view of the abilities and motivations of the average person and share most of the assumptions which have characterised the development of bureaucratic education, with the notable exception that the state should no longer seek to fulfil the conditions of a meritocracy (Brown, 1990).

Of course, it may be suggested that a modern economy only requires a high level of education for a middle class elite, and that a market led-education system will deliver precisely what the economic conditions of the 1990s demands. Indeed for some conservatives this division of labour and learning is seen to be inevitable because of the limited pool of talent (Scruton, 1984).

However, we reject both the assumption that the only viable capitalist economy is one characterised by low wages and low technology, and that such an economy is the only possible kind of economy because of the limited pool of talent available. In contrast, we will suggest that a high wage, high technology economy is possible. It will therefore require a generally high level of educational attainment predicated on the assumption of collective intelligence.

**The Third Wave: collective intelligence and economic development**

In the final part of this paper we will consider an alternative foundation to the third wave in educational development which aims to generate a 'high ability' society. Such a system of formal education is necessary in order to provide the intellectual, technical and creative resources which will be required to achieve sustainable economic growth (Brundtland Report, 1987) and to empower people individually and collectively to confront the challenges presented by the rapid transformation of existing patterns of social and economic life.

There are of course significant variations in the way industrial societies have organised systems of education in the second wave, and the popularity of free market solutions to educational problems in the late 20th Century testifies to the absence of any economic imperative or 'hidden hand' forcing educational institutions to be restructured in a way which best serves to harness the wealth of individual talent or to achieve sustainable economic growth.

Given the obvious limitations imposed on the scope of a short paper, we will confine our comments to the idea of 'collective intelligence'. We believe that the notion of collective intelligence is central to the development of a high trust, high skill, society (see Brown & Lauder, 1991, for a more detailed discussion). It can be defined and measured in terms of the intellectual, technical and creative human resources which are available within a society. It consists of a number of interrelated ideas:

*Jacking Up the Normal Curve*

We have shown that the foundations of system of education in most industrial societies have been based on the underlying assumptions of fordism, and that the idea that there is a limited 'pool of talent' in a sea of mediocrity is part of the myth of bureaucratic notions of intelligence which ignore the important ways in which intelligence is collectively structured by the form of production (Kohn & Schooler, 1983). Moreover the low-discretion and low-skill work roles which confront vast numbers of workers in fordist organisations have generated low trust responses including worker resistance, minimum level of commitment, high rates of absenteeism, wild cat strikes, etc. (Fox, 1974). These responses have traditionally been

interpreted by management as a manifestation of the feckless and irresponsible nature of most workers. Indeed, managers have typically recognised these responses as a justification for the use of surveillance and the threat of sanctions in the control of the workforce.

Our conception of collective intelligence involves a fundamental re-evaluation of these ideas which are outlined in Figure 1.

Second Wave	Third Wave
Intelligence is a scarce resource, but can be 'scientifically' identified among children at an early age	Unfolding of human capacity limited by social hierarchy and cultural attitudes
The organisation of education and employment corresponds to the normal distribution of talent	The capacity to exercise imagination, ingenuity, creativity etc, is widely distributed in the population
The average human being has a dislike of 'work' and will avoid it if possible	The expenditure of physical and mental effort in 'work' is as natural as play or rest
People must be coerced, controlled, directed, threatened with punishment to fulfil organisational goals	People will exercise self-direction and self-control to fulfil aims to which s/he is committed
Most people avoid responsibility, have relatively little ambition, and above all want security	Under the right conditions most people will both accept and seek responsibility

FIG. 1. Human Ability and Motivation.[12]

[Source: Brown & Lauder, 1991]

There is an urgent need to jack-up the normal curve of human intelligence. Given the right motivation (which is socially determined), at least 80 per cent of the population are capable of achieving the intellectual standards required to obtain a University degree in adult life. This view is supported by comparative evidence which shows significant differences in the proportion of students from different advanced industrial societies participating in higher education. Such differences need to be explained in terms of the social, cultural, and institutional differences between nation states. We do not, for instance, subscribe to the view that the English are innately less intelligent than the Japanese! We are also struck by the ever increasing numbers of 'mature' students who previously had few, if any, formal qualifications, but given a clear reason for undertaking undergraduate study (and the available opportunity), they generally prove to be able students. Hence, we concur with Sabel (1982) when he suggests that it is often "social hierarchy and the world views associated with it that restricts the unfolding of human capacity, and not the limitations of natural endowment" (p. 244). None of what we are suggesting need doubt the existence of innate differences in intelligence (although it clearly depends

what you adopt as a measure). What we are suggesting is that the vast wealth of talent has not been harnessed by current systems of education and training, and that it is nonsense to suggest that current levels of 'academic' performance are a reasonable reflection of individual and collective capability.

The creation of a high ability society will need to continue to structure opportunity on the basis of individual effort and ability, but the 'ideology of meritocracy' will need to be strongly reinforced. It has too often been a tool of 'administrative convenience' for both teachers and employers to explain why some (usually from a middle class background) make it, and why others (usually from a working class background) do not. Official assessments of this kind are extremely difficult to argue against as a student, or as a parent, because even if teachers are unable to produce a low IQ score as a 'cause' of low achievement, they will point to the other half of the meritocratic equation, that poor achievement must be the result of a failure to work hard or as a consequence of poor parental motivation. The *coup de grace* of this form of ideological justification is reserved for those who prove the system wrong by achieving later as a 'mature' student. These are imaginatively labelled the 'late developers' on the assumption that had they been capable of earlier achievement they would obviously have done so. However, the growing need for knowledgeable and empowered citizens is heightening concern about a system which incapacitates and alienates large numbers of young people.

There is strong evidence to suggest that the education system must be organised on the premise that all rather than a few are capable of significant practical and academic achievements; of creative thought and skill; and of taking responsibility for making informed judgements. The role of education in this context must become one of nurturing this wealth of talent. We will need to re-direct our attention away from the attributes of individual students as the cause of low ability systems of education, to the institutional context in which the learning process takes place. Instead of pointing to the fact that their 'failing' students are usually working class or black, teachers and trainers would be forced to examine the institutional context and their professional practices for explanations of trained incapacity. This strategy would certainly help to generate a more integrated system of education and training involving teachers, students, parents, trade unionists, and employers.

#### *From Individual to Collective Intelligence*

Intelligence, the ability to solve problems; to think critically and systematically about the social and natural worlds; and the ability to apply new skills and techniques, is usually seen as an attribute of individuals. However, there is a clear sense in which it is determined by forms of production and the social systems they create. Where societies have adopted fordist forms of production it is not surprising to find a massive wastage of talent, precisely because the ability to act on the world is given to so few -

the elite at the top of bureaucratic organisations who make all the key operational and policy decisions.

However, collective intelligence means more than simply increasing the pool of knowledgeable and technically competent people. It also needs to be understood as a measure of our ability to face up to the problems that confront us collectively and to develop collective solutions (Lacey, 1988, p. 94). Therefore, an education which does not examine the issues of the day, or help students to make connections between different aspects of their studies renders the latter less intelligent than they need be. A nation state for example which denies its youth the opportunity to examine issues concerning the causes and consequences of environmental pollution, the nature of the HIV and AIDS virus, or offer political education is also symptomatic of a low trust and low ability society.

Equally, a new division of learning will be needed to support a new division of labour. Zuboff (1988), for instance, in her account of technological innovation in the USA, distinguished technology which *automates* from that which *informs*. Automation simply involves the replacement of the human body with a technology that enables the same processes to be performed with more continuity and control. In other words, it conforms to the principles of fordism. Rather than decrease the dependence on human skills, technology which has the capacity to informate can enlarge job tasks and the room for individual discretion given that activities, events, and objects are translated into and made visible by information: "... an informed organization is structured to promote the possibility of useful learning among all members and thus presupposes relations of equality. However, this does not mean that all members are assumed to be identical in their orientations, proclivities, and capacities; rather, the organization legitimates each member's right to learn as much as his or her temperament and talent will allow. In the traditional organization, the division of learning lent credibility to the legitimacy of imperative control. In an informed organization, the new division of learning produces experiences that encourage a synthesis of members' interest, and the flow of value-adding knowledge helps legitimate the organization as a learning community". (p. 394)

In terms of education and training this raises important issues about the way employers and managers make decisions about how they deploy new technology in the workplace, and the need to breakdown low trust and low discretion relations which often existed in the past and what many managers seek to preserve (Scase & Goffee, 1989).

If we are to shape the future in a way which will facilitate social progress, formal systems of education and training will need to prepare a much larger proportion of worker/citizens to contribute to the decision-making process and to be more self-directed. Moreover, as Kanter (1984) has noted single-skilled people are unable to function in the kinds of cross disciplinary teams that produce innovation, and are less adaptable when circumstances change (p. 368).



The potential blurring or breakdown of the rigid classification and framing (Bernstein, 1975) of knowledge, skill, and job tasks, will require a more integrated approach to education and training; increasing emphasis on collective as well as individual roles and achievement; and the provision of life-long programmes of formal learning (Ashton et al, 1990).

#### *Deschooling Society*

A further problem which will need to be challenged in the third wave is the tendency for education and learning to be treated as synonymous to schooling. Large numbers of people have become alienated from any kind of formal learning because of its association with early childhood experiences of schooling, which is often viewed as irrelevant because it rarely connected with the experience of daily life, and because for many it involves lasting feelings of inadequacy and failure. We do not subscribe to the view that specialised institutions of learning, such as the school, should be abolished. No 'educational' system in the late twentieth century can be successfully organised on an ad hoc basis (involving a free market or otherwise). However, students need to be 'educated' and not 'schooled'. The state and professional educators must avoid socialising the vast majority of students to believe that they do not have the 'brains' to benefit from formal education because far greater emphasis will need to be placed on empowering students to believe that they can have an impact on the world around them.

An education for empowerment must include providing students with the 'power tools' of personal confidence and the intellectual skills required to interpret the wealth of information and ideological dogma to which we are all exposed, in order to make considered judgements in both the public and private spheres of everyday life. Indeed, given the trend towards shorter working hours and working lives the education system must seek to provide the intellectual and practical 'power tools' needed to empower people to participate in *all* spheres of social life.

Therefore an important aim of education in the third wave will be to provide students with the ability and creativity to make critical judgements and to develop alternative modes of thought. Clearly, given the current pace of technological change there is little point in teaching students specific skills which are non-transferable and may rapidly become obsolete.

It is also necessary to challenge the increasingly instrumental attitudes of students and their parents to formal education because it is turning the 'diploma disease' into an epidemic. Moreover, complying to school rules for long periods of time in order to get through examinations clearly contributed to the trained capacities of middle managers in bureaucratic organisations, but the growing demand for creative and innovative people runs counter to the dictates of an increasingly competitive pursuit for credentials, because the over-riding concern with grades tends to inhibit rather than develop the power tools required in high trust and innovative organisations (Kanter, 1984). This problem has serious consequences for the future and makes a

nonsense of claims that educational excellence can be measured in terms of numbers of credentials. What employers thought they wanted in the past, and used certificates as a measure, may be precisely what they do not want in the future. The only way of reducing the severity of this problem is by adopting a broader view of educational excellence, and employers reflecting this broader understanding in their recruitment practices.

#### *In Search of Excellence*

In our view, excellence in education is best achieved through a state provided comprehensive system. The fact is that in the third wave education differentiated according to privilege and status would militate against the promotion of collective intelligence. Recent evidence would lead us to suggest that the better the social mix of schools the better the performance of the majority of students.[13] In other words far from a proliferation of school types in competition, what is required is a well maintained comprehensive state system. Parents would have some choice of school, but the general thrust of policy would be to generate high trust relations between teachers and parents, given that schools would become a truly community resource, used daily by people of all ages. In general selection for the various routes into employment would be delayed as long as possible in order to provide the greatest opportunity for student's intelligence and creativity to flourish. A corollary of the principle of delayed selection is that as far as possible there should be open access to all forms of tertiary education and training. This will become increasingly important given that formal learning is a life-long process involving periods of re-training for employment purposes and given a growing demand for self-development.

Underlying these principles is the aim of developing a common educational culture. If a general aim of educating for a high trust society is to foster teamwork and cooperation then just as the hierarchies and differential cultures distinctive of fordist production would have to be discarded so would the differential cultures which undermine contemporary schooling. This can only be achieved by breaking down the class, gender and racial barriers within systems of education and training.

If we are genuinely concerned to produce the labour force of the future, the educational and training systems must breakdown sexist (and racist) practices which operate against both girls and boys and foster the development of narrow gender specific occupational preferences and skills by, among other things, reinforcing the processes through which boys enter metalwork, woodwork and technical design courses and the girls get channelled into home economics, childcare and office practice. The reason why these social inequalities require serious attention results from the fact that all educational and training innovations confront the real acid test of how they shape future life chances. Although there is nothing inherently superior about receiving a narrow and intensive 'academic' education, it is favoured because it has the most 'cultural capital' and 'exchange value' in the

school and labour market. It is for this reason that virtually all programmes of vocational education have failed to provide a 'parity of esteem' because they deny access to the real vocational prizes (Watts, 1983; Kantor & Tyack, 1982). There are consequently strong social and educational grounds for developing a broad based curriculum of academic, technical and practical study for all students at least during the compulsory school years.

There is also a need to stop thinking about excellence in elitist terms. Excellence should be defined in terms of the collective skills, knowledge and know-how which can be deployed within a society as a whole. To achieve the latter, it is necessary to end our obsession with the 'great man' and 'token woman' view of history. Sustainable economic growth will increasingly depend on the collective efforts of executives, managers, researchers, teachers, child carers, shopfloor workers, etc., because significant technological advances are rarely the result of the efforts and insights of any one person. It is, therefore, equally important to challenge the excessive individualism which is endemic in Britain and the United States of America (Marquand, 1989), which among other things leads employers to be more concerned with poaching skilled labour from each other than developing a mutual social obligation to train.

#### Conclusion

So long as industrial production is distinguished by the routinised tasks symbolised by the assembly line, where the majority need only to conform to the demands of the task in hand and a minority conceive and develop policy, a rigid division of labour based on bureaucratic procedures proves a reliable technology for the administration of production. The aim of education in this context is to 'process' the raw material of human abilities into workers who are then fed into the appropriate level of the productive hierarchy. Consequently, despite the shift to a fairer system of educational selection during the twentieth century and major gains in economic efficiency (achieved in the context of mass production of standardised products), the way in which systems of education and training have been organised in industrial societies on the principles of machine bureaucracy has resulted in a massive waste of talent.

In this paper we have argued that the transformation of social and economic life has profound implications for systems of education. A failure to register the importance of these changes, and to act upon them, will have serious consequences because they harbour the potential for industrial societies to organise social relations in employment, education and training on the basis of high trust and high ability. As a society, we do have choices about the way we develop and utilise human resources, although it is invariably the powerful who make such decisions about the way new technologies are to be deployed and how the education system is to be organised. In Britain and the United States of America the opportunity to generate a high trust and high ability society, with a programme of

democratic and social reforms, has so far been squandered. The right wing administrations of Thatcher/Major and of Reagan/Bush seem more interested in preserving the vested interests of the powerful and privileged. When one addresses the question of the role of education for economic development in the 1990s and beyond, we would suggest that the domination of 'free market' approaches to social (and economic) policy has contributed to the failure of both countries to maintain their relative positions in the world industrial super league. But there has been a significant increase in poverty, inequality, crime and drug addiction. It is ridiculous to claim that in isolation the educational system can solve socio-economic problems. It has never been able to compensate for the wider society of which it is a part, but it is equally true to say that wider institutional change is also limited unless formal systems of education are geared to meet the challenges which industrial societies are now confronting.

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#### Notes

- [1] The issues raised in this paper are discussed more fully in Brown & Lauder, 1991. What appears here is a revised version of a paper presented at the International Sociology of Education Conference, 'The State, Policy and Social Change in England', Westhill College, Birmingham, 2-4th January, 1991.
- [2] This immediately raises problems about what is understood by Weber's concept of bureaucracy as Gouldner (1954) makes clear in his case history of the bureaucratisation of a gypsum factory in the USA.
- [3] For a more detailed account of the three waves of socio-historical development of state education in England, see Brown 1990.
- [4] This claim has been contested because Weber tended to downplay the dysfunctions of bureaucratic organisations (Merton, 1949).
- [5] See Fallows (1985) for a discussion of Binet and his reception in the United States of America.
- [6] These quotations are taken from Henderson & Parsons (1947) and Gerth & Mills (1948) respectively.
- [7] See Lauder, Scott & Freeman-Moir (1986) for a discussion of the historically arbitrary division of knowledge into subjects and their relationship to capitalism.
- [8] Employers often create internal labour markets, in part to compensate for the lack of information about employees so that they can be placed more accurately and promoted against the internal criteria of the firm.
- [9] This a wider state dependency theory developed by the New Right. See Lauder (1987).
- [10] See Arnot & Weiner (1987); Brown (1987).
- [11] However, it is a moot point whether parents can in fact identify the schools that are doing well in terms of pupil progress. Smith & Tomlinson (1989) report that: "Parents' attitudes and views about the schools do vary widely from one school to another, but they are surprisingly

little related to the attainment of their own child, and they are not related at all to their child's progress. From the whole pattern of findings, it is quite clear that currently parents cannot identify the schools that are doing well in terms of pupil progress" (p. 303).

[12] The last three dimensions are adapted from McGregor (1960).

[13] See McPherson & Willms (1987); Lauder & Hughes (1990).

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