Untangling Theories and Hegemonic Projects in Researching Education and the Knowledge Economy

35

Susan L. Robertson

Abstract

This chapter offers the reader a conceptual tool for reading education policies, projects and their implementation – Cultural Political Economy of Education. CPE/E is particularly attentive to the explanatory power derived from holding together connections between the cultural, political and economic dimensions of educational life and lives. Using a range of 'knowledge economy' projects as a point of entry, and the idea of 'translation projects', the chapter also explores the importance of contexts of reception in the education policy domain, and the ways in which contexts of reception make it more or less feasible, or not, to continue to discursively advance, materialize, and institutionalize, particular as solutions to policy.

Keywords

Critical political economy • Education • Discourse • Translation • Power

> In those times when the world seems to be at a turning point, when the accustomed framework of life seems to be upset, there arises a demand for new knowledge that will better enable people to understand the changes going on about them. The assumptions upon which prevailing forms of knowledge were based are challenged. A different set of problems have to be confronted.
>
> (Cox and Schechter 2002, p. 76)

Introduction

This chapter's title, along with the quote from Cox and Schechter above, signals that knowledge will be used in two ways: on the one hand to draw attention to the prioritization of 'knowledge' in the new 'knowledge-based' economy and society, and on the other hand, to register the call for new knowledges and theories to better illuminate the nature, scope and consequences of emerging social relations in contemporary globalising capitalist social formations and the role of education in this process. In this chapter I will be suggesting that these two vantage points; 'knowledge as hegemonic project' and 'knowledge as the 'voice' of theory' (Young 2009), are discrete, though connected, moments in the production of a new economy, with education playing a crucial role in this through a series of 'translation projects'. Briefly, I argue that 'translation projects' are political and policy interventions; they mobilize symbolic and other (for example, material, intellectual) resources in an attempt to realize – practically, materially and institutionally – the dominant meta-narrative in specific contexts. Their success or not is mediated by the context of reception.

This chapter responds to the problem of researching the role, significance and consequences of placing 'the voice of knowledge' (as opposed to its unvalorised other – knowledge) and the 'context of reception' at the heart of contemporary education policy and practices through the systematic use of a particular theoretical and methodological approach – Cultural Political Economy (CPE). Developed by Jessop and colleagues (see Jessop 2004, 2008; Jessop and Sum 2001), CPE is a distinctive "...post-disciplinary approach to understanding capitalist social formations" (Jessop 2004, p. 159). In the first part of this chapter I outline the key elements of

S.L. Robertson (✉)
Graduate School of Education, University of Bristol, Bristol, UK
e-mail: s.l.robertson@bristol.ac.uk

A.D. Reid et al. (eds.), *A Companion to Research in Education*,
DOI 10.1007/978-94-007-6809-3_35,

this approach with specific attention to the education sector (that is, a Cultural Political Economy of Education approach). The second part of this chapter uses this approach to reveal and explore in detail a number of 'translation' projects under way within the education sector; projects which seek to "retain and institutionalize (sediment) some discourses and practices" (Jones 2008, p. 393). The final and concluding section of the chapter reflects upon, and offers some final thoughts on the theoretical and methodological challenges still facing CPE.

A Cultural Political Economy of Education (CPE/E)

In the words of one of its main proponents, CPE is a "...post-disciplinary approach that adopts the 'cultural turn' in economic and political enquiry without neglecting the articulation of semiosis with the interconnected materialities of economics and politics within wider social formations" (Jessop 2004, p. 159). In making the broad case for CPE, Jessop argues that:

> ...this approach is concerned with the key mechanisms that determine the co-evolution of the semiotic and the extra-semiotic aspects of political economy. These mechanisms are mediated through the general features of semiosis as well as the particular forms and institutional dynamics of capitalism.
>
> (Jessop 2004, p. 159)

Two key questions concern Jessop in developing CPE as a research approach. To begin, what role does the semiotic and extra-semiotic play in ordering and transforming capitalist social relations? And, given the contradictions of capitalism, what role does the semiotic play in construing, constructing and stabilizing capitalist social formations?

In order to answer these questions, CPE advances a distinctive set of ontological, epistemological and methodological claims. Ontologically, through semiosis, social objects and subjects are socially-constructed and historically-specific; these social objects and subjects are also 'embedded', 'enacted' and 'repaired' within broader social networks of social relations and institutions as part of wider processes of social reproduction. Epistemologically CPE emphasizes the contextuality and historicity of claims to knowledge whilst at the same time stressing the materiality of social relations and the constraints that operate on agents and therefore the nature of their agency. Methodologically, CPE highlights the role of the cultural and semiotic (the inter-subjective production of meaning) in the continual remaking of social relations and their extra-semiotic properties. In relation to political economy, CPE stresses the contingent and tendential nature of emergent properties. In other words, CPE tries to avoid the reification and essentializing of different moments of capital accumulation, whilst at the same time recognizing the continuing reproduction of the capital relation itself. Importantly, CPE highlights the role of imaginaries, such as economic imaginaries like the 'knowledge economy' and 'network society' in representing actually existing practices and relations. Whilst "imaginary economies are discursively constituted and materially reproduced on many sites and scales, in different socio-temporal contexts, and over various spatio-temporal horizons" (Jessop 2004, p. 162), this very process opens up new fracture lines and the limited probability of the smooth reproduction of the social order.

A 'Cultural Political Economy of Education' (CPE/E) sees education, not as a pre-given container or universal and unchanging category of social relations and life-worlds, but as a complex terrain and outcome of discursive, material and institutionalized struggles over the role of education in the 'social contract'. This includes, for instance, the role and status of knowledge within the economy and society; the role of education as a positional good; the relationship between education, the allocation of merit and credentials and social mobility; the conception of the learner; governance of the labouring of teachers and learners; the relationship between education and other social sectors, and so on. In sum, it locates education within a wider ensemble of capitalist and other social relations that directs, albeit in contradictory ways, the form and function of education over time and its role in both social reproduction and in the repair of the social relations of production. It takes the cultural turn seriously by examining the role of semiosis in constituting 'education' subjects and objects; for instance as it shapes the ideational, representational and institutional moments in education strategies, structures, subjects and subjectivities.

CPE/E deploys a strategic relational approach to understanding the structured and structuring role of education in political economies more generally (Jessop 2001, p. 5), and the global political economy in particular (Dale 2009). This involves:

> (...) examining how a given structure may privilege some actors, some identities, some strategies, some spatial and temporal horizons, some actions over others; and the ways, if any, in which actors (individual and/or collective) take account of this differential privileging through 'strategic-context' analysis when choosing a course of action.
>
> (Jessop 2004, p. 162)

CPE/E also argues that education, a key site of cultural production and social reproduction, is directly and indirectly shaped by combinations of economic, political and intellectual forces who manipulate power and knowledge in order to re/produce new boundaries, geometries and temporalities in a spatio-temporal fix to displace or defer capitalism's crisis tendencies (Jessop 2000). Taken together, CPE/E enables us to unravel and reveal the complex (and contradictory) ways in which discourses/ideas/imaginaries (such as growth, development, knowledge), actors/institutions (such as the World Bank, OECD, nation states) and material

capabilities/power (resources, aid) are mobilized to strategically and selectively advance an imagined, knowledge-based economy and its material re/production, within which education is now being re/constituted in particular ways.

Knowledge, Imaginaries and Master Narratives

According to writers like Gibbons et al. (1994), new ways of thinking about knowledge are transforming the way we work, with whom we work, and the basis of value creation. Such pronouncements have led commentator to ask: have we entered a new era in the organisation of knowledge? If so "...such a transformation would entail more than a shift from one educational ideology to another but a shift in our very conception as to what knowledge is and as to what knowledge is for" (Osborne 2004, p. 430). Similarly, Young, author of the seminal works on knowledge and control in the 1970s, remarked recently: "...'knowledge' has undoubtedly become the major organising category in the educational policies of international organisations and many national governments" (2009, p. 193). Notable too, he observes, is that despite the focus on knowledge, the question – what kind of knowledge, and for whom – is simply not asked.

These observers are right. Whilst 'knowledge' has become the centre piece of almost every national government's strategy for economic development, and despite the fact that all of the major international agencies have embraced the 'knowledge' rhetoric in reports, policies and governance tools, the question of what knowledge is, what and who it is for, and what kind of knowledge, remain under-developed. Knowledge, it would seem, is everywhere and nowhere, making it a particularly challenging object to research. Like globalisation, the ubiquity of knowledge therefore generates important challenges for researchers as to quite what it means, and from there, how best to systemically investigate it as a object of study. The slipperiness of knowledge is tied to the fact that given its 'discursive elasticity', 'absorptive capacity' and 'emptiness', enabling it to function as a powerful meta-narrative, also mean it is elusive and difficult to pin down. For researchers, these difficulties are compounded by the fact that 'knowledge' is typically viewed as a good thing, and if not, then it should be. Added to this, as Stehr observes:

> ...knowledge has always had a function in social life; one can justifiably speak of an anthropological constant: human action is knowledge based. Social groups and social roles of all types depend on, and are mediated by knowledge. Relations among individuals are based on knowledge of each other. Similarly, power has frequently been based on advantages in knowledge, not only on physical strength. And, last but not least, societal reproduction in not merely physical reproduction but, in the case of humans, always cultural, i.e. the reproduction of knowledge. (1994, p. 8)

Standing outside this maze of conceptual anchorings, commonsense meanings, and normative framings is important if researchers are to see more clearly 'what it is' that the idea of knowledge is being asked to do in contemporary societies, and why this particular idea, in contrast to other discursive possibilities, is such a potent one.

Since the late 1990s, the 'knowledge economy' discourse has dominated talk in political and policy circles. However, as we will see, 'the knowledge-based economy' does not exist *a priori*. In this section I will show, using an historical materialist approach, that 'the knowledge-based economy', like all economies, is socially-constructed.

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 argued that societies were in transition to becoming 'knowledge-based'. Their thesis, regarded as highly speculative at the time, was later added to by Manuel Castells (1996, 2000). A core argument in this body of work was that information/knowledge is 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, p. 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 as from Dominic Foray (2004) (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 (1992) (focusing on processes of learning in firms) and new growth theorist Paul Romer (2007) (that economic growth occurs when people take resources and rearrange them in ways that are more valuable).

The OECD then moved to developing sets of indicators to both measure and guide the development of nation states toward a knowledge-based economy. The effect of producing statistics to measure the KBE in turn began to stabilize and materialize 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 2009, 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 judgment 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, p. 176)

So, why 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 1990s neo-liberal political theory provided the means to unpick old institutional structures and embed the basic architecture of market liberalism, the subsequent collapse of the Washington Consensus, the leakiness of neo-liberal projects, and the global struggles around the WTO, together resulted in a series of repairs and renovations of that Consensus – Third Way politics, the Post Washington Consensus, and so on.

Strategically, neo-liberalism as an economy imaginary was not adequate to power forward and stabilize 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 reorganize an entire social formation and the exercise of political, intellectual and moral leadership" (Jessop 2004, p. 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.

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, labor processes, and forms of enterprise, 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 also a particularly potent in this discourse as it is able to articulate with the projects of the Progressive Left as well as the Right. 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-centered 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 2009), privileging knowledge creation/venture capital initiatives, and the developing of creative/innovative subjects for capital accumulation.

Translating and Constituting the Knowledge-Based Economy Through Education

Given the central role of education in social reproduction and cultural production, it is hardly surprising that education systems around the globe became the object of considerable scrutiny advanced around the rhetoric of producing 'knowledge economies'.

As argued above, education systems are important (though not exclusive) sites for the production of knowledgeable subjects. It would be important, therefore, to realize a knowledge-based economy for education to 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 which 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 making profits. 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 '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.

Much of this problem specification/agenda setting for the radical reorganization of education has come from the international agencies (OECD, WTO, WB), transnational firms

(e.g. Microsoft, Sylvan Learning Systems), and think-tanks (such as Demos) and foundations (e.g. the Bill and Melinda Gates Foundation).

For researchers, this means being attentive, empirically and methodologically, to the way in which new actors, new spaces, new strategies, new governance mechanisms and new subjectivities are both the subjects and objects of the knowledge economy meta-narrative. In the following section I outline five 'translation projects' that are currently taking place, and which would constitute sites for more extensive investigation.

Modernising Education for the Twenty First Century

Work on the 'future' of schooling and higher education was begun by the OECD with its *Schooling For Tomorrow* programme (2000), higher education scenarios (Lancrin 2004), and recent 'University Futures' programme (2008). The need for such programmes was justified on three grounds: the short-term basis of national policymaking and practice in the face of increasing complexity and change, the fragmented and unscientific nature of education's own knowledge base, and the need to offer national governments disinterested advice (OECD 2009).

In order to focus attention on problems in the contemporary school sector, the OECD proposed the *Schooling for Tomorrow Toolbox* (OECD 2000) aimed at identifying ways of enhancing decision-making at national and sub-national levels. Six scenarios were developed intended to challenge policymakers and practitioners to visualize 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' (reorganizing to prioritize schools as learning organizations), and 'de-schooling' (schools as markets in market network). The overall negative orientation to the 'status quo' scenario as a description of the current organization 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 realizing 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, p. 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, p. 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 upon rote learning. A lifelong learning model, by contrast, is based on 'doing'; it would be pupil driven and personalized, 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 prioritization 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.

The European Commission (2007a) has also embraced the 'modernizing the school' agenda as a means for realizing its own competitiveness agenda (European Commission 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 invited 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 modernize 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 'young Europeans' (p. 9). In all, this tended towards being a less radical intervention in

contrast with the OECD and World Bank. Its focus was on identifying the problems and issues facing Member States in generating a competitive and cohesive Europe. However, in the conclusion, the EC pointed out that "...the institution of the school cannot remain static if it is to serve as a foundation for lifelong learning" (2007a, p. 11). Member States were then invited into proposing solutions that would enable them to modernize their systems. This more tentative solution seeking approach, a consequence of the political reality facing the Commission in advancing its vision, project and strategies at the European scale, also illustrates the politics surrounding the selection of particular imaginaries – in this case, a very different kind of schooling for Member States to realize a knowledge economy.

The 'Scientization' of Teachers' Knowledge

A second strategic project has been the 'knowledge of the teacher'. The concern is not with the wider conditions under which teachers' work but the nature of teachers' knowledge (cf. Robertson 2000). David Hargreaves' arguments have been very influential in OECD circles (Hargreaves 2001; OECD 2005). 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 individualized 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, p. 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, p. 71)

While crude forms of the scientization of teachers' work, particularly those around 'evidence-based practice', are viewed by teachers with skepticism 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.

Personalization and the 'Prosumer'

A third project being advanced is personalized 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 thinktank, Demos. Personalization 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. Personalization sets out to generate a new social architecture and subjectivity through recalibrating the social policy/program/consumption mix. Personalization 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 Demos to its work on personalization. Personalization "...springs from the awareness that 'one-size fits-all' approaches to school knowledge and organization are ill-adapted both to individual's needs and to the knowledge society at large" (OECD 2006, p. 9). Through its focus

on public sector reform, personalization promises to link "...innovation in the public sector to the broader transformations in OECD societies" (OECD 2006, p. 115). Personalization 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 customization.
>
> (OECD 2006, p. 118)

In the UK, journalist Charles Leadbeater's writing on personalization 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, p. 12)

This means breaking open education as the sole system of formal, institutionalized 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.

Personalization articulates with notions of choice, individual responsibility and risk, and the continual renovation of the self (Robertson 2005). It takes the marketization of education a further stage, placing it at the very heart of the pedagogical process (Hartley 2007, p. 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). Personalization 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-organizing model resonating with Castell's (1996) network society, and Bell's post-industrial futures imaginaries. However, personalization'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 centered on value from intellectual property.

The Biologization/Neurologization of the Learner

Brains feature a great deal in the various projects to realize 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 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, p. 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 was 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, p. 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 legitimize 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, p. 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, p. 15).

The Commodification of Education

A fifth project concerns the unbundling and selective capitalization and commodification of the schooling and higher education sectors. This has been underway for some time in selected OECD countries – particularly the USA, UK, New Zealand and Canada. Until recently, processes of capitalization centered on the non-core aspects of education services (Molnar 2006). However, over the past 5 years it is possible to observe an extension and escalation of these activities, contributing in turn to a maturing and expanding education industry (Ball 2002, 2007). Paralleling, though not directly propelling, this development is the World Trade Organization (WTO) and its ongoing negotiations – to progressively liberalize the services sectors and bring them into the global trading regime (Robertson et al. 2002). This project's narrative is that the governance regime of knowledge-based economies should have a limited number of market-unfriendly policies (Robertson 2009). Not only should state monopolies of public services – like health and education – be dismantled, but it is argued the private sector is uniquely capable of managing change and innovation (Hatcher 2006, p. 599).

More recently, there has been rapid overall growth in the commercialization/privatization of schooling as a result of both explicit government policies shaping the development of the sector, and 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 et al. 2004; Hentschke 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. Hentschke (2007, p. 178) reports that in the United States for-profit firms operating in the K-12 segment had an annual growth rate of 6.6 %. The highest growth areas in the U.S. 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., p. 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 U.S. economy.

Final Comments: Back to CPE/E

One of the major difficulties in thinking about the role of knowledge in constituting the new economy is that 'knowledge' is made to work at multiple levels and in multiple ways – as sacred and profane; as everywhere and no-where. It describes the 'well educated', 'the wise', and 'the everyday'. Indeed, ontologically to develop as a human being – to be human – means to be a knowledging/knowledgeable self. However as I have shown, 'knowledge' is also given particular form through its mobilization in the knowledge economy imaginary, as part of political and hegemonic projects.

This knowledge-based economy master narrative is powerful 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, for governing, a certain kind of 'knowledge' – as a performance of the self – and its allied subjectivity – the flexible lifelong 'learner'. However the price of this tie is that a more fundamental transformation of the education sector is required.

The current system of education, with its grammar created out of, and reflecting, education's role in the production of modernity and capitalism, is problematized in the various translation projects for the knowledge economy, as having now reached its 'sell-by-date'. The teacher, as the secular bible, must give ground to the learner and a new pedagogy of production. One reading some of the unfolding 'translation' projects outlined above – 'modernization', 'personalization', 'scientization', 'biologization/neurologization' and 'commoditization' – is that they assume a very different role for the teacher, because the learner is involved in a very different set of social spatial relations. The learner now subsumes the teacher.

This new order – a knowledge based economy – requires and constitutes an ontological and epistemic shift in society, and, I have argued, a shift in the kinds of theories that we need to develop in order to understand better what it going on. A Cultural Political Economy of Education (CPE/E) approach draws our attention to the constitutive role of the semiotic in the political economy of education and the role of 'imaginaries' in this. Translation of this knowledge

economy imaginary within the education sector is intended to transform that sector. To the extent that these ideas take material and practical form, they are also constitutive of both subjects and objects.

However, what is important for ongoing work using a CPE/E approach to researching the knowledge economy is to undertake further empirical research work on these projects in order to understand the way in which both agents and their agency are shaped, and how in turn that structural strategic terrain of action is in turn constituted as a consequence of this agency. In other words, using these translation projects as a lens, it would be important to examine empirically the different moments of discourse so as to highlight the struggles over ideas and the basis in which some are selected for strategic implementation and which are also further sedimented into and which transform existing arrangements, and others are discarded.

Note on Contributor

Susan L. Robertson is Professor of Sociology of Education, University of Bristol. She is Coordinator of the Centre for Globalisation, Education and Societies, founding co-editor of the journal Globalisation, Societies and Education, and founding co-editor of the influential blog GlobalHigherEd. She writes on globalization, regionalization, education policy and the state. Susan has extensive experience as a researcher on projects and in working with advanced graduate students.

References

Ball S (2002) Class strategies and the education market. Routledge/Falmer, London

Ball S (2007) Education plc: understanding private sector participation in public sector education. Routledge, London/New York

Bell D (1973) The coming of the post-industrial society: a venture in social forecasting. Penguin, Middlesex

Bruer J (1997) Education and the brain: a bridge too far. Educ Res 26(8):4–16

Castells M (1996) The information age: economy, society and culture, vol 1, The network society. Blackwell, Oxford

Castells M (2000) The rise of the network society, 2nd edn. Blackwell, Oxford

Cox R, Schechter M (2002) The political economy of a plural world. Routledge, London

Dale R (2009) Pedagogy and cultural convergence. In: Daniels H, Lauder H, Porter J (eds) Educational theories, cultures and learning: a critical perspective. Routledge, London, pp 27–38

Drucker P (1969) The age of discontinuity: guidelines to our changing society. Heinemann, London

European Commission (2007a) Schools for the 21st century. Commission Staff Working Paper, SEC (2007) 1009. European Commission, Brussels

European Commission (2007b) Progress towards the Lisbon objectives in education and training: indicators and benchmarks. Commission Staff Working Paper, SEC (2007) 1284. European Commission, Brussels

Ferguson I (2007) Increasing user choice or privatising risk? The antinomies of personalization. Br J Soc Work 37(3):387–403

Foray D (2004) The economics of knowledge. The MIT Press, London/Cambridge, MA

Gibbons M, Limoges C, Nowotny H, Schartzman S, Scott P, Trow M (1994) The new production of knowledge. Sage, London

Hall J (2005) Neuroscience and education: what can brain science contribute to teaching and learning. Spotlight, #92, The SCRE Centre, University of Glasgow

Hargreaves D (2001) Teachers' work. In: OECD (ed) Knowledge management for learning societies. OECD, Paris, pp 210–237

Hartley D (2007) Personalisation: the emerging 'revised' code of education? Oxford Rev Educ 33(5):629–642

Hatcher R (2006) Privatization and sponsorship: the re-agenting of the school system in England. J Educ Policy 21(5):599–619

Hentschke G (2007) Characteristics of growth in the education industry: illustrations from US education business. In: Martens K, Rusconi A, Leuze K (eds) New arenas of global governance: the impact of international organizations and markets on educational policymaking. Palgrave, New York, pp 176–194

Jenson J, Saint-Martin D (2006) Building blocks for a new social architecture: the LEGOtm paradigm for an active society. Policy Polit 34(3):429–451

Jessop B (2000) The state and the contradictions of the knowledge-driven economy. In: Bryce JR, Daniels PW, Henry ND, Pollard J (eds) Knowledge, space, economy. Routledge, London, pp 63–78

Jessop B (2001) Regulation theory and the crisis capitalism, vol 1–5. Edward Elgar, Cheltenham

Jessop B (2004) Critical semiotic analysis and cultural political economy. Crit Discourse Anal 1(1):159–174

Jessop B (2008) State power. Polity Press, Cambridge

Jessop B, Sum NL (2001) Pre-disciplinary and post-disciplinary perspectives in political economy. New Polit Econ 6:89–101

Jones M (2008) Recovering a sense of political economy. Polit Geogr 27:377–399

Lancrin S (2004) Building future scenarios for universities and higher education. An international approach. Policy Futures in Educ 2(2):245–263

Leadbeater C (2004) Learning about personalization: how can we put the learner at the heart of the education system. DfES, London

Lundvall B-Å (1992) National innovation systems: toward a theory of interactive learning. Pinter Publishers, London

Machlup F (1962) The production and distribution of knowledge. Princeton University Press, Princeton

Mahony P, Hextall I, Menter I (2004) Building dams in Jordan, assessing teachers in England: a case study of edu-business. Globalisation Soc Educ 2(2):277–296

Mattelart A (2003) The information society: an introduction. Sage, London

Molnar A (2006) The commercial transformation of public education. J Educ Policy 21(5):621–640

OECD (2000) Schooling for tomorrow toolbox. OECD, Paris

OECD (2001) Knowledge management for the learning society. OECD, Paris

OECD (2005) Teachers matter: attracting, developing and retaining effective teachers. OECD, Paris

OECD (2006) Personalising education. OECD, Paris

OECD (2007) Understanding the brain: the birth of a learning science. OECD, Paris

OECD (2008) Higher education to 2030, vol 1, Demography. OECD, Paris

OECD (2009) University futures. http://www.oecd.org/document/18/0,3343,en_2649_35845581_31245522_1_1_1_1,00.html. Last accessed on 17 July 2009

Osborne T (2004) On mediators: intellectuals and the ideas trade in the knowledge society. Econ Soc 33(4):430–447

Robertson S (2000) A class act: changing teachers' work, the state and globalisation. Falmer/Routledge, London

Robertson S (2005) Re-imagining and rescripting the future of education: global knowledge economy discourses and the challenge to education systems. Comp Educ 41(2):151–170

Robertson S (2009) 'Producing' knowledge economies: the World Bank, the KAM, education and development. In: Simons M, Olssen M, Peters M (eds) Re-reading education policies: studying the policy agendas of the 21st century. Sense Publishers, Dortrecht, pp 251–273

Robertson S, Bonal X, Dale R (2002) GATS and the education service industry: the politics of scale and global territorialisation. Comp Educ Rev 46(4):472–496

Romer P (2007) Economic growth. In: Henderson D (ed) The concise encyclopedia of economics. Liberty Fund, Indianapolis. http://www.econlib.org/library/Enc/EconomicGrowth.html

Stehr N (1994) Knowledge societies. Sage, London/New York

World Bank (2003) Lifelong learning for the global knowledge economy. The World Bank, Washington, DC

Young M (2009) Education, globalisation and the 'voice of knowledge'. J Educ Work 22(3):193–204