# Come Hell *and* High Water: Education at the Crossroads, or U-Turn Ahead?

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## Abstract

In this explorative position paper, I make three related points. First, based on results from a recent large-scale study in KwaZulu-Natal and other empirical research reports, I argue that educational initiatives alone are not going to get learners out of poverty; it is vital to combine them with an effort to improve health and nutrition. This is particularly the case in the light of the climate changes we are facing globally, which are linked to the two other large global crises, the financial and the environmental crises. Second, I use the sociology of worth to unpack the common linking of school effectiveness to poverty eradication and social justice. I then propose an environmental order of worth, and discuss how environmental education may be seen as a process of disagreement and compromises with other orders of worth. Third, I link this to a need for broad engagement with educational goals and practices in ways which recognise teacher professionalism. These arguments pull together to make the point that we are at more than a crossroads; we are in need of a U-turn, and it is our responsibility as educators and new 'organic intellectuals' to put up the road signs and draw attention to them. In addition, the paper reflects the first steps in my own process of engaging the possible relevance of the sociology of worth to education, and I hope it will be read as such.

**Keywords:** Order of worth, environmental education, environmental crisis, teacher autonomy, curricular compromises, organic intellectuals, learning, disadvantage, poverty

## Introduction

This paper is based on a presentation at the 'Education at the Crossroad' symposium at the University of KwaZulu-Natal in 2012. The symposium was

framed, in the call for papers, by the absence of significant results from the substantial curriculum, textbook, school-intervention and teacher-development initiatives aimed at improving learner performance with the proclaimed goal of disrupting the cycle of poverty. There are three assumptions reflected in this way of describing the current educational situation, namely:

(a) that improved learner performance is linked to reducing poverty;

(b) that curriculum, textbook, school-intervention and teacher-development initiatives will improve learners' performance; and

(c) that education should primarily be concerned with school effectiveness.

In the section below, I engage the first two of these assumptions, and in the following sections I link this to the need for broad environmental education and to the 'order of worth' which I argue should replace the efficiency principle.

Data from the developed context ('world') indicate that each year of education increases future earnings by 3-6% (Jensen & Aaltonen 2012). Nonetheless, despite improved access to schooling across Africa, ours remains the rich continent with shrinking GDPs and increasing numbers of people living in poverty (Maathai 2011; Rice 2005). And material poverty is linked to other poverties (van der Merwe 2009): participation poverty refers to diminished opportunities as well as diminished capacity to participate in civic organisations or democratic debate, while identity poverty includes aspects such as loss of voice, loss of hope. The famous Coleman report found that learners' attitudes, importantly shaped by the extent to which they feel some measure of control over their own destiny, can to a degree overcome an adverse school situation, and that this relates to the background and aspirations of other learners in the school (Coleman, Campbell, Hobson, McPartland, Mood, Winefeld & York 1966:22, 23, 321). These considerations have been condensed into the notion of the learners' 'foreground', which refers to learners' interpretations of their future possibilities (Skovsmose 1994; 2012). This seems a viable notion in our context – what *is* our learners' foreground? What expectations *do* they have –

can they reasonably have? What possibilities *do* they see for themselves? If the 'future researchers' Jensen and Aaltonen (2012) are right, and globalisation will lead to production to some extent moving from Asia to Africa, such a shift, even taking into account the widespread blight of corruption and misrule in Africa (Rice 2005), will shift learners' foregrounds, with undoubted consequences for their learning performance.

## Factors Leading to Improved Learner Performance

If, for a brief moment, we assumed that improving learner performance on standardised tests is indeed the key goal, we would need to consider to what extent the various policy and teacher-development interventions facilitate this. It is therefore relevant to look at research into which factors correlate with improved learner performance.

In 2009, we collected data from 39 rural and urban schools in KwaZulu-Natal relating to Grade 6 learner performance in mathematics, teachers' content knowledge and style of teaching, learner and teacher background and school factors (Aungamuthu, Bertram, Christiansen & Mthiyane 2010). The results in many ways confirmed what previous studies showed. First, in terms of how the learners and teachers performed: the mean performance of learners was 26.9 (out of 100), and most of the teachers could correctly answer fewer than half of the questions on the teacher test[1].

The second way in which our survey confirmed previous studies was in terms of the correlations we found between learner performance and other factors. First and foremost, differences in socioeconomic status among individual learners faded into insignificance in comparison to differences between schools. This does not mean that learners' home situations do not affect their school performance[2]. Indeed, material poverty makes a bigger difference to learner performance in South Africa than in other SACMEQ countries (van der Berg, Burger, Burger, de Vos, du Rand, Gustafsson,

[1] Admittedly, our sample of teachers was small, but we found no statistically significant difference in teacher test scores between teachers with and without a formal qualification.

[2] I note that international studies indicate that the socio-economic status of learners is more significantly related to learner performance than school factors (Hattie 2003; van der Berg *et al.* 2011).

Moses, Shepherd, Taylor, van Broekhuizen & von Fintel 2011)[3]. But the key factor appears to be the socioeconomic status of the community as a whole in the area in which the school is located (Howie 2003): schools in well-to-do communities tend to be well-resourced and well-run, and this factor, rather than individual variations in learners' socioeconomic status, appears to be a principal determinant of learners' performance. This explains why, in South Africa, more than in other African countries, variation in performance is greater between schools than within them (SACMEQ II 2010).

With respect to the teacher's role, the important achievement-facilitating factors appear to be: discipline/classroom management, feedback, frequency of homework, learners feeling secure/safe in the school[4], curriculum coverage, and the posing of questions making high cognitive demands of learners. Teaching methods appear to make less of a difference – according to our own study and others (Reeves 2005; Spaull 2011; van der Berg, *et al.* 2011)[5]. 15% of the differences in learner performance was accounted for by the teacher actually being present in the classroom, by the language of instruction (Christiansen & Aungamuthu 2012), and by the learners feeling safe.

The factors of security and teachers being at their posts may be related to the issues of discipline and the proper management of the school. van der Berg et al. see these factors as strongly correlated to learner performance but add that it is not easily determined whether schools with learners who do well are easier to manage or whether schools which are well

[3] The Southern and Eastern Africa Consortium for Monitoring Educational Quality. Currently, SACMEQ consists of 15 Ministries of Education in Southern and Eastern Africa: Botswana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zanzibar, and Zimbabwe.

[4] An alarming number of learners do not feel safe in the school environment. Violence amongst learners and by teachers is not uncommon, but learners also fear violence from the surrounding community, such as rape or abduction on the road to and from school. This is why a solid demarcation of the school area is one of the characteristics of resilient schools (Christie 2001).

[5] For reading, the availability of textbooks also makes a difference, but this does not apply to mathematics textbooks (Spaull 2011).

managed produce better learner performance. Christie's work (2001) seems to indicate that leadership is a large part of what makes some South African schools succeed against the odds. This view is further developed in a later work, where Fleisch and Christie argue that 'the establishment of [political] legitimacy and authority is a precondition for sustainable effectiveness and improvement' (2004: 95). And forming part of any such strategy of amelioration would be an 'ethics of care' (Grant, Jasson & Lawrence 2010).
There are also many indications that interventions in poorer schools or schools with under-achieving learners do not have much, if any, impact; dysfunctional schools do not manage to turn an augmentation of resources into an educational advantage; and the more disadvantaged a school is, the less difference will a teacher's knowledge base make (personal communication, Paul Hobden).

Teacher knowledge or style of teaching does not appear to be strongly correlated to learner performance; in the SACMEQ III study, 'a 100 point increase in teacher scores was associated with … an average change of 4.8 points' in learner performance in Mathematics (van der Berg, *et al.* 2011:5). Factors which according to van der Berg et al. do correlate to learner performance are curriculum coverage, feedback[6], frequency of homework (also showing up as a significant factor in our study), class size (in 'African' schools only), and parental involvement (in English and Afrikaans medium schools only). Of course, the practices and procedures most advantageous to learner performance are most likely to be found in well-run and affluent schools.

What we had hoped to see strongly reflected in our study was the effect of pedagogy, in particular the much acclaimed Pedagogical Content Knowledge (PCK). We were disappointed: while some of the teachers demonstrated a range of PCK in the observed lessons, our study found no significant correlation between that and the learners' performance (Ramdhany 2010). This does not necessarily mean that PCK does not matter; it only indicates that if it does, it is overshadowed by other factors in the schools we surveyed. Taking this result together with findings from more in-depth studies of pedagogy (Ensor, Hoadley, Jaklin, Kühne, Schmitt, Lombard & van den Heuvel-Panhuizen 2009; Hoadley 2007), it could indicate that

[6] In line with the findings of Hattie and colleagues (Hattie 2003).

PCK cannot be considered in isolation from framing, pacing and classification issues[7].

In summary, we see struggling learners in struggling schools in struggling communities,

- Where these conditions detract from rather than support learning;
- Where there are no second sites for learning outside of schools (a function served in more affluent communities by museums, the home, TV, additional reading, libraries, and even shops);
- Where pedagogy reproduces social inequality;
- Where learners' foregrounds may function as a further disincentive to learning; and
- Where teachers themselves often battle, and are found wanting in some respects.

Additionally, as is clear from case studies (cf. Clark & Linder 2006), the State-school educational sector in South Africa is weighed down by a great inertia which, seeping into the schools, demotivates teachers and limits their choices.

In the light of the above, it is clear that to rely on interventions in the education system to overcome social inequality and improve learner performance is to disregard what the research findings tell us. It is similar to the myth that social inequality can be reduced by increasing economic growth, liberalising trade, and strengthening private investments. Poverty eradication must be addressed from all angles, and this involves addressing issues of disease, sanitation[8] and nutrition as well as the less tangible ones of

[7] These careful analyses of how pedagogy reproduced inequality through determining access to the regulating principles of mathematics have stronger explanatory power than sweeping statements, such as those made by Schollar (2008) blaming the continued failure of our school system on Outcomes Based Education.

[8] One can question the exact numbers in the recent publication 'Taps and Toilets,' but water and sanitation is central to improving the conditions of millions of people in Africa (Eshbaugh, Firnhaber, McLennan, Moyer & Torkelson 2011).

participation and hope. These are matters I shall touch upon in the next section, being guided in my discussion by the notion of 'orders of worth'.

## Orders of Worth

'Orders of worth' is a notion introduced by Boltanski and Thévenot (2006).

> An order of worth can be thought of as a hypothetical model of a good society constructed on a singular basis of merit that acts as the sole standard for determining what matters or what is worthy within that hypothesised society (Annisette & Richardson 2011:231-232).

Boltanski and Thévenot focus not on collectives but on situations (2006: 16), and they limit themselves to 'behaviours confronted by an imperative of justification' (Boltanski & Thévenot 2006: 347) as opposed to behaviours directed by power or love. Thus, the basic claim is that in such social situations, people act in ways which they already consider justified, rather than providing a justification after the fact (Boltanski & Thévenot 2006: 37). The choice of the term 'worth' reflects back on individuals, as each order of worth has different relations of worth, i.e. measures of success, as they are applied to individual subjects, will differ from order to order. Whereas orders of worth describe situations that draw on notions of the common good, individuals can generally 'move in and out of' orders of worth depending on the situations in which they find themselves.

Based on their analysis of texts and data, Boltanski and Thévenot postulate six different orders of worth, or 'worlds': the inspired, the domestic, one dominated by fame, the civic, the industrial, and the market. These several worlds operate with different standards of justice and fairness, different notions of what is 'for the common good', and different measures of worth. For instance, the industrial world is characterised by efficiency, performance, mastery, is tested by measurable criteria, and a successful subject is one who is a professional or an expert in something. The market world, on the other hand, is characterised by competition, possession of goods, consumption, consumer goods, etc. and a successful subject is one who has acquired desirable possessions (Annisette & Richardson 2011:233). Contrast this with the civic world, which assumes that people can enter a 'state in which they

are concerned not with their own interest but with the interest of all' (Annisette & Richardson 2011:110); this order is accordingly characterised by a focus on civil rights, democracy, and solidarity, and the successful subject is one to whom is delegated representative responsibility.

Clearly, these different worlds would view – and harness – education in different ways, and this issue needs a great deal of careful analysis[9]. Still, the contrast between the proclaimed goal of social justice and the plans for improving school effectiveness, as currently conceived, is obvious; and indeed the public services and certification of skills are mentioned by Boltanski and Thévenot as examples of compromises between the civic and industrial worlds (Boltanski & Thévenot 2006: 330-331): 'Public services offer another example of compromise between the civic world and the industrial world when measures intended to increase work efficiency are justified, especially to the staff, by a concern for the common good of the users.' (Boltanski & Thévenot 2006: 331). Extending this outlook to the South African education system describes the current view regarding the link between school effectiveness and social justice: while it is proclaimed that improving school effectiveness will increase the worth of the learners, in terms both of enhancing civil rights and of reducing financial poverty, this is an expectation I have already challenged, as the operative assumption appears to be that it will happen by magic. What drawing on Boltanski and Thévenot's framework makes clear is that, under current notions of improving school effectiveness, the measure of worth slips from the civic order to those of the industrial or market worlds.

In the sphere of education, this 'public services' compromise submits teaching to performativity, and in the process reduces the teacher to a 'technician' rather than a professional. In consequence, 'School effectiveness and its decontextualisations [are aligned] with the reconfiguring of the social and its elision with the economy and market and the related dominance of individualism' (Lingard, Hayes & Mills 2003:407). It is a world where

[9] Contrast the effective and competitive education systems of the industrial and market worlds with the child-friendly pedagogies of the inspired world, with its focus on inspiration, originality, art, the unconscious, the emotions, taking risks, questioning, bringing out the uniqueness of each child, and being on a 'journey'. It becomes clear that different approaches to education reflect incommensurable value systems, or orders of worth.

putting in the effort and investment to generate what are considered more efficient systems come at the cost of worth – in education this is reflected in the notions of 'life-long learning' and the 'reflective' teacher who must always strive for improved performativity. In the Grade 6 study I mentioned earlier, learner performance was measured by the number of correct answers on a multiple choice mathematics test. And so it is with many reports on 'effective education'; they talk about what is effective, but do not engage with what it is they are effective at, or if the objective aimed at represents the most desirable effect (Kohn 2011). That is the case, as Boltanski and Thévenot point out, because while a compromise presupposes a common good, definitions of common good are often incommensurable, and thus an 'effort to define the common good that is supposed to sustain a compromise may actually shatter the compromise and shift it back into discord' (2006: 336). Ideally, 'a compromise, in order to be acceptable, must be based on the quest for a common good of a higher order than the ones the compromise attempts to reconcile.' (Boltanski & Thévenot 2006: 20). So perhaps there is a seventh order of worth to consider in relation to that quest – an order of worth that promises (or threatens, depending on how you look at it) to challenge the other six, on the basis that if the common good of survival is not aimed at, all other notions of the common good are rendered meaning-less.

## The Interconnected Crises – The Case for Environmental Action and Education

What is the global change for which Africa is the least prepared, but which is likely to hit this continent the hardest? The answer is perhaps obvious. The environmental changes we are experiencing now, and which all predictions say will accelerate in the near future, will affect this continent the hardest, at least seen from a human perspective (Hare 2005). Despite the world overall being expected to get wetter[10] (Tebaldi, Hayhoe, Arblaster & Meehl 2006),

[10] Which is why I called this paper 'Come Hell *and* High Water' – though the situation in Southern Africa sounds more like it will be 'hell and too little water'.

mathematical models predict that the anticipated global changes 'will significantly affect present surface water access across 25% of Africa by the end of this century' (de Wit & Stankiewicz 2006:1917). Given that mathematical modelling is highly dependent on the assumptions built into the model, it is interesting to note that when Wang ran data through 15 global climate models he found inconsistencies in some predictions, but the 'models are especially consistent in predicting drier soil over southwest North America, central America, the Mediterranean, Australia, and South Africa in all seasons' (Wang 2005:739), though some variations in predictions do exist (Giannini, Biasutti, Held & Sobel 2008). Of course, drier soil will lead to reduced forest cover (Notaro, Vavrus & Liu 2007). As this prediction also affects rain forest (at least for the 15 years we can still expect there to be any rain forest left on the planet if deforestations continue at the current rate), climate change will only be exacerbated.

We are going to see more extremes in the weather (so far, 2011 and 2012 have confirmed this), and this will have a bearing on human mortality and on the behaviours of species (Tebaldi *et al.* 2006). More particles in the air from the burning of fossil fuels and the fire-clearing of forests are likely to increase the atmospheric black clouds under which 3 billion people find themselves living for at least part of the year, and these again contribute to further climate change (Ramanathan & Carmichael 2008). Climate change could alter the distribution or prevalence of parasitic diseases (Poulin 2006), and could also increase water- or airborne harmful agents, as well as diseases spread by mosquitos (Watson, Patz, Gubler, Parson & Vincent 2005; Zell, Krumbholz & Wutzler 2008). Thus, it is not only water supply and food security we have to be increasingly concerned about, but growing health challenges. On top of that, there are the pressures brought to bear on the environment by an increasing world population, and so it is not surprising that some commentators talk about the environmental crisis becoming the biggest threat to global peace in the not-too-distant future. And those worst equipped to weather the coming changes will, of course, be the poor.

So what are we in South Africa doing about it? Very little, it seems. Even China, notorious for its disregard of environmental best practice, recognises the need to do something and, according to Kumi Naidoo from Greenpeace, who gave a talk at UKZN a few years ago, is now the largest global investor in renewable energy. Well positioned to expand its renewable energy production, South Africa nonetheless appears committed to an

expansion of its nuclear power programme. This is an example of the way in which South Africa fails to engage critically and innovatively with the global crises. And this failure has a bearing upon issues of democracy and education[11].

If we as educators take these challenges seriously, we must make a strong case for environmental education, not only in the interests of our young people, but in the more inclusive interests of an environmental 'order of worth': ultimately, adults need to be able to influence political decisions about priorities and strategies, and politicians need to be reminded that

[11] Nuclear power does not rely on fossil fuels, a fact which has been used in support of nuclear power over more coal or shale gas mining. But there are other concerns which make nuclear power a problematic solution, the more so in the context of a planet with increasing coastal instability, water scarcity and possibly increased human conflict. Not only do we still not have viable solutions to deal with nuclear waste; nuclear power also uses substantially more water per kW produced, is less labour intensive and generates jobs only for the highly skilled; it is not suitable for decentralization; and failure, sabotage or natural disasters affecting a nuclear power plant are fraught with grave risks. It costs billions to build nuclear power plants, and billions to make them safe once they are decommissioned; if the same amounts were spent on solar and wind power, we would have substantially lower-risk, decentralized, renewable energy.

The decision to back coal and nuclear power as our main energy sources flows from the assumption that economic growth is the only route to national development. Higher levels of ('inclusive') economic growth are heralded as the path to overcoming joblessness and poverty. Yes, the Treasury's strategic plan mentions 'green economy initiatives' but these remain unexplored, and although a carbon emissions tax is going to be introduced, its benefits will be diluted by the exemptions it will grant. Initiatives related to global warming appear to be about dealing with the symptoms – as if a few more trees will make any difference – rather than about limiting production or changing ways of production. A commitment to nuclear power reflects this outlook: it is centralized power production for industry. It is an approach that lacks creativity and ignores the fact that despite substantial growth in the South African economy in recent years, poverty remains as stark, and the inequality gap as vast, as ever.

further mindless economic growth is not going to solve the problems it created in the first place. Africa still carries the scars of colonialism, and the despoliation continues under the current dispensation in which, as Rhodes University Vice-Chancellor Saleem Badat has put it, 'crass materialism, corruption, tenderpreneurship and unbridled accumulation, often of the most primitive kinds, run rampant' while at the same time life in the rural areas has become increasingly difficult (Gibson 2011).

Gramsci's notion of 'organic intellectuals' implies the rearing of intellectuals from the working class and the 'restructuring [of] consciousness' (Dimitriadis & Kamberelis 2006) as a contribution to making the intellectual activity of 'the masses' more critical. Today, however, we need a stronger focus on 'organic' in the sense of 'in harmony with the natural environment'. We need to apply sociological imagination (Mills 1959) in order to develop organic societies, in the dual sense of society needing to reinvent itself and needing to do so in ways respectful of all life. If a seventh order of worth is to evolve, it will do so by mobilising the sociological imagination and conjoining it with the principle of caring for the environment.

This seventh world has points of contact with the others: it joins hands with the civic world in calling for the notion of civil rights to be expanded so as to take account of the environmental impact of the rich on the poor; it relates to the industrial world in arguing for minimising waste in production; it highlights the obligation of leaders in the domestic world to reject selfishness and do what is their 'duty' – as when Wangari Maathai (2011) stresses that leadership is needed to make the necessary changes; it challenges the market world to consider the environmental costs of its practices; it embraces the inspired world by calling in question existing behaviours and values; and it dares the famous to earn their fame not only through their resourcefulness and intelligence but also through their position on the environment.

If Africa continues to push for economic growth along traditional lines, it likely implies the degradation of natural resources. In an alternative compromise between the market and the environmental worlds, I wonder if it is possible to skip this material phase and move directly into a post-material one, in which products are increasingly refined and individualised, where having fewer but carefully chosen objects of higher quality is valued, and where access to nature is a prized 'commodity' (Jensen & Aaltonen 2012).

From such a perspective, education comes to be seen as an arena for

both disagreeing and compromising with other orders of worth. If environmental education is to take this direction, it must do so through direct action in local communities, and with a clear agenda that makes no apologies for the behavioural and policy changes envisioned (Andrews, Stevens & Wise 2002).

## Educational Goals, Content, and Pedagogy

As a society, we need constantly to revisit environmental issues and learn. And what we can learn from the four types of feedback suggested by Hattie and Timperley (2007) is that the feedback we provide to ourselves must consider the goals we have for education, where we are at, and the processes and self-regulation we need to bring into play to achieve our goals. We need to consider what currently is not taught and perhaps not even valued – 'The null curriculum' (Eisner 1994) – but should be, particularly in a rapidly changing world (Garfunkel & Mumford 2011).

While learning *about* the environment is obviously central to environmental education, education informed by the principles of the seventh order of worth must also be learning *for* the environment (cf. Peden 2006). What this implies is an understanding not just of what kind of knowledge should be acquired but of the importance of critical perspectives, of sociological imagination, and of 'fundamental ways of thinking' that will promote searching analyses of the nature of society and help to facilitate the conscious remaking of it in line with the notion of the 'common good' as that which entails, among other desiderata, environmentally sound practices.

Such 'fundamental ways of thinking' are seen as including: deductive thinking, a sense of the link between cause and effect, the temporality and situatedness of practices understood in terms of their historical origins and evolution (for a more in-depth discussion see Bertram 2012), critical/ reflective ways of looking 'beyond' appearances, an ability to spot, and even create, connections; and most importantly, perhaps, an ability to link these ways of thinking to one's actions (cf. Bourdieu 1990; Negt 1994). While the foregoing desiderata demonstrate clear affinities with the civic sphere, they are broad enough to enjoy a degree of overlap with some of the others, including the seventh order of worth as proposed above. And because these 'fundamental ways of thinking' overlap several worlds, the common ground

among them resulting therefrom opens up possibilities of both negotiated compromises and productive disagreements between the seventh order and some of the others. For unless there is dialogue, inclusive of disagreement and compromise, between the environmental order and others, the remaking of life will in the end be not by choice but by necessity.

While the goals may be clear, the educational content is certainly less so: should we include food security, water harvesting, composting, etc. in the curriculum documents, so that our children are prepared for a harder future? Or maybe self-defence? Pedagogically, the challenge appears to be greater still: hitherto, we have failed in what would seem a much easier job, namely, to ensure that learners acquire basic literacy and numeracy, so successfully developing 'fundamental ways of thinking,' critical engagement, sociological imagination, and the rest, seems incomprehensibly difficult. And the more so when we consider a grossly uneven educational system, in every respect. As previously argued, in the absence of a 'foreground' of realistic expectations for their future, mired in poverty, subject to pedagogic practices that reinforce disadvantage, the great majority of learners in South Africa seem to be facing an impossible task. The same holds true for their teachers.

The transformation I am discussing here, necessary as it is, must learn from the failed interventions of the past decade. The announcement of the 'crossroads' colloquium read: 'Guided by master narratives of transformation, equity, quality and good governance, education was repackaged, underpinned by good intentions and grand designs.' For most teachers, however, this worthy agenda was experienced as a top-down approach to curriculum change, often welcomed (in theory, anyway) but seldom mastered, no matter how many short workshops on outcomes-based education teachers sat in on. On the one hand, many teachers embraced the political intentions of revamping the curriculum in order to improve access, further social justice, and demonstrably distance the new educational dispensation from its apartheid predecessor. On the other hand, the pedagogies required effectively to implement the 'new deal' were generally not aligned with teachers' existing practices (Krishnannair & Christiansen in progress; Naidoo & Parker 2005). Thus, teachers were caught in the mismatch between compliance with the new curriculum and inappropriate, but unmalleable, pedagogical practices.

'Liberation and invention, not reduced to human outputs and balance sheets, need both commitment and autonomy' (Gibson 2011) – perhaps the

very two things the implementation of past curriculum interventions have not furthered. And when teachers fail to implement a new curriculum as intended – as not seldom happens, according to numerous studies – the response has been to provide yet more detailed directives to teachers, down to telling them how to spend every minute of their lesson time. Similarly, when learners fail to learn both higher- and lower-order outcomes, the response has been to simplify the content. It may be true that slow, careful mastery-learning improves performance on simple tasks (Schollar 2008; School of Education and Development at UKZN 2010), lending credence to the suggestion that teacher development should take small steps (Beeby 1966). But such a strategy may be counterproductive if what we seek – and need – is commitment and autonomy, liberation and invention. To make schooling intellectually undemanding is, after all, to reinforce learners' disadvantage and identity poverty, and to place a damaging question mark over their capability. It implicitly limits their access to the democratic process, effectively denying them the opportunity to make informed decisions about the world we live in, and the world (both in the ordinary sense of the word and in the special sense Boltanski and Thévenot (2006) confer upon it) we want to live in. If we are compelled to simplify the education we provide, at least let us do so without losing sight of the greater purpose.

In similar fashion, regulating teachers' practices by providing detailed guidelines without adequately elucidating what the goals of the exercise are, and without developing their autonomy as educators, de-professionalises their work and diminishes their identity – as it does their status. Paradoxically, it is an industrial order of worth that serves to reduce the worth of the teachers by demanding outputs without developing mastery. This is not unique to South Africa; some see it reflected in the Ofsted inspections in the UK where working according to lesson plans dispatched from 'on high' may be seen as more important than adjusting the lesson to learners' actual needs and capacities (personal communication with UK teachers). For all that, the current South African education system is bedevilled by severe weaknesses which, if not unique, are certainly disabling. These include – in addition to the deficiencies already mentioned: high rates of teacher absenteeism, teachers' lack of content knowledge, resistance to changing outdated and/or inappropriate pedagogical practices, a widespread reluctance to spend time on furthering knowledge and skills. While there are many teachers who are strongly committed to their work and see themselves

as agents of change, they find themselves living in a society where, since possession of goods is so unequally distributed and, for the majority, so hard to achieve, such possession acquires exceptional worth and allure. In the developed world, teachers may be better equipped to resist such notions of worth, but in South Africa, the battle is a hard uphill one for many in the profession. The challenge is therefore to engage in compromise with this market world, while creating situations where other worlds can come into play. This is not a systemic intervention, but one that takes place in daily practices of engaging with communities and with teachers. It is an intervention we as organic intellectuals have to be engaged in, whether through action-research initiatives, through networks and forums, through offering free short courses to teachers based on their experiential needs, through creating community forums to which teachers are collectively accountable, or through working with parents. While the objectives of changing teaching practices and teachers' mindsets, and of rebalancing communal priorities, often run up against the inertia of deeply ingrained habits, in particular in overcrowded, underresourced schools with disadvantaged learners, and the more so in situations where colleagues are unsupportive, it is nonetheless through the 'power of individual agency' that change comes about, as illustrated in case studies (Clark & Linder 2006:1).

In the Australian context, there has been a call for 'productive pedagogies'. Lingard *et al.* (2003) describe productive pedagogies as having four dimensions: 'intellectual quality, connectedness, supportive classroom environment, and engagement with and valuing of difference' (Lingard, Hayes & Mills 2003:415): Productive pedagogies,

> describe approaches to teaching that are linked to improved intellectual and social outcomes for all students. Productive pedagogies are intellectually challenging, they recognise difference, they are embedded within a highly socially supportive classroom and they are strongly connected to the world beyond the classroom (Hayes, Christie, Mills & Lingard 2004:520).

This is framed as a pedagogy that goes beyond simply improving learners' test performances; it seeks more broad-based benefits for them by enhancing the entire schooling experience. In order to facilitate productive pedagogies, Lingard et al. argue, schools must become 'learning organisations' where

improved classroom practices ('productive pedagogies') and the resulting improved learner outcomes come about as a result of valuing teachers, their knowledge and their ongoing learning (Lingard, Hayes & Mills 2003:401). Their 'core argument is that pedagogy should be recentred and that responsibility for its quality and alignment with agreed goals for schooling must be shared by teachers, school administrators, education systems and local communities' (Lingard, Hayes & Mills 2003:401). This is 'recentring' of a kind that could usefully be appropriated by the environmental order of worth.

## Summary

In this paper, I have tried to link three dimensions: Boltanski and Thévenot's (2006) description of different orders of worth and justification, in particular their understanding of education as an example of a public service compromise between worlds; the global environmental crisis and the educational response this demands; and the need for rethinking pedagogic practices and educational goals. The position that a curriculum is not only about content (the 'what') but also about pedagogy (the 'how') and about educational goals is not new, but it deserves underlining in the light of the severity and interconnectedness of the three global crises referred to at the head of this article: the financial crisis, climate change and the environmental crisis.

What Boltanski and Thévenot's critique (2006) has done for me, is bring me to view education as a product of compromises between orders of worth. It has further enabled me to postulate the possibility of a seventh world of 'care for the environment' as a higher-order principle of common good in terms of which actions can be justified. It has assisted me in re-envisioning environmental education as necessarily entailing disagreements between worlds. And it has pointed to some potential compromises and trade-offs between this seventh world and existing principles and notions of the common good.

As for teachers and teaching, it is not enough, as Hattie (2003) remarks, for teachers to have the relevant knowledge; they must use that knowledge well. One thing that characterises successful teachers, Hattie and his team found, is that they test hypotheses about their teaching: 'successful

teachers have always been autonomous in the sense of having a strong sense of personal responsibility for their teaching, exercising via continuous reflection and analysis the highest possible degree of affective and cognitive control of the teaching process, and exploiting the freedom that this confers' (Little 1995:179). But with the collective challenges we face, the autonomy of individual teachers has to be wedded to a sense of collective responsibility and accountability for the relevance of the content and pedagogy of school curricula; and has to be wedded also to continuous collective reflection and analysis.

With those considerations in mind, the fact is that we face several crossroads: concerning the ways in which we deal with our natural environment and the 'deification' of economic growth; concerning the ways in which we view education and poverty eradication; concerning the ways in which we conceive of the role and substance of curricula; concerning teacher autonomy and, therefore, teacher-education policy and practice. Or perhaps what we really need is not so much to make the right turns as to make a U-turn.

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