Learning *for* sustainability

in times of accelerating change

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Table of contents

Afterword: let's face the music and dance?

Stephen Sterling

> There may be trouble ahead,
> ... Before they ask us to pay the bill,
> And while we still have the chance,
> Let's face the music and dance.
>
> <div align="right">Irving Berlin 1936</div>

There are three people in a vehicle. In this story, they all seem to have a foot on the accelerator. Not too far in the distance, and clearly coming into view, there is a noticeboard. It reads: 'Brake hard or change direction! – Abyss ahead!'. As the vehicle continues speeding forward, the occupants react differently to the noticeboard. One has seen it coming for some time; in fact, she anticipated it. Her optician told her she had good foresight. 'For goodness sake', she says, 'we must slow down and change direction while we can'. A second, who has also been aware of the notice for some time, says 'It's certainly an interesting notice. Let's deconstruct its meaning exactly, then we can develop our critical awareness and understanding, and decide what to do'. The third person, who was much later in recognising the sign than the other two says, 'I don't think there's any danger ahead, and if there is – which I doubt – we'll deal with it then'. Meantime, the vehicle is still getting closer to the notice, and stays on track ...

A metaphor of course, but perhaps illustrative of our collective predicament. We all – or nearly all – have a bit of our foot on the accelerator, whilst at the same time, increasing numbers are aware that braking, changing direction, and learning 'our way out' is critically important. At the same time, a significant proportion of the population and vested interests drive forward regardless, albeit with a growing suspicion that, in the words of the old Irving Berlin song, 'there may be trouble ahead'. Yet the signs are there now. As AtKisson comments (2011, p. 300):

> change of all kinds – in the biosphere (nature as a whole), the technosphere (the entirety of human manipulation of nature) and the noosphere (the collective field of human consciousness) – is happening so rapidly that it exceeds our capacity to understand it, control it or respond to it adequately in corrective ways.

Years ago, I thought that the multifaceted and critical nature of global crises – no doubt familiar to readers of this book – would in themselves generate awareness and critical reflection sufficient to exert some braking and change of direction. To an extent, they have, and there is far more discussion and practice of

sustainability oriented activities of all kinds than there was, say, when the seminal 'Our Common Future' report was launched in 1987 (WCED). That report called for 'vast campaigns of education, debate and public education' (1987, p. xiv). Some 25 years later, there is much to celebrate in the field of sustainability education and learning (Tilbury 2011). Yet, taking a broader view, there is an element of truth in the saying, 'Plus ça change, plus c'est la même chose'. So there is a deeper issue here, which requires more than 'more sustainability education'. As Paul Raskin of the Tellus Institute puts it: 'The shape of the global future rests with the reflexivity of human consciousness – the capacity to think critically about why we think what we do – and then to think and act differently' (Raskin 2008, p. 469).

This is a call for nothing less than a change of cultural worldview, and it is one that has been echoed by many others before and since publication of Raskin's 2008 global futures paper. He and his colleagues in a further report liken the shift required to the great historical transitions towards settled agriculture and industrial society (Rosen *et al.* 2010). Mary Clark goes further: in the last 2,500 years, she suggests, there have been only two 'major periods of *conscious* social change, when societies deliberately 'critiqued' themselves and created new worldviews' (Clark 1989, p. 235). In parallel, a Worldwatch Institute report advocates that we should tap our potential 'as conscious agents of cultural evolution' in order to create a sustainable civilization (Gardner, cited in Starke 2001, p. 206). Seen from such perspectives as these, 'the learning society' is one that seeks to understand, transcend and re-direct itself through *intentional learning*. However, as Rosen *et al.* (2010, p. 15) suggest, this deep shift in values and institutions – this 'Great Transition' – is far from guaranteed.

In sustainability discourse, the concept of resilience – building resilient economies, and communities and so on – has become topical. What is less considered, however, are worldviews as resilient belief and thought systems. Whilst 'sustainable systems need to be resilient' (Folke *et al.* 2002, p. 23), resilient systems need to be sustainable. Like many others, I argue that the dominant western worldview (and the economic, political and educational systems informed by it) – still largely mechanistic, objectivist, materialist, dualist, and reductionist – is no longer appropriate to our times; it is the root of our current predicament, not least as it is resistant to fundamental change (Sterling 2011). As Homer-Dixon suggests (2006, p. 3), 'we often invest enormous mental energy to maintain a perspective on the world that's at variance with reality'. There seems to be an element of lock-in operating here, even as the encompassing conditions of complexity, systemicity, uncertainty and unsustainability become ever more evident in wider society. At individual level, the maintenance of deep-seated worldviews tends to prevail

despite evidence that they may are no longer adequate for changed conditions. It may be that Chapman's view (2002, p. 14) is true of many, who, he suggests:

> will not change their mode of thinking or operating within the world until their existing modes are proved beyond doubt, through direct experience, to be failing.

At one level, this is easy to understand: faced with change, or more seriously, threat, many people are likely to hold onto – even retreat into – the security of what they know and believe, rather than willingly embrace uncertainty and possible loss of familiar identifiers. Other writers have a deeper analysis however. Ehrlich and Ornstein (1989, p. 7) suggest that in evolutionary terms, our brains are still adapted for the relatively stable environment of our forebears where threats were signalled by short-term changes and action was usually required immediately. We can still identify with and react to the short-term and immediate, but find it much harder to perceive and appreciate the import of large-scale threats occurring over years. So the media and the public become animated, say about the plight of a single whale, but do not become concerned about the acidification of the oceans threatening whole ecoystems.

McGilchrist (2009) has a further and radical take on this issue, arguing that the root of our 'increasingly mechanistic, fragmented, decontextualized world' (p. 6) lies in the structure of the brain, and the different 'views of the world' that each hemisphere has. In a carefully researched book, he makes a case that the left hemisphere – more associated with focus, linearity, precision and control – has come to dominate the right brain (more associated with perception of holistic pattern, relation and the big picture), to the extent that the former has become the dominant mode of perception and cognition. He speaks of the 'progress of the sleepwalking left hemisphere, always going further in the same direction, ambling towards the abyss' (*ibid*., p. 446), and suggests that mass technological culture, urbanisation, mechanisation and alienation from the natural world is reinforcing the dominance of the left hemisphere. The further implication of this theory is that, far from us acting upon a somehow separate and inert world, the world has plasticity: as Gregory Bateson suggests it 'partly becomes – comes to be – how it is imagined' (1980, p. 223). Similarly, McGilchrist states 'the kind of attention we pay actually alters the world: we are, literally, partners in creation. This means we have a *grave* responsibility ...' [author's italics] (2009, p. 5). Far from being detached and unaffected observers, we are – unavoidably – participants in a greater whole: as I've stated elsewhere, we are not on the Earth, but *in* the Earth, inextricably actors in the Earth's systems and flows, constantly affecting and being affected by the whole thing, natural and human, in dynamic relation (Sterling 2010).

This demands an essentially *relational* worldview and episteme that is in tune with reality: a worldview that is participative, holistic, systemic, ecological, and one that – in line with McGilchrist's diagnosis – helps our right brain to balance out the current dominance of our left brain thinking and tendencies. Achieving this cultural reorientation appears to require unlearning, new learning and re-learning, and 'on a grand scale...across society, necessitating a metamorphosis of many of our current education and learning constructs' (Williams 2004, p. 4). This is more than an isolated 'education for sustainability' programme, it is about a shift of personal consciousness and educational culture, involving movement in three interrelated areas of human knowing and experience: *perception* (or the affective dimension), *conception* (or the cognitive dimension), and *practice* (or the intentional dimension). In essence, it entails an extended and participatory epistemology, a connective ontology and an integrative praxis – affording a deeply relational sense of what it is to be human at this most challenging of times.

Such 'expansion of consciousness' sounds like a New Age mantra; rather, and at its simplest it is noticing 'what is' beyond ourselves, and recognising (that is, re-cognition) that our own wellbeing emerges from the wellbeing of the whole, whether the issue is health, inequity and social cohesion, biodiversity, climate change, and so on. Homer-Dixon echoes this in his advocacy of 'the prospective mind' which is 'grounded in the knowledge that constant surprise and change are now inevitable' (2006, p. 29). Hence, we should make a distinction between two types of learning: *anticipative learning*, or 'learning by design' on the one hand, and *reactive learning* or learning 'by default' on the other. Default learning happens when events impress themselves on the learners' consciousness, by surprise, shock or crisis. Learning by design, by contrast, implies a prior awareness, a willingness, openness and intention to learn in response to a perceived innovation, threat or opportunity. The former is a reactive response; the latter is an anticipative response.

Instead of educational thinking and practice that tacitly assumes that the future is some kind of linear extension of the past, we need *anticipative* education, recognising the new conditions and discontinuities which face present generations, let alone future ones: including the massive challenges of global warming, species extinction, economic vulnerability, social fragmentation and migration, endemic poverty, the end of cheap energy – and more positively, the rise of localism, participative democracy, green purchasing, ethical business, and efforts to achieve a low carbon economy. This implies a 'culture of critical commitment' in educational thinking and practice – engaged enough to make a real difference to social-ecological resilience and sustainability but reflexively critical enough to learn constantly from experience and to keep options open in working for a sustainability transformation.

Back to the vehicle metaphor. I'm not sure the left-brained, technocratic, vested-interested drivers are ever going to awaken and change direction sufficiently, or slow up. The concerned drivers need to ally, increase their numbers through anticipative education and learning, map out the promise of new directions and put pressure on the steering wheel to achieve the Great Transition. The emergence and success of such phenenoma as the Transition movement (Hopkins 2008), of the Occupy movement, of global citizenship initiatives (Hawken 2007), and One Planet Living are hopeful signs. As Alan AtKisson puts it, 'the good news is that this is a transformation already underway. The bad news comes in the form of a challenge: *How fast can we make....beneficial changes happen*? (AtKisson 2011, p. 21) (author's emphasis).To change metaphors, while many are like Irving Berlin's dancers – content to party yet dimly aware the bill is as yet unpaid – we need to demonstrate a much better party is possible, one that can take us through the long night and usher in a new dawn.

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