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Transforming Sustainability Education at the creative edge of the mainstream: a case study of Schumacher College

[Sterling, S., Dawson, J. & Warwick, P.](#)

Abstract

Mainstream westernised educational policy and practice continue to be firmly rooted in ontological and epistemological traditions that reflect what Gregory Bateson referred to as the illusion of our separation from the living world.

In response, there has been a flourishing of innovation at the levels of educational philosophy, curriculum and pedagogy, drawing upon various indigenous and counter-cultural trends. For the most part, these are being fully expressed only outside of the formally accredited educational system.

There are, however, a small number of pioneering centres of holistic educational innovation that are straddling this divide; operating within conventionally accredited systems. This paper seeks to profile one such institution, Schumacher College in Devon, England. The paper describes its principles; innovations in curriculum, pedagogy and assessment; and its approach to supporting transformative learning. Possible strategies are outlined for such institutions on the creative edge of the mainstream to help transform Sustainability Education.

Setting the context

Sustainability education, as it has manifested over the last few decades, has been a critically important movement for change in educational thinking and practice. But with few exceptions, it has not managed to affect or shake the foundations of educational systems within which it has been embedded. Rather, the disjunct and mismatch between Westernised formal education systems on one hand, and on the other, the dynamic learning response necessary to address the ‘watershed moment’ that defines our troubled times, is becoming

increasingly apparent. Worryingly so - particularly as regards the limited response of the higher education sector to date. There is certainly a growing progressive movement, evidenced by nodes and pockets of outstanding practice that are consciously informed by, or resonate with, an holistic conception of education. But this energy struggles to assert its influence in a policy environment which has been captivated by neoliberal thought that is almost wilfully uncomprehending in the face of rapid global change that will affect all students as they navigate their adult lives.

Yet, at the same time, it is this policy-led intransigence that - by way of reaction - is birthing new energies and alternatives appearing both within and on the margins of the mainstream, seeking to foment meaningful change. There has been a flourishing of innovation at the levels of educational philosophy, curriculum and pedagogy, drawing upon various indigenous and counter-cultural trends, that is seeking to heal the rift between our species and the rest of the living world. Despite evidence of change manifesting with the formal system through the work of committed staffs and notably, student bodies, inevitably it is outside the mainstream (where fewer constraints exist) that such work can find fuller expression. This paper outlines the work of one notable exemplar, Schumacher College, in Devon, UK which has won an international reputation during its more than 25 years of existence, not least for fostering transformative learning experiences.

For the purposes of this paper, we endorse the understanding of the Centre for Transformative Learning in Toronto (reflected by Morrell and O'Connor 2002, xvii) that transformative learning involves '...a deep structural shift in the basic premises of thought, feelings and actions' and 'a shift of consciousness'. Similarly, Peter Reason suggests it

‘implies an experience of self much more fully in transaction with others and with the environment, a participatory self or participatory mind’ (Reason 1995, 3).

At heart, sustainability education seeks to nurture transformative learning experiences that can heal, empower, energise, and liberate potential for the common good. But the crux and logic of our argument is that educational systems/institutions cannot adequately support such transformative education and transformative learning experiences, unless they themselves have experienced or are experiencing sufficient transformative processes consistent with this ethos. While myriad ‘education for change’ movements have long seen education as an agent or vehicle for personal and social change, the corollary - that educational thinking and policy must itself change sufficiently to allow it to fulfil this agency function – has received much less attention.

To make any kind of breakthrough - towards educational systems able to respond fully to the crises and opportunities of our times - it is necessary to look beyond the usual discourse of sustainability education, or of transformative education, and dig a little deeper. Three maxims help us here. The first is that there is no simple linear causality in the relationship between education and social change – the notion that content-led education *about* anything (e.g. teenage pregnancy, drug abuse, or indeed sustainability) will, by itself, lead to significant shifts in social norms. Therefore simple measures such as adding sustainability concepts to an already crowded curriculum is likely to have limited effect.

The second maxim is that not all learning is qualitatively the same. ‘Learning about’ tends to be first order, that is, information-based, leaving untouched the affective and valuative realm of understanding and of being. The third maxim is that, seen in systems terms, educational

systems are a subset of social systems. This means simply that educational systems are shaped by prevailing social and political norms, pressures and expectations. This does not deny that education affects people, and that transformative change can take place at the micro level, but holds that the overall effect is limited by the values, purposes, and expectations that society (and politicians in particular) place on formal education systems (Author 1, 2003).

At a deeper level, the prevailing educational paradigm reflects and is informed by the wider social paradigm or worldview. Consequently and inevitably, mainstream education - by and large - has a reinforcing rather than a transformative effect on social norms. And if the dominant social paradigm is maladaptive to contemporary global conditions, it follows that the prevailing educational paradigm will echo this orientation.

The following models help elaborate this argument. **Figure 1** suggests that there are levels of knowing operative in the realm of human belief, perception, and action which are mutually affecting and yet are in a loosely stratified relationship whereby the more immediate, conscious and actionable elements emerge from and are influenced by deeper levels of knowing - which may or may not be examined and brought to consciousness. This has relevance within individual and collective contexts, including across societies where a

particular worldview orientation is shared.

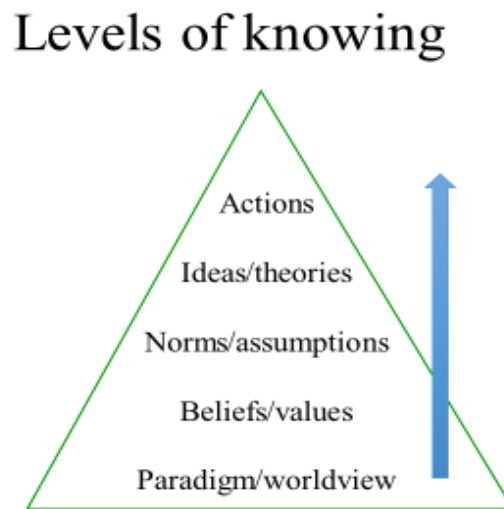


Figure 1

With this model in mind, we can outline the fundamental tenets informing the dominant Western worldview. While this is not the place to examine this topic in detail, many writers (Berman, 1981, Tarnas, 1991, Spretnak, 1999, Lent, 2017) have pointed to the legacy of Western thought over recent centuries, pointing out that the cultural inheritance of the Scientific Revolution was an ontology which emphasised a mechanistic cosmology, which was primarily determinist, and materialist; and an epistemology that was objectivist, positivist, reductivist, and dualist. It gave rise to a mutually informing nexus of ideas, assumptions, and methodologies that became the expressions of the modern socio-cultural paradigm. Richard Norgaard (1994, p. 63) acknowledges the underpinning beliefs of the modernist Western paradigm have been “extremely productive for both Western science and other institutions” but they are “embedded in our public discourse to the exclusion of other metaphysical and epistemological premises which are more appropriate for understanding the complexities of environmental systems and which are more supportive of cultural pluralism”.

Arguably, the essence of the modern worldview was (and still is) the perception of ‘discontinuities’ between subject/object, mind/body, people/nature and other poles. In other words, the Western mind shifted from some sense of identity with ‘the Other’ in pre-1500 worldviews to a profound sense of, as well as intellectual belief in, *separateness*. This flaw was identified by Gregory Bateson (1972, p.463) as an ‘epistemological error’, a perception of and belief in separateness that in turn manifests separateness and fragmentation in relationships.

Figure 2, below applies the first model (Fig 1) to the realm of education. When institutions are faced with the question of how to respond to the challenge of sustainability, the normal route taken is to effect some change in the ‘upper levels’ of ‘provision’ and ‘practice’. This might, for example, extend to localised change in curricula or campus management. Rather, we argue, sustainability requires deep attention to *education* itself – its paradigms, policies, purposes, and practices - and its adequacy for the age we find ourselves in. Fundamentally, we need to look critically at *paradigm*, the epistemic sets of values and ideas which fundamentally influence curriculum design, pedagogy, and all the other aspects of educational provision.

Here we see the bedrocks of the prevalent education epistemology - reductionism, objectivism, materialism, and dualism – exerting a kind of hidden influence over purpose, policy and provision and associated educational discourse. They reside in the subterranean geology of education, yet are manifest in the educational landscape above the surface: single disciplines, separate departments, abstract and bounded knowledge, belief in value-free knowing, privileging of cognitive/intellectual knowing over affective and practical knowing, prevalence of technical rationality, prescriptive curricula and learning outcomes, transmissive

pedagogy, analysis over synthesis, and an emphasis on first order or maintenance learning which leaves basic assumptions and values unexamined and unchanged (Author 1 109, 2009).

Educational culture: levels of manifestation

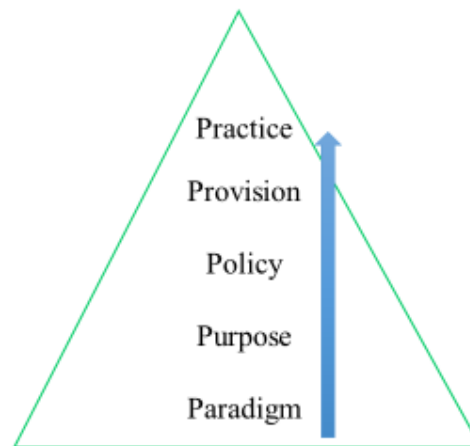


Figure 2

In the past twenty plus years, the failures of this educational paradigm have been compounded by an overtly instrumental view of education, informed by the rise of neoliberalism in economics, politics and wider society, and by the perceived demands of a globalised economy. This view of education is made manifest by a marketised system and proliferating ‘global testing culture’ (Smith 2016) which together lead to competition, homogenisation and standardisation nationally and internationally. So, for example, whilst there has been commendable interest and developments in the dynamics of learning processes within higher education, the *purposes* of such learning have been skewed. It is possible to characterise this shift towards centralised control as a ‘squeeze’ on older conceptions and models of education in three dimensions: in terms of *purpose*, where economic, ‘business-facing’ and vocational trajectories are increasingly dominant; *breadth*, where STEM subjects

are valued above arts and humanities, and specialisation valued above interdisciplinarity; and lastly, *depth of learning*, where reflexive and open-ended inquiry and transformative learning is the exception.

At the same time, there has long been a counter educational current predicated upon an holistic view of the world, of education, and of the learner. This has been reflected in such notions and practices as progressive education, valuing the whole person, learner-centred and experiential education, emergent learning outcomes, liberal arts education, inter- and trans-disciplinarity, participative pedagogies, whole institutional change, community based service learning and more latterly, transformative and transpersonal education. Now, with neoliberal education policy in the ascendancy, progressive and radical educators are faced with a considerable double-layered challenge. First, to assert ecological, humanistic and transformational ideas and practices as a counter-cultural movement to the ‘squeeze effect’ of such policy on mainstream education. Second, to signpost and articulate a more systemic, holistic and integrative worldview which can underpin this work, and can offer a more whole way of seeing and being fit for our threatened and fractured times.

Case study of Schumacher College

A key question for radical change in higher education is the degree to which such changes can be incubated from within the current system. That is, in what measure are today’s institutions of higher education capable of moving beyond enabling first-order *learning about* sustainability-related issues, to integrating the search for sustainable solutions into all levels of their organisational culture. To what extent are they capable of becoming living laboratories in which all of the talents of the learning community can be engaged in pursuit of

appropriate responses to the crises converging on our global civilisation? And insofar as they may be capable of playing such a role, what are the key enabling characteristics of such an education, and how might these be propagated into the mainstream of formal higher education? Lastly, what might be the role of institutions on the ‘creative edge’ of the mainstream in helping catalyse further radical change in higher education?

At the heart of this paper is an exploration of one postgraduate programme within a small, private college in England to explore these issues – namely the Economics for Transition programme <https://www.schumachercollege.org.uk/courses/postgraduate-courses/economics-for-transition> at Schumacher College in Devon, England. This is, admittedly, a context that in most senses is unrepresentative of the higher educational norm in terms of its scale, philosophy, lineage and location. Nonetheless, our working hypothesis here is that although these distinctive features have enabled an unusually high level of experimentation and innovation, these are not so exclusive and unique as to render the experiment irrelevant to the wider educational context.

Schumacher College is part of a larger organisation, the Dartington Hall Trust, which sits on a beautiful 1,200 acres estate in south Devon. Drawing inspiration from the work of Indian poet and visionary, Rabindranath Tagore, the Trust has sought to be a living experiment in how to live ‘a many-sided life’, in the words of co-founder Dorothy Elmhirst. This has involved innovations over almost a century in multiple fields including agricultural improvement, education, social justice, crafts and the arts. Explicitly at the heart of the vision has been education – or more precisely learning – since from the outset there has been a deep suspicion of the insidious power of school-based education to disempower students and to reinforce cultural norms to do with hierarchy, conformity and servitude.

In the early years of the Trust in fact, so great was the aversion to formal education that a conscious decision was taken *not* to have a school. Rank, role and hierarchy between adults (seniors) and youth (juniors) were kept to a minimum and the declared objective of all activities on the estate for all participants, irrespective of age, was ‘learning’. Groups of ‘seniors’ and ‘juniors’ would work together on applied projects around the estate – forestry, farming, craftwork, building and so on – and subsequently reflect on lessons learned and new enquiries stimulated (Kiddel, 1990). The dominant educational ethic was captured by John Dewey’s celebrated pronouncement that “Education is life, not the preparation for life” (Dewey, 1897, p.77).

Even when a formal school for children was introduced in the early 1930s, it represented an experiment in radical democracy, with students having a substantial say in its operation. The persistent ambiguity towards the very institution of a school is clear from the words of a newly appointed headmaster as late as the 1960s: ‘I have just become headmaster of a school. If things go well, by the time I leave.....I hope to have become the first non-head of the first anti-school in the country’ (Kiddel 1990, p.40). Learning continued to be deeply rooted in activity- and group-based work, with hands-on and applied modes of knowledge generation being favoured over conventional delivery of abstract knowledge. The school was the first of a succession of educational experiments at Dartington that broadly maintained and extended this educational paradigm.

Consequently, the philosophical and pedagogical lineage that Schumacher College was born into, when created in 1991, was already deeply aligned with many of the critiques of today’s dominant neoliberal, reductionist paradigm.

For the first eight years of the life of the college, it was a provider of non-formal, non-accredited education, hosting short courses taught by a succession of internationally

recognised thinkers and activists, many of whom have come to be icons of the progressive intellectual landscape – including Vandana Shiva, James Lovelock, Fritjof Capra, David Orr, Theodore Roszak, Thomas Berry and Arne Naess.

In 1998, the college began to offer its first postgraduate courses in partnership with its neighbouring university at Plymouth that became its accrediting organisation. Since then, a number of other postgraduate programmes have been added to the college's offer: Economics for Transition in 2011, Ecological Design Thinking in 2015, Ecology and Spirituality in 2016 and Myth and Ecology in 2017. Each of these have cohorts of between ten and fifteen students and the mix of students is especially rich in terms of nationality and age.

This sets the scene for a fascinating meeting of two cultures: that of a small, private, self-declared 'ecological college' emerging out of a lineage of radically democratic and enquiry-based, experiential education together with a large-scale and recognisably mainstream university (albeit one with pronounced progressive tendencies). Specifically, our enquiry focuses on the degree to which Schumacher College's model of holistic pedagogy and curriculum might support parallel movements within the world of formally accredited higher education.

This study – centering on a specific postgraduate programme at the College - is an elaboration of two earlier qualitative research studies (Blake & Author 1, 2011 and Author 1, Blake & Goodson, 2013) which looked at the relationship between Plymouth University and Schumacher College, and specifically at the nature of transformative learning at the College and its applicability in a mainstream setting. Both studies explored and affirmed the presence of transformative learning experiences commonly occurring at the College, which appeared to emerge from the nature of the total "learning system" - comprising the intent and learning design/pedagogy of the tutor/facilitator, the state of readiness of the learner(s), the size,

dynamics and duration of the group, and the ethos and particular quality of the learning environment (Blake, Author 1 & Goodson, 2013, p.20). At the College, whilst this interaction is conducive to transformative learning, the studies found that such experiences are not inevitable and vary from group to group, and from person to person.

Economics at Schumacher College

Our enquiry focuses specifically on the College's economics programme. This is partly in recognition that, despite the broadly shared underlying history and philosophy, there exists considerable diversity between the different postgraduate programmes in terms of pedagogical and curricular approach and we are aiming here for as fine-grained an analysis as possible. An additional reason for the focus on economics is that one of the current authors works on this programme.

The economics classroom provides an especially interesting focus for this enquiry given that it is arguably here, more than anywhere else, in academe that the cold hand of abstraction has taken hold, that the impulse to inter-disciplinarity is weakest and where the logic of the market and employability are strongest (Chakraborty, 2017). Numerous psychological and behavioural studies have found economics students to be among the least generous cohorts in the student body in terms of charitable giving and considering greed as 'generally good' and 'moral', with the gap widening over time as they pass through their university education (discussed in, Grant, 2013).

This is at least in part related to the imbalance in the conventional economics curriculum, with concepts relating to competition and self-interest dwarfing those to do with cooperation and symbiosis. The late Stanford professor Hal Leavitt lamented that this imbalance in the

curriculum was contributing to distorting business economics students into people ‘with lopsided brains, icy hearts and shrunken souls.’ Having reviewed the literature on the behavioural impact on students of the conventional economics curriculum, Adam Grant proposed that economics majors should be required to take courses in behavioural economics, anthropology, sociology and psychology (Ibid.).

All of these disciplines figure prominently in the economics curriculum at Schumacher College. There is an initial questioning of the assumption that the economy equates with that which passes through the market and of the use of Gross Domestic Product as a measure of societal wellbeing (Fioramonti, 2017). The myth of economic man (*homo economicus*) as a rational, individualistic, utility-maximising calculating machine is unpicked and the roots of exchange are located in cultures based on gift and reciprocity (Graeber, 2011; Hyde, 2009).

The economy is explored as a complex adaptive system, nested within and dependent upon (rather than standing apart from) both society and the ecosphere, and the power of symbiotic relationships within networks of actors moves centre-stage (Arthur, 2015; Beinhocker, 2011). The disciplinary map transcends the conventional dichotomy of market and state to include the household economy as well as open source and commons-based regimes and their potential to offer solutions that draw upon the distributed intelligence of both place-based and virtual communities (Raworth, 2017; Bollier, 2014).

However, efforts to redress the current imbalances in economics teaching are not limited to curricular innovation. The students’ capacity for generosity and cooperation is further stimulated – not just conceptually but experientially – through the creation of gift circles and ‘offers and needs’ boards, enabling students to identify opportunities for giving and receiving

within the learning community. Space is opened for appreciative enquiry (Cooperrider & Whitney 2005), encouraging students to provide truthful and compassionate feedback to their peers. Students work in groups on ‘real-life’ projects with local organisations. And at the physical and emotional heart of the learning experience is the maintenance of the infrastructure of the college itself – gardens, kitchen, living and sleeping spaces – undertaken by staff and students working side-by-side.

One student experience in particular illustrates the power of this pedagogical approach to effect deep cognitive and behavioural transformation. This student, growing dissatisfied with the amount of time being devoted to building a coherent and generous learning community (which he felt was eating into time for cognitive learning) began to absent himself from some classes. He then began to notice the multiple benefits that his fellow students were deriving from being part of the strong learning community thus generated and, in consequence, decided to reverse his decision and spend more time with his peers.

This led him to the wry insight that he was behaving every bit as instrumentally and selfishly as the dominant economic system he was seeking to critique and transcend. Fascinated by this and by the literature on neuro-plasticity suggesting that new neural pathways can be opened through behavioural and attitudinal shifts (Doidge, 2016) he set out on a process of self-study, observing the impact on his own consciousness and behaviour of daily acts of generosity. He committed to spending at least an hour a day for one month freely giving – language lessons, work shifts for peers who were sick or otherwise indisposed and so on. The results of the study were revelatory for the student who concluded his assessed assignment on the subject by declaring for himself:

‘.....an obligation to embrace a totally new way of being, which means first and foremost having the intention of being in and making society and community; of connecting and cooperating with others, to being present, taking notice and finally, giving.’

This points to a core distinctive feature of academic life at the College, namely an embracing of multiple modes of learning and, specifically, of the validation of subjectivity as an essential source of intelligence and knowledge. That is, the pedagogical ethic is built on the assumption that there is no objective truth out there waiting to be uncovered and transmitted to the student as a fixed body of knowledge, delivered cognitively in neat subject-specific envelopes. Rather, knowledge is socially constructed, necessarily emerging out of an ongoing, collaborative and iterative process of experimentation, questioning, and reflection that transcends conventional disciplinary boundaries (Reason & Bradbury 2015). Allan Kaplan, co-founder of The Proteus Initiative in South Africa, captures the essence of this way of understanding the dance of inquiry between students and the object of their study: “[T]here is a delicate relationship between the world ‘out there’ . . . and the sense-making that we bring to that world; that the phenomenal world we live in arises from the conversation between sense and sense-making” (Kaplan & Davidov, 2014, p.26).

This translates into a pedagogical fabric comprising four distinct though mutually reinforcing threads that we will explore in turn: collaborative, project-based learning; the need for reflexivity; engaging multiple learning faculties; and the power of language in framing how we interpret, understand and engage with the world.

Collaborative, project-based learning

One of the programme's core modules is centred around collaborative projects with local organisations, many of which are linked to the local Transition Town Totnes initiative or to the Dartington Trust. These include projects in fields as diverse as renewable energy, the development of affordable housing work-space and local food production and processing. A common discovery for students as they undertake this work is the complexity of the change process. Conventional educational pathways that privilege technical rationality prepare the students to act as 'experts' whose job is to analyse, diagnose and design solutions which are then transferred to operational staff for implementation. In the project-based enquiries undertaken by students at the College, the importance of power structures, narrative frames, group dynamics and collaborative meaning-making among the various stakeholders to the long-term success of any intervention becomes clear. This is all the more so given that the students spend only a few months embedded within the project teams. Consequently, a critical dimension of their enquiries needs to be into the role of the external agent in enabling regenerative change to happen.

The early focus of one student's dissertation research was on the design of a complementary currency for a community in Brazil. However, as she became progressively more sensitised to the history of and multi-layered dynamics within the community, she became progressively more aware of how inappropriate (and lacking in lasting value) it would be for her to play the conventional role of consultant using her technical expertise to deliver a 'solution'. Her research reoriented towards a nuanced and highly personal exploration into the role of the catalyst of change in a community not her own.

As noted above, day-to-day management of the life of the College offers another opportunity for collaboration within the learning community. This includes an explicit rejection of unnecessary hierarchy and an invitation to weave artistic creativity, singing, dancing and mindfulness practices into the daily life of the College. This locates the College explicitly within the tradition of ‘living and learning’ communities, common to many of the world’s ecovillages and drawing inspiration from, among others, the Gandhian ashram and ‘nai talim’ tradition (Sykes, 2018).

This expands the “living classroom” to include all dimensions of the life of the college, enabling a breaking down of the artificial boundaries that conventionally exist between the theory and practice of sustainability. Students learn to grapple with issues relating to decision making and conflict resolution, facilitating rather than driving change processes, sourcing and cooking food, and relating to others in respectful and regenerative ways. This holistic approach to learning was described in an earlier research study commissioned by and on the College as ‘curriculum as lived experience’ (Baines & Author 1, 2002).

At the time of writing, College students, together with staff, volunteers and alumni are co-creating the design of the ‘Schumacher Commons’, a global online community that that will enable the College’s various stakeholders to self-organise around various initiatives and to create a network of geographically located hubs.

Reflexivity

A core assessed element of the economics postgraduate programme is reflexivity – that is, the ability of students to recognise and track their own personal embeddedness within the field of their enquiries. Rather than standing apart from the object of their study as disinterested researchers, students bring to their enquiries a lifetime of related experience and meaning-

making that inevitably frames and conditions how they approach their research topics. They are, in turn, changed by the new insights they acquire on their learning journeys – and as they are changed, so the nature of their enquiries subtly change. A sensitivity to this iterative process is a critical part of the learning journey, enabling the students to remain aware of and responsive to their ever evolving and emergent enquiries.

So thoroughly has the subjective realm been excluded from the territory of scientific study that it can be difficult for students to acknowledge and accept it as a legitimate dimension of their academic work. And yet, developing the capacity to track one's embeddedness within the field of study – what John Shotter refers to as 'thinking within systems', as opposed to 'thinking about systems' – is recognised by many students as among the most important learnings they take away from their year of study (Shotter, 2012).

An important tool for cultivating reflexivity is the learning journal, in which students are encouraged to explore creatively – through writing, painting, mind-mapping and other artistic modes – their emerging insights, confusions, frustrations and breakthroughs. Risk-taking and exploring zones of discomfort, either in terms of engagement with curricular material or modes of self-exploration, are strongly encouraged.

One way of framing this is that the course is as much about the *inner* as the *outer* journey of transition. Since the student does not stand apart from but is rather embedded within the field of enquiry, the quality of attention, integrity and reflexivity that s/he is able to bring is critical. In the words of Jonathan Rowson and Ian McGilchrist: "The kind of attention we pay to the world changes the world we pay attention to" (Rowson & McGilchrist, 2013).

In this context, rather than being rigidly determined in advance, the curriculum needs to take on a provisional character, demanding the space and flexibility to evolve in co-created directions required by the flow of the inquiries. In the words of educational theorist John Dewey, “the learner and curriculum are each transformed as they interact with each other” (Trueit, 2012, p. 239). This requires a delicate dance between the need for structure (including such mundane issues as time-tabling and teacher inputs) and giving the students’ enquiries space to breathe and develop organically.

One way of doing this at the College is to ‘flip the classroom’, with students studying set materials (readings, videos, podcasts) in advance of the class so as to be able to use presenters as conversationalists and resources in the undertaking of their enquiries. Another is to provide the students with light-touch guidance, facilitation and mentoring as they undertake their project-based work and dissertation research. This also has potentially revolutionary implications for assessment of student work, a theme we will look at in greater depth below.

Engaging multiple learning faculties

The western scientific tradition leans heavily on rationality and validation based on empirical evidence. Within this tradition, the Cartesian researcher stands apart from the rest of creation, able to dissect and understand it objectively through the rigorous application of their intellect.

There is a growing recognition that the researcher is, rather, embodied and deeply implicated in multiple relationships within the human and other-than-human world, exploring it with the full range of human faculties: rational and cognitive, experiential, intuitive, relational, emotional and embodied. Portuguese neurologist, Antonio Damasio, for example in his book

Descartes' Error proposes that emotions play a leading role in guiding behaviour and that rationality requires emotional input (Damasio, 2015). A recent study into education for sustainable development found that in the absence of emotional engagement, “cognitive understanding is not enough to foster behavioural changes. . . . Emotions concern what gives meaning to life; they frame, transform and make sense of our perceptions, thoughts and activities (Eilam and Trop 2011).” Student engagement on an emotional level, the study found, was essential for behavioural change.

British journalist George Monbiot captures this beautifully: “Acknowledging our love for the living world does something that a library full of papers on sustainable development and ecosystem services cannot: it engages the imagination as well as the intellect” (2015).

Linguists George Lakoff and Mark Johnson go so far as to argue that *all* cognition is based on knowledge that comes initially from the body, and that other domains are mapped onto our embodied knowledge using primarily conceptual metaphors (Lakoff & Johnson, 2003).

This provides the theoretical basis for a pedagogy of ‘head, heart and hands’ that seeks to cultivate the whole person. Within the economics postgraduate programme, there is an especially strong embodied and theatrical dimension to this pedagogy. The course includes a Theatre of the Oppressed workshop, drawn from the work of Augusto Boal, himself profoundly influenced by the work of Paulo Freire. Theatre of the Oppressed is an arsenal of theatre techniques and games that seeks to motivate communities to identify the roots of the oppressions they face and to rehearse taking action in response. It begins with the idea that everyone has the capacity to act in the “theatre” of their own lives; everybody is at once an actor and a spectator – or, to use a term coined by Boal, ‘spect-actors’ (Boal, 1995).

This opens up a powerful way of working that takes members of the learning community beyond reading and theorising about the oppression faced by others, to find themselves embedded within very real felt oppressions in their own lives. In this way, the field of enquiry comes urgently alive and subsequent explorations of oppression, in whatever context, animate real passion.

In one recent Theatre of the Oppressed workshop at the College, a North African student explored his experience as a victim of racial discrimination in the context of fear of terrorism in New York City. He picks up the story in his own words: 'It was the first time that I was able to speak openly about this experience. Creating the piece of theatre helped me heal certain wounds.....By engaging in this creative process I became an observer of my own story, therefore shifting my perspective; I became engaged in a conversation where we could collectively heal something much deeper than my individual ignored suffering' (personal conversation).

Another session at the College saw the introduction of Boal-inspired techniques into a student-led session on the enclosure of the commons. This involved a mock lock-out from the class's treasured teaching space (on the pretext that a mix-up in the College's scheduling meant another group would be given this space for the day), invoking reactions ranging from rage to despair among the students. The ruse revealed, the group returned to its beloved classroom where the ongoing exploration of themes related to enclosure took on a vibrant urgency unimaginable in the absence of the 'invisible theatre' (to use Boal's words) stunt.

The economics class also uses systemic constellations techniques to map out dynamic situations relating to economic power structures, using the students' bodies to represent different stakeholders and drawing upon their bodily wisdom as a source of new insights and perspectives (Carnabucci & Anderson 2011). Similarly, the course includes exercises drawn from the pioneering educator, Joana Macy, among whose aims is to help students to

overcome their learned reticence about bringing uncomfortable emotions into the classroom. One such exercise, the Council of All Beings, invites students to seek empathic identification with various other-than-human species, creating masks inspired by these species and attempting to speak from their perspectives (Macy, 1998).

Students are encouraged to be artistically creative both in their research methods and their assessed assignments. Assignments (all of which need to include a rigorous academic commentary) have included art installations, videos, podcasts and musical compositions. One afternoon a week is opened up for the students to engage in gardening, craft work, carpentry or other applied hands-on activities.

The power of frames and language

The fourth core element of the economics postgraduate programme's pedagogy is a playfully irreverent relationship with language. There is a suspicion of claims that this can, in any meaningful sense, provide an objective, value-free description of some pre-existing reality. It is, rather, seen as being embedded in, arising from and reinforcing the dominant worldview, which, when unquestioned and unchallenged, it tends to insidiously reinforce. In short, we recognise that linguistic devices such as metaphor and narrative function in our construction of reality – and that prevailing linguistic forms tend to privilege the interests of the powerful, disenfranchising and delegitimising other epistemologies/worldviews (Author 2, 2017).

Classes often begin with someone – student or teacher – writing the words 'This is Not The Truth!' on the flip-chart. This Zen-like invocation acts as an invitation for the students to co-produce the meaning-making in the classroom, recognising both that all theoretical models are, at best, *usefully* imperfect abstract representations of reality; and that there can be

substantial potential for breaking free of conventional ways of thinking by interrogating the language we use in our enquiries.

An area of the classroom is devoted to the recording of words and phrases that are encoded with the ideological patterning of systems, values and behaviours we are seeking to transcend, as well as of alternatives that could be more helpful. An entire elective module is devoted to the science of our cognitive capacities and how we make meaning in the world; and how the insights emerging from this analysis can be used to communicate sustainability-related messages more effectively and powerfully. Students are encouraged to create and enact new communications strategies through multiple art-forms: dance, theatre, video, poetry. One breakout group explored communication strategies around climate change through a stand-up, rap, comedy routine!

Leverage points for transformation

This is but one telling of the story of the pedagogical approach adopted within the economics postgraduate programme at Schumacher College. Every member of the learning community would undoubtedly tell the story differently, putting greater emphasis on some aspects, less on others. However, given this inevitable limitation, the question is to what degree – if at all – is this story relevant to the purposes of those embedded within more conventional settings who are seeking to radically reorient the type of education that their institutions are seeking to curate?

Here we propose a number of specific leverage points and areas in need of strengthening for an educational paradigm such has emerged from Schumacher College to take root and flourish more widely.

The question of scale

Among the most distinctive features of Schumacher College that has been highly conducive to its success in manifesting its educational culture is its smallness of scale. This has enabled the activation of an holistic field of learning in which there has been a blurring of the divides that plague most conventional education settings: those between self and others, self and the other-than-human world, mind and body, abstract and context-based learning, curriculum and pedagogy and that which happens within and beyond the ‘classroom’.

It is important to note that there are a growing number of learning contexts in mainstream Higher Education that do, in fact, enable students to engage in small collaborative learning opportunities that are also community engaged. One such example is Service Learning; a curriculum embedded innovation that has particularly taken root within US higher education provision (Stanton et al., 1999, Butin, 2010). This requires HEIs to seek learning spaces beyond their campuses and to build partnerships with local stakeholders such as businesses, community groups and NGOs. This form of educational experience provides the opportunity for multiple benefits. It gives students exposure to real-life contexts in which to experiment with new ideas and approaches. It enables them to work at a scale that makes possible the kinds of pedagogical approaches promoted here. And it can reduce the chasm often experienced by neighbouring communities between themselves and the ‘elitist’ academic institutions in their midst.

It may be that the expansion of this type of engaged practice that we are currently seeing in part reflects the emergence of other instrumental agendas such as enhancing graduate employability. But could such opportunities for collaborative, place-specific, problem-based

learning provide a context in which embryonic, experiential and collaborative learning communities could also take root?

Assessment

The design and implementation of assessment systems fit for purpose for this type of learning represents another potentially powerful leverage point. While there has been some innovation in this field in recent years in mainstream settings, assessment practices continue to be informed primarily by the reductionist assumptions of the dominant paradigm; individualistic, competitive, based on the articulation of pre-determined outcomes and the recall of cognitive knowledge. There has, however, been a certain timidity among educational bodies experimenting with new approaches; the response to outmoded systems has often been to reject or downplay the need for assessment rather than attempting to transform it. To give but one example, assessment of most of the projects falling under the aegis of the EU-funded CEAL (Community-based Entrepreneurship Action Learning network) programme was undertaken on the basis of one standard pass grade for the achievement of specified tasks, such as participation in a certain number of sessions or the submission of written assignments (CEAL, 2016).

The Schumacher College experience suggests possible avenues for exploration of a more ambitious approach, one that begins with the aim of having authentic and personalised assessment systems as an empowering and supportive structure for students. At the heart of this approach is the challenge of how to assess reflexivity and creative self-expression in modes other than the cognitive. How, in short, can we bring rigour to subjective self-expression? In his ground-breaking essay, *Enlivenment*, Andreas Weber proposes the concept of ‘poetic objectivity’ to describe and validate the importance of the subjective in the

student's learning journey (Weber, 2013). However, operationalisation of the concept remains a work in progress and Weber's essay is arguably more declarative than analytical in terms of how rigour can be brought to the process of assessing the generation of subjective knowledge.

This is territory that the emerging field of action research has the potential to make an important contribution to. As outlined by the action research pioneer, Judi Marshall, who works as a visiting lecturer at the College, it provides 'quality processes' for measuring the rigour and depth of reflexive engagement (Marshall, 2016). These include the adoption of a critical approach, in which the student's own assumptions are interrogated and challenged; and disciplined engagement on the part of the student in multiple cycles of inquiry into emergent processes.

Students at the College are encouraged to creatively engage in an exploration and framing of the assessed learning outcomes in ways that best support their own learning journeys and with the aim of enabling them to increase their sense of ownership of the learning process, both as individuals and as members of a cohort. Where appropriate, formal assessment includes the weighting of marks awarded by the student, his/her peers and the teacher.

Role of the educator

A further potential leverage point to emerge is a transformation in the role of the educator. Within the model described here, the centre of gravity shifts from the authority of the teacher to the distributed intelligence of the learning community, with students taking ever greater responsibility for the framing and management of their own learning journeys. This serves to revolutionize the role of the teacher. Their primary role shifts from being a transmitter of a

fixed body of knowledge to becoming an “educator” (etymology: “to draw out from”), helping students engage creatively and intelligently in their sense-making enquiries. Teachers play the roles of catalyst, mentor, provocateur, and, to some degree, also that of peer within the learning community of which they form a part.

This requires a whole different skill set from that generally provided by more conventional teacher training institutions. Here, radical experiential centres such as Schumacher College have an obvious potential role in providing training more geared to the needs of the new holistic educational paradigm.

The purpose of education

This brings us to a final leverage point for transformation, namely a transformation of the very purpose of education (Meadows, 1997). According to Donella Meadows, changing the purpose or goals of a system has the power to effect systemic change, secondary only to paradigm shift. She explains that the goal of a system, if widely shared, influences the nature and behaviour of the system be it an organisation, company, local group or other entity. That being the case, a change in goal or goals can shift the entire behaviour of that system and of the players within it. Whilst Meadows’ number one ‘leverage point’ – a change in paradigm - is extraordinarily challenging to affect at organisational levels, an intentional change of purpose in educational policy and practice, “is possible at micro, meso and macro levels and can be a harbinger of a deeper cultural shift, especially when aligned with and connected to growing progressive and reconstructive movements in civil society” (Author 1, 2017, p42).

In a world in which eight people own as much wealth as half of humanity (Oxfam 2017) and in which the rate of species extinction has led many scientists to describe the era in which we

live as the beginning of the Earth's sixth great extinction event (Kolbert, 2014), this is an existential as much as a moral or aesthetic imperative. In this context, a more explicitly values-driven curricular and pedagogical approach commends itself, following in the footsteps of Freire (2000) and bell hooks (2007), as an explicit tool for the empowerment and liberation of the oppressed.

Moreover, methodological approaches informed by an understanding of complexity theory are legitimised by the nature and urgency of the crises converging on our global civilisation.

Marshall, explains it thus: "In modern western societies, we are caught in a conceptual trap that renders our accepted ways of understanding our world unequal to the task that the sustainability challenge offers" (Marshall, Coleman & Reason, 2011). There are solid grounds for believing that most of the critical crises we face are "wicked," or complex in nature, lending themselves well to apprehension and engagement through a systems/complexity lens (Buchanan, 1992, Boulton et al., 2015).

In summary, given the nature, scale and urgency of the crises converging upon us, as well as our emerging understanding of how knowledge is generated, the time may be ripe to embrace transformative learning as the prime purpose of higher education. This proposition has resonance: the former Director-General of UNESCO stated in UNESCO's Global Monitoring Report on education and sustainability, 'we must fundamentally change the way we think about education and its role in human well-being and human development' (Bokova, 2016, p.i). In meeting this challenge, we would argue that innovative work on the 'creative edge' of the mainstream has increasing and urgent relevance and potential.

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