

Wilderness experience in education for ecology.

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At least since the 1980s, and possibly long before that, humanity has been running an ecological deficit with the earth. The activities of humans are fast overwhelming the self-regulating capacity of the planet of which we are a part (see, for example WWF, 2004:2-4). The Millennium Ecosystem Assessment (2005) reveals that “approximately 60 percent of the ecosystem services that support life on Earth – such as fresh water, capture fisheries, air and water regulation, and the regulation of regional climate, natural hazards and pests – are being degraded or used unsustainably...” and that this “could grow significantly worse in the next 50 years”. The ecological footprint, a measure of humanity’s use of renewable natural resources (Wackernagel et al., 1997), grew by 80 per cent between 1961 and 1999, to a level 20 per cent above the Earth’s biological capacity. The challenge of sustainability faces us now, not in some distant future. David King, Chief Scientific Advisor to the UK government has described climate change as the greatest challenge facing the world in the twenty-first century (King, 2004a, 2004b). James Lovelock has issued the grim warning that we are too late for ‘sustainable development’ and must make "a well-planned sustainable retreat" (Lovelock, 2006).

This chapter explores how wilderness experiences, as part of education for ecology, can be part of management education designed to address these issues. For the challenges we face are not simply economic and technical—although they have economic and technical dimensions. Rather the crisis is primarily one of mind and of how we perceive of ourselves in relationship to the planet of which we are a part. As David Orr argues

The crisis we face is first and foremost one of mind, perceptions, and values; hence, it is a challenge to those institutions presuming to shape minds, perceptions, and values. It is an educational challenge. More of the same kind of education can only make things worse. (Orr, 1994:27)

The MSc in Responsibility and Business Practice at the University of Bath seeks to address these educational challenges (see <http://www.bath.ac.uk/carpp/msc.htm>). It looks at the complex relationship between business decisions and their impact on local and world communities, economies and environment, and helps participants develop management practices that are responsive to pressures for greater awareness in these areas. Many people would like to bridge the gaps between their beliefs and hopes as human beings, and the reality of their working lives. This course aims to

equip participants with the skills, knowledge and awareness to review their own practice and play an active part in moving organizations towards a more values-aware orientation.

Judi Marshall has described the educational design of this programme as ‘matching form to content’ (Marshall, 2004). She argues that ‘pedagogy matters... that we need to develop educational forms that are robustly congruent with the issues addressed’ (2004:197). Our pedagogy recognizes that there are no formulaic solutions to these issues; we invite participants to engage in active reflection and experimentation, and so become explorers and potentially pioneers in responsibility and business practice. Thus our educational model is both appreciative and question-posing.

The programme is part-time and comprises eight intensive, five-day residential workshops over two years. Each workshop explores a content area in depth—the first two open the territory, looking at *Globalization and the new context of business* and *New economics*; the third workshop, the subject of the current chapter, explores the ecology of the planet of which business is a part; while the fourth brings participants back to the practices of *Sustainable corporate management*; in the second year workshops develop these themes. We weave other, ongoing, strands of learning throughout the programme: systemic thinking, acting for change, power, gender, diversity and leadership.

Our question-posing education practice is based on action research (Reason & Bradbury, 2001). We invite participants to develop skills of reflective practice (Marshall, 2001; Schön, 1983; Torbert, 2004), co-operative inquiry (Heron, 1996), and large scale change (Gustavsen, 2001). For example, the programme is structured overall as cycles of action and reflection, with each workshop offering space for reflection in learning groups, and the periods between workshops as cycles of action. We bring into the classroom exercises which encourage reflective capabilities here-and-now—such as individual and group process reviews; and ‘tools’ to enhance off-line reflection such as the ‘learning pathways grid’ (Rudolph, Taylor, & Foldy, 2001). The assessment process encourages learning through inquiry. Maybe most important and challenging is our attempt as staff to model a practice of inquiry moment-to-moment in all our engagements with students .

Wilderness Experience

The staff team, when they originally designed the programme, were adamant that the programme, while clearly a business programme in a prestigious business school, should attend to questions of meaning, value, spirit, and in particular that students should be exposed to radical thinking about the nature of the planet Earth as the originator of all human and non-human wealth. We wanted to explore deep ecology and Gaia theory, and, as far as it possible in the overcrowded British Isles, offer students a ‘wilderness experience’, an opportunity for a direct experience of the wildness of the natural world.

To this end we have teamed up with colleagues at Schumacher College in Devonⁱ, and in particular with the resident ecologist Stephan Harding. Together we designed a week-long experience which includes lectures on deep ecology (Devall & Sessions, 1985; Naess, 1990)—see Box 1; Gaia theory (Harding, 2006; Lovelock, 1979, 2006)

—see Box 2; and the state of the natural world, but where a lot of time is spent outside. We take participants on a night walk through woodland and spend an afternoon meditating by the River Dart. We summon the Council of All Beings, the ceremony developed by John Seed and Joanna Macy (Macy & Brown, 1998; Seed, Macy, Fleming, & Naess, 1988) in which participants come to the council circle to speak as the many diverse beings of their concern for the state of the world. And we spend one whole day in a hike along the upper reaches of the River Dart, along what must be one of the last remaining stretches of wilderness in England. On this walk we leave the footpaths and scramble over rocks and under branches; we help each other through bogs and over torrential streams. And under Stephan's guidance we experiment with deep ecology exercises which shift our experience of the more than human world.

—Box 1 & Box 2 about here—

Through ten years of reflective practice conducting this workshop we have learned that education for ecology cannot be based solely on propositional knowing: it must be an experiential and aesthetic process. As Gregory Bateson argued in his essay *Conscious Purpose vs Nature* (in Bateson, 1972), the conscious rational human mind—what we in academia are proud to inculcate in our students—is itself antipathetic to natural ecological processes. He argues that the human mind, driven by rational conscious purpose, separates itself from the wider Mind embedded in the self-regulation of ecological systems. Consciousness as a 'short-cut device to enable you to get quickly at what you want' (1972:443), when coupled with powerful technology, cuts through the balancing circuits of Mind and undermines the ecosystem's stability. Bateson wanted to find a way of accessing the lost sense of interconnectedness and intimate interdependency; and he calls this the recovery of 'grace', the sacred dimension of our being (for a fuller review of the implications of Bateson's ideas for ecological education, see Reason, forthcoming 2007).

Experiential Inquiry

I have described the educational model of the MSc programme as drawing on action research as a basis for learning, and throughout the programme there is an emphasis on inquiry processes and skills. The deep ecology workshop draws on the model of co-operative inquiry by inviting participants to engaged in cycles of action and reflection in their exploration of the natural world. Co-operative inquiry is a form of collaborative action research—research *with* rather than *on* people—in which all participants contribute equally to the design of the inquiry and engage in the activities being researched (Heron, 1996; Reason, 2003). While in traditional research, the roles of researcher and subject are mutually exclusive, co-operative inquiry is based on reciprocal initiative and control, so that all those involved work together as co-researchers and as co-subjects. It is argued that for a truly human science of persons, those involved in the inquiry process must engage as persons rather than as passive objects, contributing with awareness to the both the ideas and the action that are part of the inquiry endeavour. It is important to emphasize that the workshop is not an example of a full practice of co-operative inquiry: the staff team retain a significant degree of (hopefully authentic and legitimate) hierarchical control of the design: we want to offer the co-operative inquiry model to participants and 'walk them through it'; and we want to offer activities which may open participants to a range of new

experiences. However, within the overall design there is plenty of space for individual autonomy and collaboration among participants.

An important part of the co-operative inquiry that we want participants to understand and experiment with is the idea that our ‘reality’ is subjective-objective and involves an extended epistemology. As human persons we participate in and articulate our world in at least four interdependent ways: experiential, presentational, propositional and practical. These four forms of knowing can be seen as aspects of human intelligence and ways through which we dance with the primal cosmos to co-create our reality.

Experiential knowing is through direct encounter, face-to-face meeting: feeling and imaging the presence of some person, place, process or thing. It is knowing through participation and empathic resonance with what is there. As knower I am open to other and distinct from it. Experiential knowing is the foundation for the co-creative shaping of our world through mutual encounter, and thus articulates reality through inner resonance with what there is. It is the essential grounding of other forms of knowing.

Presentational knowing emerges from and is grounded on experiential knowing. It clothes our encounter with the world in the metaphors and analogies of aesthetic creation. Presentational knowing is profoundly embodied and draws on expressive forms of imagery, in movement and in visual, musical, vocal and verbal art-forms, and is the way in which we first give form to our experience.

Propositional knowing is knowing in conceptual terms; knowledge by description. It is knowing expressed in statements, theories, and formulae that come with the mastery of concepts and classes through language and number. Propositions themselves are carried by presentational forms—the sounds, or the visual shapes of the spoken or written word or number—and are ultimately grounded in our experiential articulation of a world.

Practical knowing is knowing how to do something, demonstrated in a skill or competence. It presupposes a conceptual grasp of principles and standards of practice, presentational elegance, and experiential grounding in the situation within which the action occurs. Practical knowing is based on and fulfils the three prior forms of knowing, brings them to fruition our practice.

The process of co-operative inquiry draws on cycles of action and reflection which draw on the extended epistemology and thereby present the possibility of addressing Bateson’s concerns. At each stage of the cycle a different way of knowing holds primacy. In Phase 1 a group of co-researchers come together to explore an agreed area of human activity. In this first phase they agree on the focus of their inquiry and the questions or propositions they wish to explore. They agree to undertake some action, some practice, which will contribute to this exploration, and agree to a set of procedures by which they will observe and record their own and each other's experience. Phase 1 is primarily in the mode of propositional knowing.

In the deep ecology workshop the focus of inquiry is established as part of the course content. The questions posed for the week are ‘What is the experience of deep

ecology?’ and ‘What activities and disciplines aid its development?’ within these broad questions individual participants are invited to develop their own specific questions as the week progresses. The inquiry is based propositionally in the ideas about deep ecology and Gaia theory offered by Stephan.

In Phase 2 the co-researchers now also become co-subjects: they engage in the actions agreed and observe and record the process and outcomes of their own and each other's experience. In particular, they are careful to notice the subtleties of experience, to hold lightly the propositional frame from which they started so that they are able to notice how practice does and does not conform to their original ideas. This phase involves primarily practical knowledge: knowing how (and how not) to engage in appropriate action, to bracket off the starting idea, and to exercise relevant discrimination.

Starting with the night walk the evening we arrive at Schumacher College, participants are invited into the range of activities outlined above. As faculty we have designed activities through which they can bracket their preconceptions and engage with the natural world in novel ways—to enter into relation with trees, to walk on the earth as a living being, to meditate with the River, to speak as a slug or as an oak tree...

Phase 3 is in some ways the touchstone of the inquiry method. The co-subjects become full immersed in and engaged with their experience. They may develop a degree of openness to what is going on so free of preconceptions that they see it in a new way. They may deepen into the experience so that superficial understandings are elaborated and developed. Or they may be led away from the original ideas and proposals into new fields, unpredicted action and creative insights. Phase 3 involves mainly experiential knowing, although it will be richer if new experience is expressed, when recorded, in creative presentational form.

For many participants it is this experiential knowing that is the key to the workshop experience. For many, living for a week in community in an area of amazing natural beauty, having time just to sit by a river, and being given permission to open themselves to the voice of the more-than-human world is a great significance.

In Phase 4, after an agreed period engaged in phases two and three, the co-researchers re-assemble to consider their original propositions and questions in the light of their experience. As a result they may modify, develop or reframe them; or reject them and pose new questions. They may choose, for the next cycle of action, to focus on the same or on different aspects of the overall inquiry. The group may also choose to amend or develop its inquiry procedures—forms of action, ways of gathering data—in the light of experience. Phase 4 is primarily the stage of propositional knowing, although presentational forms of knowing will form an important bridge with the experiential and practical phases.

The course community is divided into small groups (who also work together each day on simply household tasks to maintain the ecology of the College) which meet at the end of each day to review and make their sense of the experiences. We invite participants to help each other articulate what has been important for them, to write reflectively, to draw or otherwise create visual images.

In a full inquiry the cycle will be repeated several times. Ideas and discoveries tentatively reached in early phases can be checked and developed; investigation of one aspect of the inquiry can be related to exploration of other parts; new skills can be acquired and monitored; experiential competencies are realized; the group itself becomes more cohesive and self-critical, more skilled in its work. Ideally the inquiry is finished when the initial questions are fully answered in practice, when there is a new congruence between the four kinds of knowing. It is of course rare for a group to complete an inquiry so fully.

The deep ecology workshop is designed with three cycles of inquiry: discussion of the philosophy of deep ecology followed by an afternoon in meditation with the River Dart; an introduction to Gaia theory and the state of the world followed by the Council for All Beings; and the day-long eco-walk down the River Dart with mini-talks and exercises. Each of these cycles is followed by a review in small groups, and on the final morning we meet as a whole group. Each person is given 'post-it' stickers and asked to write three answers to each of the two questions of the inquiry: 'What is the experience of deep ecology? And 'How do you get there?' Participants take it in turn to present their answers to the group, and to place their stickers on a wall chart, with the aim of clustering them into meaningful groups.

This process of inquiry, based in experiential knowing, parallels and amplifies the learning cycle of deep ecology, which involves deep experience, deep questioning and deep commitment.

Deep experience is 'often what gets a person started along a deep ecological path' (Harding, 1997:14); it often involves a spontaneous recognition of the interconnectedness of all things and thus the value of all things in their own right.

A key aspect of these experiences is the perception of gestalts, or networks of relationships. We see that there are no isolated objects, but that objects are nodes in a vast web of interconnections. When such deep experience occurs, we feel a strong sense of wide identification with what we are sensing. This identification involves a heightened sense of empathy and an expansion of our concern with non-human life. We realize how dependent we are on the well-being of nature for our own physical and psychological well-being. (Harding, 1997:16)

This sense of belonging to an intelligent universe revealed by deep experience often leads in the deep ecology framework to 'deep questioning'

which helps to elaborate a coherent framework for elucidating fundamental beliefs, and for translating these beliefs into decisions, lifestyle and action... By deep questioning, an individual is articulating a total view of life which can guide his or her lifestyle choices... In questioning society, one understands its underlying assumptions from an ecological point of view. (Harding, 1997:16)

Deep experience combined with deep questioning leads to deep commitment:

When an ecological world-view is well developed, people act from their whole personality, giving rise to tremendous energy and commitment. Such actions are peaceful and democratic and will lead towards ecological sustainability. Uncovering the ecological self gives rise to joy, which gives rise to involvement, which in turn leads to wider identification, and hence to greater commitment. This leads to "extending care to humans and deepening care for non-humans". (Harding, 2001:17)

By linking bringing the process of co-operative inquiry to the perspective of deep ecology we hope to emphasize the importance of question-posing in education. We are not offering deep ecology as a monolithic normative view to which all must conform. But we are saying, there is something really important in this view of a deeply interconnected world, please engage in an exploration of what this means for you in your life; use the inquiry process to make it your own.

Wilderness Experience

Schumacher College is located on the edge of Dartmoor which, while by no means a pristine wilderness, contains pockets of land where the modern human imprint is minimal. One of these is a corridor along the river Dart in its higher reaches, where the river is swift flowing, tumbling over rocks and through narrow gorges as it falls off the moor. While we introduce participants to outside activities throughout the week, the 'ecohike' down the Dart on the fourth day is the major event. We take a coach up onto the moor, and walk downstream for about 6 hours. For most of the distance there are no paths: we scramble up and down, through boggy areas, over rocks, through oak woods; sometimes walking confidently on secure ground, while at other times cautiously on slippery rocks by the river's edge; sometimes walking alone, and at others helping each other up steep cliff climbs and over swollen streams where they join the main river. We have walked this route ten times now in many different weather conditions—on several occasions in pouring rain. I have found myself moved almost to tears as I watch group members look after each other, the stronger helping the less able over difficult patches—it is clear that as well as providing an education in ecology, the experience is emotionally bonding for the group.

We encourage participants to walk with open minds and hearts, to be awareness of the world around them. We encourage them to walk with an attitude of deep ecology—that the world they are walking through is of intrinsic value; and of Gaia—that the world is in some sense a living being. We ask people to avoid everyday chatter as much as possible—for how can we hear what the trees might be saying if we don't listen to them? We invite them to try walking meditatively with a mantra on their lips—one of my favorites I learned from Joan Halifax, "walking the green earth...Ah!" which is repeated in time with one's walking pace. From time to time on this walk we stop to hear from Stephan about ecological features—we can see directly the erosion of granite rocks by water and plants which is fundamental to the carbon cycle. At others we stop to invite participants to engage in 'deep ecology exercises'—simple activities which may radically shift perception.

Typically at our first stop, in a particularly wet and mossy glade overhung with ancient oaks growing improbably out of crevasses in the granite, we invite

participants to walk around in silence, touching the moss, rocks and trees while exploring the sense that as they touch, these beings are touching them; and more broadly that as they see the world, the beings in the world are—in an entirely different way—‘seeing’ them. We are here drawing on anthropological evidence from hunter gathers (see Harding, 2006:48-49); and on David Abram’s (1996) interpretation of Merleau Ponty that we can touch because we ourselves are physical beings capable of being touched, so that touching is a transaction, ‘certain ways the outside has of invading us and certain ways we have of meeting the invasion’ (Merleau-Ponty, 1962:317)

Our second exercise is a variant of the ‘blind walk’ with the emphasis placed not on qualities of interpersonal trust but on the perception of the world with our primary sense of sight inhibited. Participants work in pairs to help each other experience the roughness of bark, the stickiness of mud, the delicacy of fungi, the coldness of rock—yet these qualities are experienced directly rather than described verbally. Later we may express them through poetic form such as Haiku:

Water drop on leaf
a tear rolls down for times lost
and new beginnings. (Ruth Townsley)

In the third formal exercise we invite participants to find a quiet spot and imaginatively identify with a part of the more than human world and how it partakes in the cycles of Gaia: *How a tree expires water, creating clouds which form rain which feeds the river which, amplified by the roots of the tree, erodes the granite releasing calcium which links with carbon to form calcium carbonate which sediments as chalk....*

The last time we did this, I was sitting against a tree in a particularly lush and damp piece of woodland. I relaxed against the tree, experienced my body against the wood and the earth, and looked around me. As I quietened my thoughts, and looked at those beings I call trees, earth, stones, birds... and opened my imagination to include fungi, insects, bacteria... and then the various chemical substances, the elements and molecules... and then again the quantum reality of the particles that lie underneath even that... I realized everything I could see and imagine was in the process of becoming something else, that everything was participating in everything else. I realized quite suddenly that to see the world as separate things or beings was to have already abstracted from this ongoing process of being. And I think I understand what Whitehead and the Buddha might have meant. (Reason, 2002:19)

We end the walk pretty exhausted, foot sore and ‘full up’ with experiences. However, participants usually have the energy for further reflection that evening. During the week we have introduced participants to creative ways of recording experience—freefall writing (Turner-Vesselago, nd), poetry and haiku, drawing—and following the walk we encourage people to reflect together on their experience and to use these approaches to gather their reflections. We end the inquiry process with a round of sharing, usually centred about questions such as ‘What is the experience of deep ecology?’ and ‘What activities and disciplines aid its development?’

What is the experience of Deep Ecology?

Student responses

This workshop is experience as both deeply moving and challenging. Looking directly at the state of the world through statistics and through the eyes of other Beings can be deeply disturbing. And the workshop can challenge deeply held views of those with a scientific education and those with strong religious commitments. On the whole, it opens new perspectives on the world we live in. The fourth MSc group made a tape recording of their final inquiry cycle which formed the basis of a journal article (Maughan & Reason, 2001). The following give some sense of the nature of the experience (the quotation marks indicate participants actual words).

The experience of deep ecology started for most of us with a true appreciation, as if for the first time, of the simple beauty of the more-than-human world versus the human-made urban world many of us live in. This experience is one of profound joy expressed by one participant as ‘post human exuberance, when you sit on a rock and feel happy, it's not like when you're happy because you've had a birthday present, it's a different, more profound sort of happiness’.

We found beauty in ‘the wonder and magic of nature’s complex cycles’. Through cycles of birth, death and re-use we became aware that ‘everything is related in one way or another’ and deep ecology provides us with an ‘understanding of the intimate relationships which exist and which we have with nature as well’. Our ‘connectedness to the rhythms of the natural world’ is something which our urban lives allow us to forget and the experience of deep ecology places us back within our most fundamental context: ‘we are nature’. One participant elaborated on this: ‘I thought the core experience was to actually feel myself as part of the natural world. I don't think we normally actually feel that’.

We found our experience was particularly heightened by the exercises during our day long wilderness walk when we were invited to close our eyes, touch our surroundings and sense our surroundings touching and feeling us in reply. One participant spoke of ‘the blur between me and the moss I was touching, it was difficult to know where I ended and the moss began. Then there was the exercise where we really probed our surroundings, I almost felt like asking permission of this other living entity, ‘May I?’ and ‘Should I?’ and ‘I’ve never done this before’. I really experienced a wonderful balance between the blur and the sense of otherness, in our existence, our relationships with the living world, our very being.’ This notion of otherness was also expressed in this way: ‘Now I know the earth and everything on it has a heart and has feeling’.

Throughout the week we felt welcomed by the more-than-human world and many of us shared this participant’s feeling ‘of coming home, of being accepted by the place like when I've had a really happy home, I've just walked in and been embraced’... (Maughan & Reason, 2001:21-22)

From the experiences of our students over many cycles of inquiry, we can summarize the experience of deep ecology as in Box 3.

—Box 3 about here—

So what?

The deep ecology workshop is for many a turning point on the programme. Our experience as staff is that participants join the programme with a strong value orientation toward making a difference but sometimes with a quite narrow view of ‘responsibility and business practice’ based, understandably, in their own career and experiences. For many, the first two workshops open their eyes to the extraordinary range of issues—economic, political, personal and spiritual—that are presented when questions of justice and sustainability are placed at the centre of the curriculum; and the urgency of the ecological challenge. For many this is a daunting realization which modern humanist values do not prepare them for. In many ways the programme deeply challenges the assumptions and values of the modern capitalist world.

The experience of deep ecology can, we would argue, provide a new grounding in an earth-centred ethic. Not to say that as the result of a week’s experience participants all become radical deep ecologists. But the experiences of the workshop do open the possibility of a different way of addressing what Thomas Berry (1999) calls the Great Work of our times—learning how move from a devastating presence on the planet to a benign presence. How participants actualize this is highly individual, but the thread of the Schumacher College experience can be traced through their work on the rest of the course and into their final projects. I trace three examples.

Jane Brown worked as an Equal Opportunities advisor in the Fire Service. Her job, and her passion, is to open the service to women, persons of colour, and other minorities, to promote equality. She writes of how she was moved and inspired by the ecology workshop and concludes that:

The claim that there is a deep interconnectivity at all levels of life... gives me a feeling of relief but also an increasing sense of responsibility. It lets me rest and releases me from taking on everything myself... It invites me to trust both the greater intelligence that is the universe and to myself as part of that universal intelligence. It also obliges me to take action and engage in... the “real work” of becoming a whole person... My understanding of what “equality” meant is fundamentally different...

Ian Nicholson is an engineer who has worked extensively in the construction and water industry. He recounts how the experience at Schumacher gave him a sense of unity with the natural world, “because I was part of it and not different to it”. While these fundamental values are at the heart of his practice, he struggles with how to integrate this with the needs of his nascent environmental consultancy. It is tough going.

Christel Scholten works for a large international bank seeking a way toward sustainable banking. She writes of how the deep ecology perspective came to life for her on the ecology workshop in her experience of both the pain and the beauty of the planet. This informs her worldview that we can learn to live in harmony with nature, each of us unique yet part of one living system. She applies this to her practice as a “tempered radical” (Meyerson & Scully, 1995) in her bank, using her informal power

to bring people together in different forms of dialogue to create a ‘change community’.

The challenge of learning about deep ecology and Gaia theory offers a profound challenge to programme participants. For many, it changes their sense of who they are as humans in relation to the earth which penetrate and deeply challenge their practice as organizational members.

Box 1

The Deep Ecology Platform

- All life has value in itself, independent of its usefulness to humans.
- Richness and diversity contribute to life’s well-being and have value in themselves.
- Humans have no right to reduce this richness and diversity except to satisfy vital needs in a responsible way.
- The impact of humans in the world is excessive and rapidly getting worse.
- Human lifestyles and population are key elements of this impact.
- The diversity of life, including cultures, can flourish only with reduced human impact.
- Basic ideological, political, economic and technological structures must therefore change.
- Those who accept the foregoing points have an obligation to participate in implementing the necessary changes and to do peacefully and democratically

This version of the Deep Ecology Platform was formulated by those attending the *Deep Ecology* course at Schumacher College, May 1995. (Harding, 2006:241-242)

Box 2

Gaia

Gaia Theory proposes two radical departures from the conventional view [of life on earth]. The first proposal is that life profoundly affects the non-living environment, such as the composition of the atmosphere, which then feeds back to influence the entirety of the living world. The second property emerges out of this tight coupling between life and non-life. This ‘emergent property’ is the ability of Gaia, of the Earth System as a whole, to maintain key aspects of the global environment, such as global temperature, at levels favourable to life, despite shocks from both within and outside itself.

This sort of ability, which scientists call 'self-regulation' is exhibited by all living things.... So, according to this theory, Gaia is in some sense alive...

Adapted from Harding (2001:17-19; see also 2006, Chapter 3)

Box 3

What is the experience of deep ecology?

- The experience of deep ecology is a feeling of joy and awe at the beauty of the more-than-human world
 - It is an appreciation of the delicate balance between chaos and order
 - It is the acknowledgement of the interconnectedness of all living beings, including ourselves, in the endless cycles of the planet
 - This acknowledgement leads to the direct identification of ourselves with other living beings and a redefinition of our place, no longer dominating nature but one equal part of it
 - It is a sense of the consciousness of other living beings and the reciprocal relationship between us
 - The experience is both of the moment and of eternity
 - The experience is that of a spiritual quest to reconnect with our true human nature and break down the artificial barriers we have erected
 - It is the feeling of home-coming
 - It is the celebration of the creator
- (Maughan & Reason, 2001:21)

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