TEACHERS MATTER…DON'T THEY?: PLACING TEACHERS AND THEIR WORK IN THE GLOBAL KNOWLEDGE ECONOMY

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1. Introduction

In the conclusion to my book, *A Class Act: Changing Teachers' Work, the State and Globalisation*, I argued:

> If history can be read forward…there is a simple lesson to be learned about teachers…the conditions associated with fast capitalism, the rise of the competitive contractual state and the tendency toward individualism and 'doing well' …will have created new fissures and progressively fragmented teachers as a unified category of workers (2000: 211-13).

Reading history forward does not, of course, mean the future is determined for us. Far from it! However, eight years have passed since drawing that conclusion, and a great deal has happened in the world. Arguably the most significant development, at least for the purposes of this paper – which broadly is intended to place teachers and their work in the context of globalisation – is the emergence of a new, very powerful, discursive imaginary – the assertion that we now live in, or are moving toward, a knowledge-based economy.

The focus on knowledge as the key motor for the economy, on how to create, distribute and manage it, has placed education at the centre of policy and politics. Earlier versions of human capital theory have been invigorated by new growth theorists who argue that it is not just more education that matters, but kinds of education experiences that foster innovative aptitudes (Romer, 2007), while popular intellectuals, such as Richard Florida have promoted concepts like the creative class as the basis for producing competitive economies. Among policymakers, there is now intense interest in developing creativity as a basis for invention and innovation, with the suggestion that new, more active, child-centred pedagogies are desirable, and should be promoted in schools. It is against this backdrop we are told 'teachers matter' (OECD, 2006) and that high quality educational provision is now more critical than before.

This might suggest a move away from almost two decades of teacher blaming, audits and managerialism that has accompanied much of the restructuring of education around the world toward a revaluing of teachers. However, in this paper I will be examining a number of projects underway which, if realised, have the capacity to generate profound changes to education and to teachers' work. At the heart of these projects 'translating' the knowledge economy discourse into new institutional structures and material practices is the view that the education system must be radically transformed to secure the future. These projects include the 'modernisation of the school', 'personalisation' of learning, the 'scientisation' of teachers' knowledge, the 'biologisation/neurologisation' of the learner and the commodification of schooling. If I am right in my prognosis, then these developments can be read as a rupture in the grammar of schooling (Dale, 2008). In combination these projects, if realised, would lay the groundwork for a very different kind of 'education labouring' for teachers and learners. They also raise fundamental questions about what kind of learner and what kind of society is being constituted. The paper is developed in three parts. I begin with some reflections on the globalisation of neo-liberalism throughout the 1980s and 90s and its consequences for teachers' work. I then turn to an examination of the knowledge economy discourses promoted particularly by the international agencies from the late 1990s. This master narrative has gained sufficient traction in state policy circles for it to legitimise a newer, deeper round of institutional innovation/transformation, including education. In the third part of the paper I examine, briefly, four projects intended to advance this renovation and recalibration of education to constitute a knowledge-based economy. In the final conclusion I stand back and review the implications of these developments for contemporary societies more generally, and for teachers as labouring class in particular.

2. Globalising Neo-liberal Projects and Teachers' Work

To date, most teachers' experiences of globalisation have come in the form of the globalisation of neo-liberalism which, according to Santos (Dale and Robertson, 2004), is a particularism that has secured for itself hegemonic status. Neoliberalism is a theory of political and economic practice which proposes human's well-being is

best advanced by liberating their individual entrepreneurial freedoms and skills within an institutional framework characterised by private property rights, free markets and free trade (Friedman, 1962).

In response to a global crisis of capitalism that shocked the world economies in the early 1970s, from the early 1980s onwards governments around the world wittingly embraced neo-liberalism as an alternative to ethical liberalism (Keynesianism), or unwillingly had this ideology imposed upon them largely as a result of IMF/World Bank Structural Adjustment Programmes (Robertson et al, 2007). The outcome was the radically transformation of the social fabric of societies around the globe. These transformations led David Harvey in his brief history of neo-liberalism to observe: "Future historians may well look upon the years 1978-80 as a revolutionary turning point in the world's social and economic history" (2005: 1).

Three central principles featured in neo-liberal informed restructuring: deregulation, competitiveness and privatisation (Cox, 1996: 31). The first, deregulation, refers to the removal of the state from a substantive role in the economy, except as a guarantor of the free movement of capital and profits. The second, competitiveness, refers to the justification for dismantling existing political and economic structures and constructing new more market friendly ones. The third, privatisation, describes the sale of government businesses, agencies or services to private owners, where accountability for efficiency is to profit-oriented shareholders. Through prising open the growing fissures in the post-war class compromise and hastening its demise, neo-liberals and their allies 're-levelled' and 're-bordered' the playing field, putting into place a set of rules that directed the steady flow of class assets (cultural, economic, social) upward toward the ruling classes (Robertson et al, 2007).

Education systems—particularly the school sector—were shielded from the full force and impact of this agenda. For instance, quasi rather than complete market principles were introduced into the schooling sector to break 'provider capture' and open up the possibility for 'choice' and education consumerism (Ball, 2002). This altered existing patterns of post-war redistribution and social mobility against the interests of the working and middle classes (Robertson and Lauder, 2001).

Drawing on discourses (and in some places reality) of 'crisis', neo-liberal political projects were mobilised by international agencies, transnational firms and governments across national state spaces. These projects set about challenging and changing the architecture of schooling; its *mandate* (what it is that the education system should do), *capacity* (the means through which the mandate can be realised e.g. fiscal and human resources) and mechanisms of *governance* of the education sector (that is, the means for coordinating the system) (Robertson, 2000).

In terms of the 'mandate' for education, the economy was prioritised above all else. Education systems were tasked with developing efficient workers for a competitive national economy, while teachers were to demonstrate through national (SATS) and global (e.g. PISA, TIMMS) systems of indicators they had taught their young charges 'well'. Regarding 'capacity', there was an overall reduction in financing in the public sector more generally and in education. In general (aside from Latin America - whose expenditures on education rose from 3% to just under 4.5%) most regions experienced an overall decline in education expenditures as a percentage of GDP (ILO, 2004: 47). Education providers were pressured to use funds more efficiently and encouraged to seek additional sources of funding from households and the business sector (Robertson, 2007: 43-47).

In sketching out the broad features of the political project, I am not intending to suggest that neo-liberal projects, policies and practices in education were implemented in the same way, at the same time, with the same effect, across national state spaces. The particular constellation of institutions and social forces in a formation will mediate the discourses and projects of actors. However, by anyone's reckoning, the advance of neoliberal projects has dramatically altered the social fabric and social relations of many societies around the globe.

In looking at the impact of neo-liberalism on teachers' workplaces and conditions of labouring it is possible to detect affects on teachers' work, status and market situations. A major report into teachers' work in 25 countries by the OECD (2005) provides some insights into the affects. Half of the countries in the OECD study reported problems of teacher shortages. Evidence suggests that shortages are the result of deteriorating conditions of work, such as heavy workload, lack of resources

and support, pupil behaviour, and ongoing government reforms creating a stressful work environment. However, where salaries are high, there are few problems (p. 74). In countries (Sweden, Finland and Belgium) where there were shortages, more than 10% of teachers appointed to cover classes were not-fully-qualified (that is, having a degree in the area they are teaching in). In the USA, the figure was at least 20% of the teachers appointed to cover classes did not have a proper qualification. The problem of teacher shortages is more acute in secondary schools, and in low-income, low achieving urban areas (p. 49-50). Teacher attrition is also problematic, particularly in the US, UK, Sweden and Israel where it is above 6%, while there were only a small number of countries (Italy, Japan and Korea – see p.173) where teacher attrition was less than 3%. Attrition reflects the exit from the profession of early career teachers. These rates are: higher in secondary compared with primary schools (p. 176); amongst better rather than less well qualified teachers; and, amongst teachers working in more disadvantaged rather than advantaged schools. Overall, while teachers' salaries in real terms increased in almost all of the OECD countries covered in this study, in comparison to other occupations, teachers' salaries have fallen further behind. In general, since the early 1990s, teachers feel they have low status and little public respect.

It is paradoxical then that while the knowledge economy discourse now places quality learning at the centre of policymakers' agendas, one effect of more than two decades of neo-liberal policies and programmes in education has been to so seriously erode teachers' working conditions that it has undermined teaching as a profession. This has not only placed teachers and the teaching profession in a situation where they are more vulnerable to critique but it has opened the space for the advance of a more radical 'modernizing the school' agenda at national and international levels. This new economic imaginary draws its legitimacy from the claim that we are living in a knowledge-based economy, in turn necessitating an even more radical set of reforms to education than we have seen to date. Despite more than two decades of restructuring, education, it is argued, is a creature of the industrial age which continues to promote a 'one size fits all' pedagogy and curriculum. In the following section I look more closely at the history of the knowledge economy argument in order to reveal both its politics and also the actors that are involved in this project.

4. The Knowledge-Based Economy Master Narrative

As I noted earlier, since the late 1990s 'knowledge-economy' discourse has dominated talk in political and policy circles. Policy statements from the multilateral agencies, firms and national governments of all persuasions assert that 'we live in a knowledge-based economy' (cf. OECD, 1996; World Bank, 2003; EC, 2000; Blair, 2000). It is important at this point to note the hortatory character of this claim - the insistence that a new ontological order has emerged. However, as we will see, 'the knowledge-based economy' does not exist *a priori*. Like all economies 'the knowledge-based economy' is constructed. It is a fluid and dynamic entity; an evolving outcome of ideational, representational, material and institutional discourses, practices and struggles.

The idea of a knowledge-based economy has its roots in work developed by a group of 1960s intellectuals, futurologists and information economists, including Fritz Machlup (1962), Peter Drucker (1969) and the well known Daniel Bell (1973). These writers both argued that societies were in transition to becoming knowledge-based. This thesis, while regarded as highly speculative at the time, was added to later by Manuel Castells (1996, 2000) and his theory of the emergence of a network society. A core argument in this body of work is that information/knowledge is now a new factor in production.

The OECD was heavily influenced by these ideas. During the 1970s, the OECD took on board the idea of an 'information society' (Mattelart, 2003: 113). It also enlisted the expertise of a range of economists concerned with mapping and measuring information. The concept of a *knowledge-based* economy was added in the 1990s, and reflected the contribution of economists, such Dominic Foray (2000) (that it was knowledge and not information that was important, and that economic growth was the result of the distribution and use of knowledge), Bengt-ake Lundvall (1996) (focused on processes of learning in firms) and new growth theorist Paul Romer (2007) (economic growth occurs when people take resources and rearrange them in ways that are more valuable).

The OECD then moved toward developing sets of indicators to both measure and guide national state's development toward a knowledge-based economy. The effect of producing statistics to measure the KBE in turn began to stabilise and materialise the idea of a knowledge-based economy around four pillars which the OECD and other international agencies and national actors were encouraged to agree upon: 'innovation', 'new technologies', 'human capital' and 'enterprise dynamics' (see Robertson, 2007 for a fuller explanation). These four pillars were also taken up in the World Bank's *Knowledge for Development* programme launched in 1996.

At the heart of the OECD's version of the 'knowledge economy' is the idea that knowledge has value. As Bell put it:

> Knowledge is that which is objectively known, an *intellectual property*, attached to a name or group of names and certified by copyright, or some other form of social recognition (e.g. publication). …It is subject to a judgement by the market, by administrative or political decisions of superiors, or by the peers as the worth of the result, and as to its claim on social resources, where such claims are made. In this sense, knowledge is part of the social overhead investment of society, it is a coherent statement, presented in a book, article, or even a computer program, written down or recorded at some point for transmission, and subject to some rough count (Bell, 1973: 176).

So, why this interest in the idea of a knowledge-based economy? We can begin to make sense of this if we set it against the crisis of capitalism in the early 1970s and the subsequent search for solutions to underpin the next long wave of accumulation. As we have seen already with the neo-liberal project that drove the restructuring, crises are path breaking and path shaping moments. Crises also require both semiotic and strategic innovation.

However, while through the 1980s and 90s neo-liberal political theory provided the means to unpick old institutional structures and embed the basic architecture of market liberalism, the collapse of the Washington Consensus, the leakiness of neo-liberal projects, and the global struggles around the WTO, resulted in a series of renovations - Third Way politics, the Post Washington Consensus, and so on.

Strategically, neo-liberalism as an economy imaginary was not adequate to power forward and stabilise a new social formation. This is because the emergence and consolidation of a new economic regime is dependent upon *more* than changes in the economy: "It also depends critically on institutional innovation intended to reorganise an entire social formation and the exercise of political, intellectual and moral leadership" (Jessop, 2004: 166). This requires an economic imaginary that has considerable resonance, plausibility, flexibility, and interpretability. It must be one that also;

> …enables the rethinking of social, material and spatio-temporal relations among economic and extra-economic activities, institutions, and systems and their encompassing civil society through proposing visions, projects, programmes and policies. And, to be effective, it must, together with associated state projects and hegemonic visions, be capable of translation into a specific set of material, social and spatio-temporal fixes that jointly underpin a relative structures coherence to support continued accumulation"(Jessop, 2004: 116).

Through the 1990s, with steerage from dominant nations, regions and agencies, such as the US, EC, WTO, OECD and World Bank, the idea of a 'knowledge-based economy' was promoted to eventually emerge as a powerful master economic narrative in many accumulation strategies, state strategies and hegemonic visions around the world. And, while it corresponds in significant ways to changes in technologies, labour processes, and forms of enterprise, as we have seen, it emerged out of the field of other possible contenders, including ideas like the network society and informational age, and so on. The idea of 'knowledge' is particularly potent in this discourse, as it is able to articulate with progressive left as well as right projects. Who can be against knowledge? It also articulates with both human capital and new growth theory, with their interest in the basis of economic growth and competitiveness. However, if we look more closely, the OECD and World Bank's approach is deeply inflected with western-centred mercantilism (Jessop, 2004). This more neo-liberal version of the 'knowledge-based economy' seeks to deepen and widen its grasp space by presiding over an extension of intellectual property rights, establishing institutions to ensure that value is returned across borders (Robertson,

2008), privileging knowledge creation/venture capital initiatives, and developing of creative/innovative subjects for capital accumulation.

Given the central role of education in social reproduction and cultural production, it is hardly surprising that education systems around the globe would *again* be scrutinised more closely. Education systems are important (though not exclusive) sites for the production of knowledgeable subjects. It would be important, therefore, to realise a knowledge-based economy for education be renovated in ways that would enable this new kind of self/worker/citizen to be constituted. An economy driven by constant innovation would require a rather different kind of self - one that actively produced new knowledge (and potential products and markets) through processes of assembling and reassembling knowledges. However, education systems have also increasingly been viewed as sites for profit-making. Until recently, education systems had been protected from the intrusion of capital by discourses of public good, public service and human rights. However, in knowledge-based economies, where knowledge services have a value, then it is also a logical move to bring education into the economy as a services sector in its own right. This requires the state to lose its monopoly hold over of education and enable new players in. These two related moves have opened up education to a range of projects intended to re/construct the sector, its pedagogy and subjectivities.

5. Translating and Constituting the Knowledge-Based Economy

Much of this problem specification agenda setting for the radical reorganisation of education has come from the international agencies (OECD, WTO, WB), transnational firms (Microsoft, Sylvan Learning Systems), and think-tanks (such as Demos, Futurelab) (Robertson, 2005; Robertson and Dale, 2008). At a range of scales, projects are now translating, materialising and constituting the master narrative of the knowledge based economy. All have profound implications for the organisation of teachers' work.

Modernising the school for the 21st Century

Work on the future of schooling was begun by the OECD with its *Schooling For Tomorrow* programme (2000). The need for the programme was justified on two grounds: the short-term basis of national policymaking and practice in the face of increasing complexity and change; and the fragmented and unscientific nature of education's own knowledge base. In order to focus attention on problems in the contemporary school sector, the OECD proposed a *Schooling for Tomorrow Toolbox* (OECD: 2000) aimed at identifying ways of enhancing decision-making at national and sub-national levels. Six scenarios are developed intended to challenge policymakers and practitioners to visualise desirable futures for schooling and how these might be achieved. Education leaders were encouraged to pro-actively influence their wider environment, redesign the way that organizations work, and shape their own country's futures based on national and global trends.

Three pairs of scenarios were developed in the 'toolbox' – all possible responses to the problems of learning for the knowledge economy. These are: maintaining the 'status quo' (schools as outdated bureaucracies),'re-schooling' (reorganising to prioritise school as learning organisation), and 'de-schooling' (school as market of market network). The overall negative orientation to the 'status quo' scenario as a description of the current organisation of schooling was meant to convey the view it cannot offer an adequate vision and orientation to the future. Both re-schooling and de-schooling were then selected as possible ways forward. Both privilege the learner above teachers, and new forms of governance over state monopolies, as the means of realising knowledge-based economies. The OECD's preferred position tended toward the 're-schooling' scenario, with schools continuing to sit inside a web of state and private sector provision rather than a full-blown market model.

In its first major foray into education policy for secondary schools, the World Bank's 2003 *Lifelong Learning for a Global Knowledge Economy* (directed at developing countries), also tackles the need for the radical transformation of schooling. It reinforced Bell's views outlined earlier, that;

> …a knowledge-based economy relies on ideas rather than physical abilities and the application of technology rather than the transformation of raw

> materials or the exploitation of cheap labor… The global knowledge economy is transforming the demands of the labor market throughout the world (World Bank, 2003: 161).

The Bank then argues that the global knowledge economy;

> …is also placing new demands on citizens who need new skills and knowledge to be able to function in their day-to-day lives. Equipping people to deal with these demands requires a new model of education and training, a model of lifelong learning (World Bank, 2003: 161)

In the Report the Bank contrasts current education systems (status quo) with a 'lifelong learning' approach. Current systems of education are argued to be teacher dominated, test based and focused on rote learning. A lifelong learning model, by contrast, is based on 'doing'; it would be pupil driven and personalised, with individual learning plans. Teachers are viewed as impediments, imposing facts on students. Teachers should be guides and mediators. Space is also made for technologies to become knowledge-based tutors (p. 38). The prioritisation of technologies and the Bank's commitment to public-private partnerships creates an entry point for transnational firms to enter into the education sector countries. The imagined school for the future for the World Bank is captured by the de-schooling scenario – with new technologies and the for-profit sector playing a significant role in the provision of learning.

More recently the European Commission (2007a) has also embraced the 'modernising the school' agenda as a means for realising its own competitiveness agenda (EC, 2007b). This is a radical and controversial move given that schools are constitutionally protected by the principle of subsidiarity and therefore part of national state space. Despite political sensitivities, the EC has pressed ahead, and is inviting Member States to discuss the agenda at its November 2007 Ministerial meeting in Lisbon, Portugal. The EC's working paper for discussion by Member States reflects many of the same issues as the OECD and World Bank reports: the importance of education to develop the stock of human capital (p. 3); the need to modernise the education system to ensure the development of individual creativity; "…the ability to

think laterally, transversal skills and adaptability…rather than specific bodies of knowledge" (p. 5). The EC also notes that the persistence of social inequalities limits the success of education policies in ensuring successful learning for a 'young Europeans' (p. 9). In all, this is a less radical intervention by contrast with the OECD and World Bank. Its focus is on identifying the problems and issues facing Member States in generating a competitive and cohesive Europe. However, in the conclusion, the EC points out that "…the institution of the school cannot remain static if it is to serve as a foundation for lifelong learning" (2007: 11). Member States are invited into proposing solutions that might enable them to modernise their systems. This more tentative solution seeking approach is a consequence of the political reality facing the Commission in advancing its vision, project and strategies at the European scale.

The 'scientisation' of teachers' knowledge

A second strategic project area is the teacher. The concern is not with the wider conditions under which teachers work but the nature of teachers' knowledge. David Hargreaves' arguments have been very influential in OECD circles (Hargreaves, 2001). He has also been very influential in the UK through his stewardship of key government agencies. Hargreaves argues teachers do not possess a body of codified scientific knowledge around teaching and learning. Rather, teachers work in individualised settings and acquire their knowledge through trial and error. Their knowledge is thus personal rather than collective, tacit rather than explicit, and subject/content based rather than process based. Two problems are identified here (OECD, 2001). The first is that teachers do not build up a body of evidence and use that evidence to inform their own practice. The OECD has kept the issue alive by running a series of conferences and workshops exploring how research evidence can be better used by teachers to inform teaching and learning (OECD, 2007). It has also created fora for discussions on the kinds of institutions (such as completing reviews of research on areas like ICT and learning) who might synthesise knowledge in ways useful to teachers. However, the tendency has been to generate a simplistic 'what works' - or *x causes y* approach (supported by evidence from random field trials if possible), rather than a more context sensitive 'what works for whom, under what

circumstances, with what outcomes' approach, where complexity and contingency in social settings is taken into account.

The second approach derives from the influential work of Gibbons and colleagues; that content/discipline-based knowledge (Gibbons *et al* 1994 call this Mode 1 knowledge) is less important than process and trans-disciplinary knowledge (Mode 2 knowledge) in a knowledge-based economy. Drawing upon these kinds of arguments, the OECD claims that: "Teachers …now need to teach students to learn how to learn…" and that "…this requires the production and application of new pedagogic knowledge on a huge scale" (OECD, 2001: 71). They add:

> The creation and application of professional knowledge on the scale and in the time-frame demanded by 'schooling for tomorrow' makes demands at the individual and the system levels. At the level of the individual teacher, there needs to be a psychological transition from working and learning alone with a belief that knowledge production belongs to others, to a radically different self-conception which, in conformity with interactive models, sees the production of knowledge with colleagues as a natural part of teachers' professional work. At the system level ways have to be found to bring teachers together in such an activity (OECD, 2001: 71).

While crude forms of the scientisation of teachers' work, particularly evidence-based practice, are viewed by teachers with scepticism and resistance, many teachers have been motivated to work in more collaborative, interactive ways and embraced opportunities that enable this. They have also been keen to take advantage of opportunities offered by governments to develop partnerships with universities to co-produce—though research-- knowledge about improving learning. These developments are having a positive affect on teachers' work and suggest that projects of this kind will 'fix' new pedagogical practices.

Personalisation and the 'prosumer'

A third project being advanced is personalised learning. This strategy is a response to the problem of 'learning how to learn' and has been finessed by the OECD, the UK Department for Education and Skills, and UK based think-tank Demos. Personalisation is a key strategy within the social policy sector more generally (Ferguson, 2007) to produce 'active citizenship' (Jenson and Saint-Martin, 2006). It challenges current ambitions for reform. That is, the OECD argues that current visions/practices do not have the future (post industrial) reality in its sights. Personalisation sets out to generate a new social architecture and subjectivity through recalibrating the social policy/program/consumption mix. Personalisation also replaces words like consumerism in an effort to create an effect of distance between the earlier neo-liberal project and the knowledge economy master narrative, though as we will see they are tightly linked together in this formulation of the economy.

The OECD acknowledges the significant input of the UK government and UK-based think-tank Demos to its work on personalisation. Personalisation "…springs from the awareness that 'one-size fits-all' approaches to school knowledge and organisation are ill-adapted both to individual's needs and to the knowledge society at large" (OECD, 2006: 9). Through its focus on public sector reform, personalisation promises to link "…innovation in the public sector to the broader transformations in OECD societies" (OECD, 2006: 115). Personalisation also challenges the teacher-learner relationship, placing the learner at the centre. The teacher is now one amongst an army of specialists; a node in the network and drawn upon when necessary. The OECD report invites a new way of thinking about the learner when it asks:

> Imagine a catalogue that consists of items you invent, design and conceive yourself and the supplier was more of an assistant who connects up with you momentarily through a vast, continuously reconfigured network. …In this post-industrial catalogue, which the 'producer-consumer' or *prosumer* can publish as their personalised version others might want to build on, the crucial ingredient is the value added by the individual themselves. Their capacity to invent, design and then co-produce is what distinguishes this version of personalisation from mass customisation (OECD, 2006: 118).

In the UK, journalist Charles Leadbeater's writing on personalisation has been extremely influential. In a pamphlet given government endorsement Leadbeater argues that it is possible to imagine that:

> …users take on some of the role of producers in the actual design and reshaping of the education system…The script of a system characterised by personal learning is rather different. It should start from the premise that the learner should be actively, continually engaged in setting their own targets, devising their own learning plans and goals, choosing from a range of different ways to learn (Leadbeater, 2004: 12).

This means breaking open education as the sole system of formal, institutionalised learning and moving toward one that is more fluid, flexible, multi-aged and community based (p. 16), and where teachers have a minor rather than major role.

Demos, while supportive of the overall personalisation approach, is mindful of the challenges to its possible success. The costs of education are likely to be significantly greater than current mass systems, unless of course there are mechanisms for ensuring fairness whilst targeting the brightest talent. Even so, personalisation will exacerbate the huge chasm between social classes as a result of differential access to cultural, economic and social resources (Johnson, 2004). While personalisation is intended to deliver neo-liberalism without us knowing through its appeal to being more democratic as a result of involving us in the decisions we are making about services, its neglect of poverty and inequalities, as well as its flawed assumptions about learners, autonomy and learning, will likely render it a highly contradictory strategy in the knowledge economy armoury.

Personalisation articulates with notions of choice, individual responsibility and risk, and the continual renovation of the self (Robertson, 2005). It takes the marketisation of education a further stage, placing it at the very heart of the pedagogical process (Hartley, 2007: 630). There is a convergence, then, around the importance of human capital and learning into adulthood as part of an adjustment to the new economy and to promote social inclusion, and to invest in the future (Jenson and Saint-Martin, 2006). Personalisation is envisaged as having the potential to be a mechanism of

governance, a means of constituting the active subject, and co-constituting the competitive knowledge-based economy. It also introduces consumerism to education beyond policies of choice (where consumers made decisions between products). The consumer, in this case the learner, constructs the system, becoming in this moment both consumer and producer - a fluid, self organising model resonating with Castell's (1996) network society, and Bell's post industrial futures imaginaries. However, personalisation's success as a pedagogy for the knowledge-based economy will ultimately lie with whether it is capable of resolving multiple problems within the system of knowledge production – that is, if it is able to increase individual learner performance to ensure international competitiveness; generate sufficient self-discipline in the learner/worker; facilitate inclusion so that it is a bridge to self-responsibility; and, generate creative minds to feed the innovations necessary for an economy centred on value from intellectual property.

The biologisation/neurologisation of the learner

Brains feature a great deal in the various projects to realise a knowledge-based economy, from strategies to secure the best brains/talent from around the world to work for a firm or nation, to those that focus attention on how to 'read' the brain so as to develop then develop instructional approaches that nurture learning and creativity. Considerable attention is now being given to research on brains - though from the perspective of neuroscience. Its claim is that this kind of approach provides a "hard, scientifically based theoretical framework for educational practices… and the basis for a 'Science of Learning'" (OECD, 2007: 24)

Since 1999 the OECD's Centre for Education has run a programme of work on the brain and learning in order to better understand the learning of an individual. The programme has been developed over two phases. In phase one (1999-2002), an international group of researchers were bought together to review research findings on the brain and its implications for learning sciences. In phase (2002-2006) three areas were further developed: literacy, numeracy and lifelong learning. In its 2007 publication—*Understanding the Brain: The Birth of a Learning Science*, the OECD claims that through techniques such as 'neuroimaging' it is possible to see extensive

structural change taking place in the brain. With this kind of data the report claims that, for instance:

> Understanding the underlying developmental pathways to mathematics from a brain perspective can help shape the design of teaching strategies. Different instructional methods lead to the creation of neural pathways that vary in effectiveness: drill learning, for instance, develops neural pathways that are less effective than those developed through strategy learning (OECD, 2007: 16).

Understandings generated from this approach to learning, such as the idea of *plasticity* (that is that development is a constant and universal feature of cerebral activity), is used to legitimise the lifelong learning discourses which feature as sub-narratives in the knowledge-economy master narrative.

However, this area of work has been particularly controversial, in part because of the huge (and often inaccurate) claims that have been made for brain research - in being able to understand processes learning (Hall, 2005: 4) and the considerable distance (still) between brain development, neural functioning and education practices. As Bruer noted: "Neuroscience has discovered a great deal about neurons and synapses, but not nearly enough to guide educational practice" (1997: 15).

The commoditisation of schooling

A fourth project being mobilised is the unbundling and selective capitalisation of the schooling system. This has been underway for some time in the heartlands of selected OECD countries—particularly the USA, UK, New Zealand and Canada. However, until recently, capitalisation centred on the non-core aspects of education services (Molnar, 2007). Over the past five years it is possible to observe an extension and escalation of these activities, contributing in turn to a maturing and expanding education industry (Ball, 2007). Paralleling, though not directly propelling this development is the World Trade Organization (WTO) and its ongoing negotiations – to progressively liberalise the services sectors and bring them into the

global trading regime (Robertson, Bonal and Dale, 2002). This project's narrative is that the governance regime of knowledge-based economies should have a limited number of market-unfriendly policies (Robertson, 2008). Not only should state monopolies of public services--like health and education--be dismantled, but it is argued that the private sector is uniquely capable of managing change and innovation (Hatcher, 2006: 599).

Recently, there has been rapid overall growth in the commercialisation/privatisation of schooling as a result of both explicit government policies shaping the development of the sector, and also growing confidence by firms that profits can be made in particular areas of education services. Education as a sector is being unbundled to reveal an array of educational goods and services open to trade to market actors. This includes goods and services in areas such as (i) delivery – such as provision; (ii) content – such as texts; (iii) infrastructure – such as hardware, buildings; and (iv), services – such as testing. Unbundling is taking place in a number of sectors of the education system: K-12, higher education and the corporate sector. However, my concern here is with K-12. A number of studies have recently been published to reveal the extent of the capitalisation of education (see Mahony, Menter and Hextall, 2005; Henschke, 2007; Ball, 2007). Taken together they reveal a myriad of complex interconnections between firms that draw education directly into the global economy.

Education is now regarded as big business. Henschke (2007: 178) reports that in the US for-profit firms operating in the K-12 segment had an annual growth rate of 6.6%. The highest growth areas in the US are currently in K-12 testing and tutoring, while growth in K-12 delivery has been propelled by the continuing expansion of Charter Schools, commercial home-school services and virtual charter schools (ibid: 184). Expansion in the field of testing services also owes a great deal to the testing mandate imposed by the Bush administration – as a result of the effort to drive up standards in education to foster a more competitive US economy.

The market is dominated by a small number of very large firms, such as Educate (previously Sylvan Learning Systems), Huntington Learning Centres, and Score! (Kaplan). Recently some of these firms in the US have begun to buy up smaller firms both within and across national boundaries in order to generate economies of scale

(Henschke, 2007). New firms, such as Bairds, have also been created to provide advice to investors in the education sector. These firms monitor national and international education policy developments with an eye to which of these policies, such as with assessment policies, will provide an opening and opportunity for financial gain.

Similarly, in the UK the Labour government has looked to the private sector for the ongoing development of education. This was facilitated by the Private Finance Initiative; legislation that enabled the private sector to move into hitherto uncharted territory for profit-making in education. These public-private initiatives have ranged from relatively small sponsorship deals to specialist schools and multi-million dollar infrastructure developments (such as building schools, taking over and managing local education authorities, school inspection, and examination marking). Not surprisingly, the early days of the PFI/PPP was met with considerable resistance by teacher unions. However teachers lost considerable power over this period, as they moved from collective to individualised performance-based contracts. The outsourcing of education services in the UK has been controversial and in many cases inefficient – with companies facing annual fines for failing to meet targets, criticisms from the Auditor General that quality is poor, and Despite this, the government has pressed ahead and it is clear that this is an ideological project over and above all else. Ball (2007) describes in considerable detail the deepening interconnections between the state, capital, the public sector and civil society, arguing that the extent and consequences of these changes are epistemic; that is, they involve the reshaping of "deep social relations…in an emerging Market Society within which everything is viewed in terms of quantities; everything is simply a sum of value realised or hoped for" (Ball, 2007: 185).

6. Teachers' Matter – Don't They? Drawing Conclusions

The knowledge-based economy master narrative is a potentially powerful one in its capacity to articulate with, and give direction to, projects, strategies, practices and

subjectivities that might underpin and realize a new long wave of accumulation. It ties education more closely and completely to the economy though prioritizing 'knowledge'. However the price of that tie is that a more fundamental transformation of the education sector is required. This new order—a knowledge based economy—is constituted out of a new ontology—it embraces a very different way of thinking about what it means to be human and how humans learn, develop and come to know the world, and knowledge. It also registers a different role for teachers, for good and for bad.

The current system of education, with its grammar created out of and reflecting education's role in the production of both modernity and capitalism, is problematised in the various translation projects for the knowledge economy, as having now reached its 'sell-by-date'. The teacher as the secular bible must ground to the learner and a new pedagogy of production. One reading the unfolding projects outlined above, of 'modernisation', 'personalisation', 'scientisation', 'biologisation/neurologisation' and 'commoditisation', is that they assume a very different role for the teacher as the learner is involved in a very different set of social relations. The child has subsumed the teacher. However the pedagogical project for the child, the learner, is the making and remaking of goods and services for the economy in a continual process of re/invention. The contradictions and dilemmas in these translations/strategies are all too evident. How can these approaches be embedded sufficiently for it to stabilize the social formation and economy? How is the necessary social cohesion built to ensure social stability and social reproduction? Taking teachers out of the formulation might remove an important obstacle to realizing the knowledge-based economy. However, keeping teachers in might be just as crucial. Teachers, if nimble and visionary, might be well placed to realize their individual and collective interests when the contradictions generate new spaces for action.

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Capítulo IV

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WHAT ARE SCHOOLS FOR ?

Michael Young

Introduction

Every parent and teacher needs to ask the question “What are schools for?”. They are not, of course the only institutions with purposes that we should question, but they are a special case. Like families they have a unique role in reproducing human societies and in providing the conditions which enable them to innovate and change. Without schools each generation would have to begin from scratch or – like societies which existed before there were schools – remain largely unchanged for centuries.

There are however more specific reasons why it is important to ask the question “What are schools for?” today. Since the 1970s, radical educators and

many critical sociologists have questioned the role of schools and have seen them in largely negative terms. I shall argue that despite having an element of truth which we should do well not to forget, these critiques are fundamentally misconceived.

More recently, John White, the philosopher of education, has offered a critical but explicitly positive answer to the question (White 2007). However like the negative critiques, by failing to specify what is specific about the role of schools, he does not take us very far.

I begin this chapter therefore by reviewing these two kinds of answer. I then go on to explore the implications of an alternative approach that locates schools as institutions with the very specific purpose of promoting the acquisition of knowledge.

For rather different reasons, the question of knowledge and the role of schools in its acquisition has been neglected by both policy makers and by educational researchers, especially sociologists of education. For the former, a focus on the acquisition of knowledge is at odds with the more instrumental purposes that are increasingly supported by governments . For many educational researchers a focus on knowledge masks the extent to which those with power define what counts as knowledge.

There is no contradiction, I shall argue, between ideas of democracy and social justice and the idea that schools should promote the acquisition of knowledge.

The 1970s and 1980s critics of schools

In 1970s negative views of views of schooling came largely from the left and were given considerable support by researchers in my own field – the sociology of education. The idea that the primary role of schools in capitalist societies was to teach the work class their place was widely accepted within the sociology of

education (Althusser, 1971; Bowles and Gintis, 1976; and Willis, 1977). The few working class students that did progress to university were seen as legitimating the fundamental inequalities of the education system as a whole.

In the 1980s and 1990s this analysis was extended to refer to the subordination of women and ethnic and other minorities. However these analyses rarely went beyond critiques and presented little idea of what schools might be like in socialist, non-patriarchal, non- racist societies. Radical critics such as Ivan Illich (1971) went even further and claimed that real learning would only be possible if schools were abolished altogether.

The post structuralist turn in the social sciences

In the late 80s and 1990s, under the influence of post modernist and post structuralist ideas and the collapse of the communist system in Eastern Europe, Marxism and other grand narratives foretelling the end of capitalism (and even of schooling) lost their credibility. As a consequence, the critiques of schooling changed, but more in style than substance. They drew much on the work of the French philosopher, Michel Foucault.

In his book **Discipline and Punish (Foucault 1977)** Foucault grouped schools with hospitals, prisons and asylums as institutions of surveillance and control; they disciplined pupils and normalised knowledge as subjects .

The difference between thinkers such as Foucault and the left wing ideas of earlier decades was that the ‘post marxist’ theorists dispensed with the idea of progress and any idea of a specific agency of change such as the working class. For Foucault there was no alternative to schooling as surveillance – all social scientists and educational researchers could do was to offer critiques. He expressed this point in the following terms:

"I absolutely will not play the part of one who prescribes solutions. I hold that the role of the intellectual today … is not to prophesy or propose solutions since by doing so one can only contribute to the determinate situation of power that must be critiqued" (p?)

It is not surprising, therefore, that these critiques were not listened to by policy makers – they really had little to say about schools, except to other social scientists.

Government's responses

At the same time as the emergence of post structuralist ideas, another set of ideas – neo-liberalism – came to dominate economics and government and, indirectly, education. Neo-liberals argued that the economy should be left to the market and governments should give up trying to have economic or industrial policies.

The logic of this position was followed through with enthusiasm by governments of both parties in this country with profound implications for schools. While ceding to the free market any role in the economy (with the exception of the control of interest rates), governments devoted their efforts to reforming the school system or improving 'human capital'. New Labour went even further than the Tories; they argued that the market offered the best solution for improving the public as well as the private sector – and education in particular.

This had two consequences that are relevant to the question "What are schools for?" One has been the attempt to gear the outcomes of schools to what are seen to be the 'needs of the economy' – a kind of mass vocationalism. The control of much post compulsory education and even some schools and local education

authorities has been put in the hands of sometimes willing but often reluctant private employers.

The other consequence has been to turn education itself into a market (or at least a quasi-market), in which schools are forced to compete for students and funds. I call this the ***de-differentiation of schooling***. Schools are treated as a type of delivery agency, required to concentrate on outcomes and pay little attention to the process or content of delivery.

As a result, the purposes of schooling are defined in increasingly instrumental terms – as a means to other ends. With schools driven by targets, assignments and League tables, it is no wonder that pupils become bored and teachers experience 'burn out'.

New goals for old?

In seeking to re-assert the distinctive purposes of schools, I want to consider two alternative answers to my starting question. The first can be found in John White's recent Paper for the Philosophy of Education Society of Great Britain. It is titled **What are schools for and why? (White 2007)**. No one could take issue with his claim that schools should promote human happiness and well being. The problem is that such goals apply equally to all institutions (except perhaps prisons) and they say nothing specific about what schools are for and what distinguishes their role from that of other institutions.

In his paper White is dismissive of the idea that subjects or disciplines might definite the purposes of schools. He makes the curious argument that the subject based curriculum was a middle class device designed by the 18th century Puritans for promoting their interests as the rising bourgeosie of the time. It is inconceivable, he argues, hat a curriculum with such origins could be the basis for schools for all in the 21st century.

In my view his argument is deeply flawed for two reasons. First, as John Mayer and his colleagues at Stanford University (M) have shown, what the contemporary curriculum in this country is remarkably similar to that found in most developed countries, despite their very different histories. Furthermore, the historical fact that this curriculum was developed by a particular fraction of the middle class in the late 18th/early 19th century is no grounds for describing it as a middle class curriculum. It would be equally flawed to describe Boyles Law as a middle class law on the grounds that Boyle was an 18th century upper middle class gentleman! The particular historical origins of scientific discoveries are interesting as are the historical origins of scientific laws; however these origins have nothing to say the truth of a scientific law or about the merits of a curriculum.

My second argument reason for rejecting White's argument is that it does not address the question why parents, sometimes at great sacrifice, especially in developing countries, have historically tried to keep their children at school for longer and longer periods. Nor does it tell us what parents expect as a result of these sacrifices.

Despite asking the question "What are schools for?" White also ends up, like the government and the post-structuralists in de-differentiating the goals of schools. As a result we have surveillance for Foucault, employability for New Labour and happiness and well being for John White.

I certainly prefer the last but it is hardly a guide for those responsible for the curriculum. Let us go back to Foucault for a moment. When he puts schools in the same category as prisons, asylums and hospitals, he misses both the history of the political struggle over mass schooling and what is distinctive about schools. I want to focus briefly on the first of these points and develop an argument about the implications of the distinctive purposes of schools.

Struggles over the purposes of schools

The historical struggle over the purposes of schooling can be seen in terms of two tensions. The first is between the goals of *emancipation* and *domination*.

Since the Chartists in this country in the 19th Century and more recently in the case of Bantu Education in South Africa, dominant and subordinate classes have attempted to use schools to realise their widely different purposes. One only has to remember that Nelson Mandela was a product of the schools for Africans that pre-dated Bantu education to be reminded that even the most oppressive school systems can be used as instruments of emancipation.

The second tension is between the question *"who gets schooling?"* and the question *"what do they get?"*

The struggle over schools in this country has, with a few exceptions, taken the second question as given and focused on the first. The terms in which each of these questions have been debated have of course changed. The 'access' question began with the campaign for free elementary schooling in the 19th century, led to struggles over the 11+ and selection and now is expressed in terms of the goals of promoting social inclusion and widening participation.

Interestingly the idea of a struggle over access has been replaced by a largely top down approach associated with government policies for 'widening participation'.

Debates over the question "what do they get?" also go back to the Chartists in the 19th century and their famous slogan "really useful knowledge'. This was an attack on the domination of the curriculum by the scriptures.

The Chartist's idea was revived on the left in the 1970s but such questions are far less visible today. The legacy of earlier debates can be seen in two contrasting concepts of education that underlie present day government policies.

One might be called “education as outcomes”. In this approach to education policy, teaching and learning become dominated by the setting, assessing and attaining of targets and the preparing of students for tests and examinations.

Less visible is a very different idea of education that still finds expression in the idea of subject syllabuses. It is the idea that the primary purpose of education is the transmission of knowledge in different specialist fields.

The idea of education and the transmission of knowledge has, with some justification, been heavily criticised by educational researchers, especially sociologists of education. However, my argument is that these criticisms miss a crucial point. They focus on the mechanical one-way and passive model of learning implied by the ‘transmission’ metaphor and its association with a very conservative view of education and the purposes of schools. At the same time, they forget that the idea of schooling as the 'transmission of knowledge' gives transmission a quite different meaning and explicitly presupposes the active involvement of the learner in the process of acquiring knowledge.

The idea that the school is primarily an agency of cultural or knowledge transmission raises the question “what knowledge?” and in particular what is the knowledge that it is the schools’ responsibility to transmit.

If it is accepted that schools have this role, then it implies that types of knowledge are differentiated. In other words, for educational purposes, some types of knowledge are more worthwhile than others, and their differences form the basis for the difference between school or curriculum knowledge and non-school knowledge.

What is it about school knowledge or the curriculum that makes the acquisition of some types of knowledge possible.

My answer to the question ‘what are schools for?” therefore, is that schools enable or can enable young people to acquire the knowledge that for most of them cannot be acquired at home or in the community, and for adults, in workplaces . The rest of this chapter is concerned with exploring the implications of this assertion.

What knowledge?

In using the very general word knowledge I find it useful to distinguish between two ideas – ***“knowledge of the powerful’*** and ***"powerful knowledge"***.

"Knowledge of the powerful' is defined by who gets the knowledge. Historically and even today when we look at the distribution of access to university, it is those with more power in society who have access to certain kinds of knowledge; It is this that I refer to as "knowledge of the powerful". It is understandable that many sociological critiques of school knowledge have equated school knowledge and the curriculum with ***“knowledge of the powerful’*** . It was, after all the upper classes in the early 19th century who gave up their private tutors and sent their children to the Public schools to acquire powerful knowledge(as well, of course, to acquire powerful friends) . However the fact that some knowledge is 'knowledge of the powerful' or high status knowledge as I once expressed it (Young 1971:Young 1998), tells us nothing about the knowledge itself. We therefore need another concept in conceptualising the curriculum that I want to refer to as ***‘powerful knowledge’***. This refers not to whose has most access to the knowledge or who gives it legitimacy, although both are important issues; it refers to what the knowledge can do- for example, whether it provides reliable explanations or new ways of thinking about the world. This was what the Chartists were calling for with their slogan “really useful knowledge”. It is also, if not always consciously, what parents hope for in making sacrifices to keep their children at school; that they will acquire powerful knowledge

that is not available to them at home. Powerful knowledge in modern societies in the sense that I have used the term is, increasingly, specialist knowledge. It follows therefore that schools need teachers with that specialist knowledge. Furthermore, if the goal for schools is to 'transmit powerful knowledge', it follows that teacher-pupil relations will have certain distinctive features that arise from that goal . For example :

* they will be different from relations between peers and will inevitably be hierarchical * they will not be based, as some recent government policies imply, on learner choice, because in most cases, learners will lack the prior knowledge to make such choices

This does not mean that schools should not take the knowledge that pupils bring to school seriously or that pedagogic authority does not need to be challenged. It does mean that some form of authority relations are intrinsic to pedagogy and to schools. The issues of pedagogic authority and responsibility raise important issues, especially for teacher educators which are beyond the scope of this chapter. The next section turns to the issue of knowledge differentiation. **Knowledge differentiation and school knowledge** The key issues about knowledge, for both teachers and educational researchers are not primarily the philosophical questions such as "What is knowledge?" or "How do we know at all?". The educational issues about knowledge concern how school knowledge is and should be different from non-school knowledge and the basis on which this differentiation is made. Although the philosophical issues are involved, school/non-school knowledge differences raise primarily sociological and pedagogic questions. Schooling is about providing access to the specialised knowledge that is embodied in different domains. The key curriculum questions will be concerned with:

(a) the differences between different forms of specialist knowledge and the relations between them, (b) how this specialist knowledge differs from the knowledge people acquire in everyday life(c) how specialist and everyday knowledge relate to each other, and (d) how specialist knowledge is pedagogisedIn other words, how it is paced , selected and sequenced for different groups of learners.

Differentiation, therefore, in the sense I am using it here, refers to:

* the differences between school and everyday knowledge* the differences between and relations between knowledge domains* the differences between specialist knowledge (e.g physics or history) and pedagogised knowledge (school physics or school history for different groups of learners)

Underlying these differences is a more basic difference between two types of knowledge. One is the ***context-dependent*** knowledge that is developed in the course of solving specific problems in everyday life. It can be *practical*- like knowing how to repair a mechanical or electrical fault or how to find a route on a ma. It can also be procedural, like a handbook or set of regulations for health and safety. Context-dependent knowledge tells the individual how to do specific things. It does not explain or generalise; it deals with particulars. The second type of knowledge is ***context independent*** or ***theoretical knowledge.*** This is knowledge that is developed to provide generalisations and makes claims to universality; it provides a basis for making judgments and is usually, but not solely, associated with the sciences. It is context independent knowledge that is at least potentially acquired in school and is what I referred to earlier as ***powerful knowledge***.

Inevitably schools are not always successful in enabling pupils to acquire powerful knowledge. It is also true that schools are more successful with some pupils than others. The success of pupils is highly dependent on the culture that they bring to school. Elite cultures that are less constrained by the material exigencies of life, are, not surprisingly, far more congruent with acquiring context-independent knowledge than disadvantaged and subordinate cultures. This means that if schools are to play a major role in promoting social equality, they have to take the knowledge base of the curriculum very seriously-even when this appears to go against the immediate demands of pupils (and sometimes their parents) . They have to ask the question "Is this curriculum a means by which pupils can acquire powerful knowledge?" For children from disadvantaged homes, active participation in school may be the only opportunity that they have to acquire powerful knowledge and be able to move, intellectually at least, beyond their local and the particular circumstances. It does them no service to construct a curriculum around their experience on the grounds that it needs to be validated, and as a result leave them there. **Conceptualising school knowledge**The most sustained and original attempt

to conceptualise school knowledge is that developed by the English sociologist Basil Bernstein (Bernstein 1971;2000). His distinctive insight was to emphasise the key role of knowledge boundaries, both as a condition for the acquisition of knowledge and as embodying the power relations that are necessarily involved in pedagogy. Bernstein begins by conceptualising boundaries in terms of two dimensions. First he distinguished between the ***classification*** of knowledge- or the degree of insulation between knowledge domains- and the ***framing*** of knowledge- the degree of insulation between school knowledge or the curriculum and the everyday knowledge that pupils bring to school. Secondly, he proposed that ***classification*** of knowledge can be ***strong***- when domains are highly insulated from each other(as in the case of physics and history) – or ***weak***- when the there are low levels of insulation between domains (as in humanities or science curricula). Likewise, ***framing*** can be ***strong*** – when school and non-school knowledge are insulated from each other, or ***weak***, when the boundaries between school and non-school knowledge are blurred (as in the case of many programmes in adult education and some curricula designed for less able pupils). In his later work Bernstein(1996:2000) moves from a focus on *relations between* domains to the *structure of the domains* themselves by introducing a distinction between vertical and horizontal knowledge structures. This distinction refers to the way that different domains of knowledge embody different ideas of how knowledge progresses. Whereas in vertical knowledge structures(typically the natural sciences) knowledge progresses towards higher levels of abstraction (for example, from Newton's laws of gravity to Einstein's theory of relativity), in horizontal(or as Bernstein expresses it, segmental) knowledge structures like the social sciences and humanities, knowledge progresses by developing new languages which pose new problems. Examples are innovations in literary theory or approaches to mind and consciousness. Bernstein's primary interest was in developing a language for thinking about different curriculum possibilities and their implications. His second crucial argument was to make the link that between knowledge structures, boundaries and learner identities. His hypothesis was that strong boundaries between knowledge domains and between school and non-school knowledge play a critical role in supporting learner identities and therefore are a condition for learner's to progress. There are however a number of distinctive aspects of how Bernstein uses the idea of boundary, all of which can be traced back to Durkheim (Moore 2004). Firstly, boundaries refer to *relations between*

contents not the *knowledge contents themselves*. Secondly, although strong boundaries have traditionally been expressed in disciplines and subjects, from Bernstein's perspective, this is a historical fact and the disciplines and subjects that we know are not the only form that strong boundaries can take. Thirdly, strong boundaries between contents will have distributional consequences; in other words they will be associated with certain inequalities of outcomes. Fourthly, whether it is associated with creating new knowledge (in the university) or extending the acquisition of powerful knowledge to new groups of learners, innovation will involve crossing boundaries and calling identities into question. In other words school improvement from this perspective will involve both stability and change, or in terms set out in this chapter the inter relation between boundary maintenance and boundary crossing.

Conclusions This chapter has argued that whatever their specific theoretical priorities, their policy concerns or their practical educational problems, educational researchers, policy makers and teachers must address the question "what are schools for?" . This means asking how and why school have emerged historically, at different times and in very different societies as distinctive institutions with the specific purpose of enabling pupils to acquire knowledge not available to them at home or in their everyday life[1]. It follows, I have argued, that the key concept for the sociology of education(and for educators more generally) is ***knowledge differentiation***[2].

The concept of ***knowledge differentiation*** implies that much knowledge that it is important for pupils acquire will be non-local and counter to their experience. Hence pedagogy will always involve an element of what the French sociologist, Pierre Bourdieu refers to, over-evocatively and I think misleadingly, as *symbolic violence*. The curriculum has to take account of the everyday local knowledge that pupils bring to school, but such knowledge can never be a basis for the curriculum.

[1] In a broader theoretical context this chapter is arguing that the sociology of education should see schools as part of the linked projects of modernization and social justice.
[2] In beginning with ***a theory of knowledge differences*** and not just the fact of differences, the concept *knowledge differentiation* is quite distinct from (and a critique of) the superficially similar idea that there are different types of knowledge.

The structure of local knowledge is designed to relate to the particular; it cannot provide the basis for any generalisable principles. To provide access to such principles is a major reason why all countries have schools.

The concept of ***knowledge differentiation*** sets a threefold agenda for schools and teachers, for educational policy makers and for educational researchers. Firstly, each group(separately and together) must explore the relationship between the purpose of schools[3] to create the conditions for learners to acquire powerful knowledge and both their ***internal structures*** - such as subject divisions- and their ***external structures***- such as the boundaries between schools and professional and academic 'knowledge producing communities' and between schools and the everyday knowledge of local communities. .

Secondly, if schools are to help learners to acquire powerful knowledge, local, national and international groups of specialist teachers will need to be involved with university-based and other specialists in the ongoing selection, sequencing and inter-relating of knowledge in different domains. Schools therefore will need the autonomy to develop this professional knowledge; it is the basis of their authority as teachers and the trust that society places in them as professionals. This trust may at times be abused; however any form of accountability must support that trust rather than try to be a substitute for it. Thirdly, educational researchers will need to address the tension in the essentially ***conservative*** role of schools as institutions with responsibility for knowledge transmission in society-especially as this aspect of their their role is highlighted in a world increasingly driven by the instabilities of the market. However, conservative has two very different meanings in relation to schools. It can mean preserving the stable conditions for acquiring 'powerful knowledge' and resisting the political or economic pressures for flexibility. A good example is how curricular continuity and coherence can be undermined by modularisation and the breaking up of the curriculum into so-called "bite sized chunks". The 'conservatism' of educational institutions can also mean giving priority to the preservation of particular privileges and interests, such as those of students of a particular social class or of teachers as a professional group. Radicals and some sociologists of education have in the past tended to focus on this form of conservatism of schools and assume that if schools are to improve they have to

[3] Here, schools is a short hand for **all** formal educational institutions.

become more like some view of the non-school world- the community or the market. This takes us back to the tension between differentiation and de-differentiation that I referred to earlier in this chapter.

This chapter has made three related arguments. The first is that although answers to the question "What are schools for?" will inevitably express tensions and conflicts of interests within the wider society, nevertheless educational policy makers, practicing teachers and educational researchers, need to address the distinctive purposes of schools. My second argument has been that there is a link between the emancipatory hopes associated with the expansion of schooling and the opportunity that schools provide for learners to acquire 'powerful knowledge' that they rarely have access to at home. Thirdly I introduce the concept - ***knowledge differentiation as a principled way of distinguishing between school and non-school knowledge.*** Contemporary forms of accountability are tending to weaken the boundaries between school and non-school knowledge on the grounds that they inhibit a more accessible and more economically-relevant curriculum. I have drawn on Basil Bernstein's analysis to suggest that to follow this path may be to deny the conditions for acquiring powerful knowledge to the very pupils who are already disadvantaged by their social circumstances. Resolving this tension between political demands and educational realities is, I would argue, one of the major educational questions of our time.

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