Towards greater realism in learning for sustainability

(Published as Chapter 1 in Arjen E J Wals & Peter Blaze Corcoran (Eds.) *Learning for sustainablity,* Wageningen Academic, 2012, 35-48)

John Huckle

Can we learn our way to sustainability? Can teachers in schools re-design what pupils learn, how they learn, and the environments in which they learn so that they become sustainability literate citizens capable of working together to bring about more viable futures?

This chapter addresses these questions. It suggests that learning for sustainability is essentially about learning to value sustainable relations between people (social relations); between people and the rest of the bio-physical world (environmental relations); and between the elements that make up that non-human world (ecological relations). It is also about considering dominant and alternative forms of technology and social organization (political economy) and their potential to foster such sustainable relations. Changing social relations, of economic, political, and cultural power, shape (and are shaped by) environmental and ecological relations, and people are more likely to realize their common interest in sustainable relations if social relations are just and democratic. In conditions of equality people's basic needs are more likely to be met; greed is likely to be less acceptable; and the costs and benefits of living within ecological limits are more likely to be fairly shared. In conditions of genuine democracy, citizens have real power to shape the economy, government, and cultural life and are more likely to develop systems of governance that deliver sustainability.

So how to proceed? As the title of this chapter suggests, I want to suggest that much education for sustainable development (ESD), or learning for sustainability (LfS), should be more realistic. More alert to issues of inequality, social class, and sustainability politics; more firmly anchored in the realities of the dominant forms of unsustainable development and underdevelopment shaping the contemporary world; and more attentive to the struggles of the workers and citizens to introduce more sustainable alternatives. My argument moves from sustainability as a frame of mind through sustainability ethics to political economy and the current crisis of neo-liberal capitalism. It then considers the nature of radical change, beliefs that act against such change, and how these are reflected in the overt and hidden curriculum of schools. LfS requires not only that we encourage pupils to critically consider alternative forms of political economy and alternative beliefs, but that we develop democratic classrooms and common community schools in which they learn about equality, democracy, and sustainability through direct experience.

Sustainability as a frame of mind and sustainability ethics

Bonnett (2004) argues that rather than conceiving of sustainability as policy designed to achieve a certain state of affairs (for example balance between economic growth, social justice, and environmental protection), teachers should conceive of it as a frame of mind or

way of relating to nature. Such a frame of mind is committed to the co-evolution of human and non-human nature and seeks the kinds of sustainable relations within and between the bio-physical and social worlds outlined above. It recognises that a 'realist' nature of bio-physical structures and processes (Soper, 1985) exists independently of human activity; that such nature is nevertheless affected by society; and that it places real ecological limits on social development. If development is to sustain mutually beneficial relations, people will require a deep empathy towards the flourishing of things beyond themselves. They will need to be open and engaged with the complexity and meaning of things in the manner of great art or literature; attuned to the harmony and discord in the world via a heightened sense of attachment; and capable of viewing nature in ways that are essentially poetic and non-manipulative.

Bonnett insists that the kind of knowledge that learners require will not be exclusively or even predominantly scientific. The science of nature and society needs to be set in a broader context provided by the arts and humanities for only then will they be alive to the many facets and significances of nature that shape understanding of the world, the self, and what counts as development. The arts and humanities can encourage learners to balance the economic or instrumental values that modern society places on (and extracts from) nature with ecological, aesthetic, scientific, existence and spiritual values. They can also express the virtue of sufficiency over excess and of sustaining things not in order to have something in hand for the future, but in order to let things be true to themselves, unalienated from their own essence and development.

At the heart of sustainability as a frame of mind are weakly anthropocentric values that recognise that while humans are the only source of value, they are not the only bearers of value. Sustainability ethics suggest that we realise our fullest development only by recognising the ultimate meaning and value of things beyond ourselves, or by taking the interests of non-humans seriously. In that they deal with ultimate concerns, values, and truth, such ethics are bound up with spirituality and are reflected in statements of universal moral principles, such as the Earth Charter (Corcoran et al, 2005). This is founded on principles of respect and care for the community of life (principles 1 & 2) while principle 3 recommends democratic societies that are just, participatory, sustainable and peaceful.

Learning designed to foster sustainability as a frame of mind will focus on learners' sensory experience of place and nature. It will supplement outdoor education with lessons in the sciences, arts and humanities, designed to foster learners' critical faculties of environmental interpretation and appreciation. They will become more skilled in recognising sustainable and unsustainable relations in places and communities; whether they are developing in more of less sustainable ways; and how design, technology, and planning can render places more sustainable. Values education activities will be used to instil, clarify, and develop sustainability ethics. Learners will be introduced to individuals and communities that are seeking to realise such ethics in their everyday lives, and the school will be run in ways that reflect them.

Political economy, environmental history, and alienation from nature

Learners exposed to sustainability as a frame of mind and sustainability ethics are likely to ask "but why don't we live in ways that foster sustainability as a frame of mind and reflect sustainability ethics?" The simple answer is that modern societies are dominated by economic and instrumental values and that prevailing social relations favour the interests of rich and powerful minorities over the common interests of the majority. More complex answers introduce the concept of political economy and the ways in which changing modes of economic production and social reproduction are associated with changing social and environmental relations, and changing beliefs and values regarding human and non-human nature (Huckle & Martin, 2001, Robbins et al, 2010).

Political economy (or political ecology) suggests that nature is constructed both materially and existentially in the ongoing development of society in ways that are more or less sustainable. There is little if any nature untouched by society and the world that surrounds us is a hybrid of bio-physical and social elements, constructed in the past and present. Landscape, technology, artefacts, infrastructure, institutions, beliefs and values, are all the product of social structures and processes interacting with bio-physical structures and processes in different ways, at different times, under different social or power relations. These control not only what gets made and how it gets made (by combining land, labour and capital in different ways), but how the conditions of production (ecological resources not used directly in the production process, such as fertile soil or clean water; urban and rural space free from pollution and congestion; and healthy, suitably skilled workers) are reproduced. Schooling was introduced into society to instil the disciple and develop the basic skills required by the factory system. While its contents and methods are contested, its primary function remains that of economic and cultural reproduction. To reproduce workers and citizens who are supportive of the interests of those who control and govern society.

LfS might introduce political economy by exploring environmental history, the ways in which societies have lived more or less sustainably in the past (Ponting, 1991, Diamond, 2006), and the ways in which industrialisation changed the ways in which people used and viewed landscape and nature (Clayre, 1977, Pepper, 1996). Such studies will lead to considerations of the rise of capitalism and the ways in which it alienates people from nature (by separating them from the land through urbanisation; by separating them from the nature they produce as they work on goods and services for sale; by separating them from the rest of human nature by encouraging individualism and personal rather than collective consumption; and separating them from a comprehensive understanding of nature by divisions of knowledge and the encouragement of specialisation). Alienation from nature discourages the development of sustainability as a frame of mind and is a prime driver of consumerism, the means by which capitalism seeks to provide compensatory meaning and purpose to life.

Neo-liberal capitalism

Capitalism is a system for producing ever greater quantities of commodities (goods and services) for sale at a profit, by incorporating ever greater quantities of human and non-human nature (workers and natural resources) into international circuits of money or capital.

It is an irrational and unsustainable system driven by competition between capitalist corporations and nation states, and displays waves of development (boom and bust) each linked to distinctive productivity and demand regimes, and stabilised by distinctive institutions and ideas. Neoliberal capitalism, which dominated the world economy from the early 1980s until the financial crisis of 2008, involved the deregulation of financial markets; speculation; privatisation; and globalisation. It fostered flexible production of niche products and services using information technology; the outsourcing of production to low-wage economies; the intensification of consumer demand through the ready availability of credit; a much enhanced role for the financial sector; and the partial dismantling of welfare states.

Neoliberal capitalism was essential a project to restore the power of the capitalist class (Harvey, 2010). The power of organised labour was eroded; the share of GNPs going to wages and salaries declined; inequalities increased; and work became less secure for many. Consequently capital over-accumulated in the corporate and financial sectors and was re-circulated in the form of credit. Banks made loans to riskier and riskier customers or invested in riskier and riskier derivatives, and when the resulting credit and housing bubbles burst, governments stepped in to bail them out. Debts were effectively transferred to governments that then introduced austerity packages that further increased inequalities. The continuing crisis is characterised by global imbalances (within the Eurozone and between the newly emerging and old economies); rising energy prices due to the approach of peak oil; worsening ecological problems, especially climate change that is impacting on food prices; and unprecedented levels of globalisation and interdependence that render problems more difficult to solve (Gamble, 2009, De Santos et al,, 2009).

During the neoliberal era, growing concentrations of wealth in the corporate and financial sectors distorted business incentives and liberal democracy. Money was invested in takeovers, private equity, property and financial engineering, rather than in the creation of more sustainable businesses and jobs. Rich individuals and corporations were able to exert undue political influence, ensuring light or non existent regulation; low taxes; inaction on tax havens; and legislation favourable to their interests (Lansley, 2011). In late 2011, the G20 were searching for ways to restore growth and avoid recession. Falling real wages were stifling demand; corporations held near-record volumes of cash; banks were reluctant to lend; and the power of Wall Street and the City of London remained intact.

The alternatives, a green new deal or green socialism

Late 2011 also saw anti-capitalist protest in cities around the world. In London, as elsewhere, members of the Occupy movement demonstrated forms of co-operative living and direct democracy. They drafted a manifesto stating their refusal to pay for the banks' crisis; their rejection of government spending cuts which they saw as neither necessary nor inevitable; and their demands for global tax justice and an end to democracy representing corporations instead of citizens. They sought independent regulation of business; co-ordinated action to defend public services, stop wars and arms dealing; and structural change towards authentic global equality. The world's resources should go towards caring for people and the planet, not the military, corporate profits, or the rich (Toynbee, 2011).

Meanwhile the mainstream politics of sustainable development is divided between those who advocate a green economy in a neoliberal mode (a green version of business as usual) and those who propose such an economy in a social democratic or reformist mode. The former, often termed ecological modernisation, relies heavily on technical fixes, corporate social responsibility; the pricing the environment and pollution to quicken the introduction of clean technologies and waste-free production; and the further commodification of nature (new environmental goods and services) to provide new sources of investment and profits (Porrit, 2007) . The latter is associated with advocacy of a green new deal (UNEP, 2009, SICSWS, 2010) with UK authors (NEF, 2008) proposing that we should deal with the current crisis firstly through a structural transformation of the regulation of national and international financial systems and major changes to taxation systems, and secondly by a sustained programme to invest in and deploy energy conservation and renewable energies, coupled with effective demand management. Government should invest in green jobs, infrastructure, and public services and reshape institutions and ideas, in order to hasten the start of a new cycle of capitalist development with more sustainable productivity and demand regimes.

Advocates of ecological modernisation and green new deals fail to grasp that it is the greed that underpins capitalism that is the true cause of unsustainable development (Thompson, 2009, Shutt, 2010). Only economic democracy (public control over the financial system and investment) and popular planning (public control over economic and social development) can ensure the transition to sustainable development in ways that benefit the majority and end the inequality and alienation associated with capitalism. Green socialism would heal social, environmental and ecological relations by encouraging production for use rather than profit; adopting waste-free and appropriate technologies; providing satisfying work and a basic wage for all; reducing working hours in the formal economy to free time for self and community development; encouraging internationalism and the global redistribution of wealth alongside greater local and regional self-sufficiency; and engaging all citizens in the planning of their lives and futures through new forms of environmental, ecological and global citizenship (Dobson, 2003, Monbiot, 2003). Pepper (1993), Kovel (2007), and Foster et al (2010) are among those who have written on green or eco-socialism, and green socialists are well represented amongst anti-capitalist protestors (Saad-Filho, 2003, Gilbert, 2008).

The agents of revolutionary change and social learning

Harvey (2010) explains that capitalist development is the result of capital moving through seven inter-related spheres of socio-ecological reality in search of profit. In addition to environmental and social relations, and the reproduction of conditions of production, already mentioned in this chapter, he recognises technologies and organisational forms; institutional and administrative arrangements; production and labour processes; and mental conceptions of the world. These seven spheres evolve in dynamic interaction with one another. None is dominant and each is subject to perpetual renewal and transformation. Tensions and contradictions between the spheres (at a particular place and time), allow us to say something about the likely future development of society, but all change is contingent rather than determined.

Revolutionary change towards green socialism can, in Harvey's opinion, start anywhere and everywhere and needs to become a movement across and through the seven spheres. As social movements confront different emerging contingencies, contradictions and possibilities, they learn by testing ideas and strategies in action. Such social learning (praxis or critical pedagogy or critical action research) takes place within and between the five movements that in their different ways address the question of whether the world can change materially, socially, mentally and politically to confront capitalism's perpetuation of endless compound growth and usher in more sustainable forms of development. These movements are non-governmental organisations; grassroots organisations; organised labour and left political parties; movements to resist dispossession, for example through privatisation; and emancipatory movements around issues of identity.

Why capitalism and inequality persist

That these movements have failed to bring about radical change is largely due to the fact that much that is currently wrong is widely seen as either inevitable or justifiable. Arguing in the context of Britain, Dorling (2011) suggests that while the old social evils of ignorance; want; idleness; squalor; and disease have largely been eradicated, they have been replaced by five new tenets of injustice, that: elitism is efficient; exclusion is necessary; prejudice is natural; greed is good; and despair is inevitable. Those in power across almost all rich countries hold these beliefs and do not believe there is a cure for modern social ills. Critically in the context of LfS they believe that just a few children are sufficiently able to be fully educated and only a few of those are then able to govern; the rest must be led. They also believe that their own greed, and that of their friends, is helping humanity as much as humanity can be helped. Such beliefs are propagated through the media, government, educational institutions, and corporate PR departments, all suggesting, for example, that without greed there would be no growth, and without growth we would all be doomed.

Dorling exposes these new tenets of injustice as false. Elitism began to be propagated once the well-off felt threatened by the poor who had shown that they too could be educated. A pseudo-science of intelligence testing based on assumed genetic differences, was used to justify educational rationing and to divide and sort pupils. In reality, "intelligence merely reflects environment and is only one small part of what it means to be clever" (Dorling, p. 45). Realisation that all children are capable of learning without limit, and that selection by so called ability wastes talent, shaped the introduction of comprehensive education (all ability, community schools) in Britain in the 1970s and early 1980s. By the 1990s, there was a move to testing and league tables as ways of labelling pupils and schools, and establishing a market in education: a continuum of supply (different types of schools, differentiated by quality) to cater for an imagined distribution of demand (parents expressing their choices for different kinds of schooling). Schooling again became more clearly differentiated by social class, with some parents are more able than others to exercise choice due to their influence, knowledge, religion, or ability to move to be nearer a desirable school.

LfS requires community schools, attended by all the pupils in the neighbourhood, because it is by learning together that young people recognise their common interest in sustainable

development and the rich recognise their obligations to the poor. The current system in England, and elsewhere, labels too many pupils as failures; condemns too many disadvantaged pupils to schools with too few resources; and cultivates cynicism and despair in pupils who do not see the point of schooling when well qualified older siblings have unsatisfying jobs or no jobs at all. The media's attack on schools attended mainly by the poor is part of a more general demonization of the working class, whereby the poor are labelled wanting, feckless, immoral and criminal, again to explain away present inequalities (Jones, 2011). Elitism remains firmly established (in 2006/7 only 45 children claiming free school meals made it to Oxbridge, out of around 6,000 successful applicants (Jones, p. 180)), and given the present "school wars" in England over the organisation, control and content of education (Benn, 2011), it is not surprising that ESD has made only modest progress here during the UNDESD..

Greed is a key factor in sustaining educational inequality since "the rich believe that their children have a special right to more because it is somehow their 'duty' to be set up to be above others" (Dorling, p. 28). The myth that "the wealthy are the children of those who work hard, take risks, make money, and just want to leave it to their family" (p. 29) is now widely accepted by the middle classes and many of the poor, yet the evidence suggests that greed does not create worthwhile work for others; is not efficient; creates huge amounts of waste; and corrupts thinking since the rich overstate their contribution to society, and the poor blame themselves for their condition. Sustainability is essentially about constraining greed, learning to conserve rather than waste resources, and co-operating rather than competing in the ways we produce and distribute wealth. Much greed is the result of people mistaking wants for needs, and believing, as advertisers and politicians tell them, that their present way of living, based on debt and consumerism, is the only way possible (Barber, 2007).

Learning for sustainability as critical pedagogy

In 2010 Danny Dorling toured schools in England showing short films on injustice to older pupils and discussing their reactions. He found that pupils' explanations of inequality reflect their class background. Most of the pupils he met had little real understanding of the lives of others or the structures and processes that shape the development of the society in which they live (Dorling, 2010).

Such findings suggest that on the foundations of sustainability ethics and sustainability as a frame of mind, LfS should develop pupils' understanding of dominant and alternative forms of political economy and their potential to deliver equality, democracy, and sustainability. It should explore the relationship between people's ideas and values and their material position in society and employ ideology critique (Grundy, 1987) to reveal the role of ideas in legitimating unsustainable forms of development. Learners should consider how social, environmental and ecological relations have changed over time; the benefits and costs of capitalism in its diverse forms; the validity and viability of different kinds of reformist and revolutionary change proposed by diverse social movements; and the desirability of people acting collectively and successfully to shape and change their own natures and the natures

that surround them. As regards green socialism they might, for example, critically consider social planning in Cuba, Curitiba and Porto Alegre in Brazil, or Kerala in India.

Developing the knowledge, skills and values of active and critical citizenship is central to such critical pedagogy (Kincheloe, 2008) with pupils being introduced to those forms of environmental, ecological and global citizenship that give expression to Earth Charter principles and our responsibilities to other species and people at a distance in space and time (Huckle, 2008a).

Such learning should be inquiry based, drawing on a wide range of academic knowledge and making this relevant for learners in the context of the everyday knowledge and issues they bring to school. It should help them decide what is technically possible, culturally acceptable and morally and politically right, and so develop sustainability literacy (the ability to 'read' the unsustainable present and 'write' a more sustainable future). Teachers should draw on a wide range of experiential and democratic activities (games, role-plays, decision-making exercises; dilemmas; field visits; media analysis; etc) to encourage such learning and should use new technologies to enable pupils to share information and communicate within and across communities. Schools should model cooperative and sustainable living in their use of resources; the curriculum they offer; and their links with the wider world. In a media dominated age, pupils might watch and discuss extracts from such films as *The Story of Stuff*, *The Yes Men Fix the World*, *The Age of Stupid*, and *Inside Job*.

The case for greater realism in education for sustainable development

In England the introduction of critical pedagogy into environmental education can be traced to recognition of the ideological role played by its dominant forms (Huckle, 1983); the writings of radical environmentalists (Pepper, 1987), and increased dialogue between practitioners of "adjectival" educations (peace education, human rights education, futures education, etc) (see for example Hicks, 1988). Development educators introduced the ideas of Paulo Freire, and in the mid to late 1980s I used these, along with a curriculum framework provided by the Programme for Political Education (Crick & Porter, 1978), to develop curriculum materials for older pupils (Huckle, 1988b). Subsequent policy initiatives on ESD marginalized critical approaches (Huckle, 2008, Winter, 2007), but Morgan (2010) provides an inspiring example of their recent application.

Meanwhile in Latin America, Freirean ideas were leading to what has become ecopedagogy, a loosely knit, worldwide association of critical educators, theorists, non-governmental and governmental organizations, grassroots activists and concerned citizens engaged in critical LfS (Gadotti, 2010, Kahn, 2008, 2012). Like this chapter, ecopedagogy maintains that the majority of ESD, much of it sponsored by governments and corporations, is unrealistic, functions as ideology, and contributes to what has been termed the "closing circle of ESD" (Selby & Kagawa, 2010, 2011) that is linked to the deradicalisation of development education (Bryan, 2011). A rough test of this claim is to search four publications linked to the UNDESD for key words and phrases used in this chapter that would suggest their authors had a realistic understanding of our contemporary predicament and the role of LfS in its amelioration (see Table One).

Key word or phrase	Tomorrow Today (Witthaus et al, 2010)	ESD Lens (Fien et al, 2010)	ESD An expert Review of Processes and Learning (Tilbury, 2011)	ESD in the UK in 2010 (UKNCUnesco, 2010)
Political economy	0	0	0	0
Values	85	75	54	6
Politics	13	0	0	2
Capitalism	0	0	0	0
Crisis	13 (3 refer to economic/financial crisis)	1 (food crisis)	0	1 (climate crisis)
Socialism	0	0	0	0
Citizenship	19 (2 refer to ecological citizenship)	27	5 (3 refer to democratic citizenship)	32 (13 refer to global citizenship)
Inequality	3	2	0	1
Democracy	11	5	4	0
Literacy	24 (most refer to basic literacy, 2 to environmental literacy, 4 to media literacy)	11 (2 refer to scientific literacy, and 1 to critical literacy)	9 (1 to sustainability literacy and 1 to environmental literacy)	6 (5 refer to sustainability literacy)
Critical pedagogy	0 (but 15 mentions of pedagogy)	0 (but 4 mentions of pedagogy)	0 (but mention of transformative pedagogy)	0 (but 2 mentions of pedagogy)
Ecopedagogy	3 (all in Gadotti's article)	0	0	0

Table One Frequency of Key Words and Phrases in Four Publications Linked to UNDESD

On this limited evidence, ESD remains idealistic (values feature more than politics), ignores political economy, and makes little reference to the global financial crisis that remains largely unresolved. There is much mention of citizenship and some mention of democracy but little analysis of their meanings within different models of political economy. Reference to ecopedagogy is confined to one contributor. There is no mention of critical pedagogy but there is mention of sustainability literacy in two of the documents.

Since the first Earth Summit in 1972, much has been learnt about the theory and practice of environmental and development education and ESD. The ESD community may however still have much to learn if it is to empower learners as agents of effective change towards more just, democratic and sustainable schools and societies.

References

Corcoran, P., Vilela, M. & Roerink, A. (eds.) (2005) *The Earth Charter in Action, Toward a Sustainable World.* Amsterdam, the Netherlands: KIT Publishers.

Barber, B. R. (2007) *Consumed: How markets corrupt children, infantalize adults, and swallow citizens whole.* London, UK: Norton and Company.

Benn, M. (2011) *School Wars: The Battle for Britain's Education*. London, UK: Verso.

Bonnett, M. (2004) *Retrieving Nature: education in a post-humanist age*. Oxford, UK: Blackwell.

Bryan, A. (2011) "Editorial: Another cog in the anti-politics machine? The 'declawing' of development education", *Policy and Practice*, 12, 1 -14. Available at http://www.developmenteducationreview.com/issue12

Clayre, A. (ed.) (1977) *Nature and Industrialization*. Oxford, UK: Oxford University Press.

Crick, B. & Porter, A. (eds.) (1978) *Political Education and Political Literacy*. London, UK: Longman.

De Santos, R., Husson, M., Katz, C. & Mandel E. and others, (2009) *Socialists and the Capitalist Recession.* London, UK: Resistance Books.

Diamond, J. (2006) *Collapse, How Societies Choose to Fail or Survive*. London, UK: Penguin.

Dobson, A. (2003) *Citizenship and the Environment*. Oxford, UK: OUP.

Dorling, D. (2010) "Notes from a travelling professor." *Education Guardian*, 26 October 2010.

Dorling, D. (2011) *Injustice: Why social inequality persists*. Bristol, UK: Policy Press.

Fien, J., Parker, J., Lotz-Sisitka, H. & Khoti, S. 2010 Education for Sustainable Development Lens: a practice and policy review tool, Unesco, Paris. Available at http://unesdoc.unesco.org/images/0019/001908/190898e.pdf

Foster, J. B., Clark B. & York, R. (2010) *The Ecological Rift: Capitalism's War on the Earth*. New York, USA: Monthly Review Press.

Gadotti, M. (2010) “Transformative Learning.”’ In M. Witthaus, K. McCandless, and R. Lambert (eds.) op.cit.: 157- 159.

Gamble, A. (2009) *The Spectre at the Feast, Capitalist Crisis and the Politics of Recession*. Basingstoke, UK: Palgrave Macmillan.

Gilbert, J. (2008) *Anticapitalism and Culture: Radical Theory and Popular Politics*. Oxford, UK: Berg.

Grundy, S. (1987) *Curriculum: Product or Praxis*. London, UK: Falmer Press.

Harvey, D. (2010) *The Enigma of Capital And the Crisis of Capitalism*. London, UK: Profile Books.

Hicks, D. (ed.) (1988) *Education for Peace, Issues, principle and practice in the classroom*. London, UK: Routledge.

Huckle, J. (1983) “Environmental Education” in J. Huckle (ed.) *Geographical Education: Reflection and Action.* Oxford, UK: OUP.

Huckle, J. (1988) *What We Consume: The Teachers Handbook*. Richmond, UK: WWF/Richmond Publishing..

Huckle, J. and Martin, A. (2001) *Environments in a Changing World*. London, UK: Prentice Hall.

Huckle, J. (2008a) “Sustainable Development.” In J. Arthur,, I. Davies, and C. Hahn, (eds.), *The Sage Handbook of Education for Citizenship and Democracy*. London, UK: Sage, pp. 342 – 354.

Huckle, J. (2008b) “An analysis of New Labour’s policy on education for sustainable development with particular reference to socially critical approaches.” *Environmental Education Research,* 14(1): 65 – 76.

Jones, O. (2011) *Chavs: The Demonization of the Working Class*. London, UK: Verso.

Kahn, R. (2008) “From Education for Sustainable Development to Ecopedagogy: Sustaining Capitalism or Sustaining Life?” *Green Theory & Praxis*, 4(1), 1 – 14.

Kahn, R (2012) *Ecopedagogy: Educating for Sustainability in Schools and Society*. London, UK: Taylor & Francis.

Kincheloe, J. (2008) *Critical pedagogy*. New York, USA: Peter Lang.

Kovel, J. (2007) *The enemy of nature: The end of capitalism or the end of the world?* London, UK: Zed Books.

Lansley, S. (2011) *The Cost of Inequality: Three Decades of the Super-Rich and the Economy.* London, UK: Gibson Square Books.

Monbiot, G. (2003) *The Age of Consent: A Manifesto for a New World Order*. London, UK: Harper Perennial.

Morgan, J. (2011) *Teaching Secondary Geography as if the Planet Matters*. London, UK: David Fulton.

NEF (New Economics Foundation). 2008. *A Green New Deal: Joined up policies to solve the triple crunch of the credit crisis, climate change and high oil prices*. London, UK: NEF. Available at http://www.neweconomics.org/publications/green-new-deal

Pepper, D (1987) "The Basis of a Radical Curriculum in Environmental Education." In C. Lacey and R. Williams (eds.) *Education, Ecology and Development: The Case for an Education Network.* London, UK: WWF/Kogan Page.

Pepper, D. (1993) *Eco-socialism: from deep ecology to social justice*. London, UK: Routledge..

Pepper, D. (1996) *Modern Environmentalism*. London, UK: Routledge.

Ponting, C. (1991) *A Green History of the World*, London, UK: Sinclair-Stevenson.

Porritt, J. (2005) *Capitalism as if the World Matters*. London, UK: Earthscan.

Robbins, P., Hintz, J. and Moore, S. (2010) *Environment and society: a critical introduction*. Chichester, UK: Wiley.

Saad-Filho, S. (ed.) (2003) *Anti-Capitalism: A Marxist Introduction*. London, UK: Pluto Press.

Selby, D. & Kagawa, F. (2010) "Runaway Climate Change as Challenge to the 'Closing Circle' of Education for Sustainable Development", *Journal of Education for Sustainable Development*, 4(1), 37 – 50.

Selby, D. & Kagawa, F. (2011) "Development education and education for sustainable development: Are they striking a Faustian bargain?", *Policy and Practice*, 12, 15-31. Available at http://www.developmenteducationreview.com/issue12

Shutt, H. (2010) *Beyond the Profits System: Possibilities for a Post-Capitalist Era*, London, UK: Zed Books.

SICSWS (Socialist International Commission for a Sustainable World Society). 2010. *From a High Carbon Economy to a Low Carbon Society*. Available at http://www.socialistinternational.org/viewArticle.cfm?ArticleID=2032

Soper, K. (2005) *What is Nature?* Oxford, UK: Blackwell.

Thompson, S (2009) "Green Keynesianism and its Limits." In R. De Santos, M. Husson, C,.Katz, E. Mandel E. and others, op.cit., 36 – 48.

Tilbury, D. (2011) *Education for Sustainable Development: An Expert Review of Processes and Learning*, Paris, France, Unesco. Available at http://unesdoc.unesco.org/images/0019/001914/191442e.pdf

Toynbee, P. (2011) "Here in the City protest has occupied the mainstream," *The Guardian*, 18 October 2011.

UKNCUnesco (UK National Committee for Unesco) Education for Sustainable Development in the UK 2010. London, UK. Available at http://www.unesco.org.uk/uploads/UNESCO_educationforsustainabledev_2010_web.pdf

UNEP (United Nations Environment Program). 2009. *Global Green New Deal: Policy brief*. Available at http://www.unep.org/greeneconomy/

Witthaus, M., McCandless, K. & Lambert R. (eds.) (2010) *Tomorrow Today*. Leicester, UK: Unesco/Tudor Rose.Available at http://unesdoc.unesco.org/images/0018/001897/189741e.pdf

Winter, C. (2007) "Education for sustainable development and the secondary curriculum in English schools: rhetoric or reality?" *Cambridge Journal of Education*, 37(3): 337 – 354.

About the author

Since the early 1980s John Huckle has sought to bring a more critical perspective into the theory and practice of environmental education and ESD. Working with WWF-UK, he developed a curriculum for high school students (*What We Consume*) and a course of professional development for teachers (*Reaching Out*). He co-edited *Education for Sustainability* with Stephen Stirling and later advised the Sustainable Development Commission on ESD indicators. He was the main overseas consultant and workshop facilitator for WWF-China's ten year project to introduce ESD to normal university tutors and school teachers (*Environmental Education Initiative*) and is currently advising tutors writing a masters course in ICT-enabled ESD within the framework of the ERASMUS virtual campus programme. John's current interests are in the development of ESD informed by political ecology and critical pedagogy and the links between such ESD and citizenship education. His website is at http://john.huckle.org.uk