SECTION I: CONTEXT

2   Sustainability, Participation, Change and Power

The Worldwatch Institute currently suggests that seven well established environmental trends are shaping the future of civilisation - population growth, rising temperature, falling water tables, shrinking cropland per person, collapsing fisheries, shrinking forests, and the loss of plant and animal species (Brown & Starke, 2000). In a similar vein the ICSU reminds us that "*our* uses of energy and practices of intensive farming and technology have altered the albedo of the Earth, the composition of soil and water, the chemistry of the air, the areas of forests, the diversity of plant and animal species and the balance of global eco-systems", (ICSU cited in Cooperrider & Khalsa, 1997, italics mine). Such human dimensions of global environmental change, that go beyond the "inexorable forces" of nature, are currently in a pattern of increasing deterioration (Cooperrider & Khalsa, 1997; Pezzey, 1992). Arguably this has something to do with the fact that we humans use approximately 40 percent of "potential net primary productivity" (essentially photosynthetic activity) of the planet (Vitousek & Ehrliich, 1986). In conjunction with these trans-boundary environmental problems, a wide range of social phenomena - from persistent poverty, the provision of basic healthcare and sanitation to malnutrition, inequalities in income and access, depression, anomie and withdrawal from society (Brown & Starke, 2000; UNDP, 1998; Korten, 1987) - are also indicating a path of social decline.

2.1   Sustainable development - puzzle or crisis?

According to Thomas Kuhn's work on scientific revolutions, when results that do not accord with the present "system" or "paradigm" appear there is a tendency to regard these anomalies as questions that need to be solved from within the current frame of understanding, they are puzzles that require adjustments or accommodations within the context of "normal science". Puzzle solving activities such as these have been given labels such as first-order change (Bartunek & Louis, 1988), single-loop learning (Argyris & Schon, 1978) or Learning I (Bateson, 1972). In such forms of practice incremental modifications are employed "that make sense within an established framework or method of operating" (Bartunek & Moch, 1987) and require change on a few dimensions and one or two behavioural aspects (such as values,

attitudes) (Levy, 1986). The essence of such activity suggests that the problems or anomalies that have appeared do not present a challenge to the underlying assumptions, premises and starting points of the present mode of understanding, but that *development* within the paradigm would be sufficient to solve the puzzles.

In Kuhn's description of the paradigm shift, associated with the revolution in astrology, he suggests that incremental changes to the incumbent Ptolemic system slowly created what Copernicus described as a "monster"; the minor problem solving activities served to increase the complexity of the Ptolemic system to the point where it had become unwieldy and useless. It was at the point of crisis where the paradigm had become unable to solve any problems asked of it, that what had previously appeared as a "puzzle" to be solved within the paradigm became a challenge to the paradigm itself. However, as Kuhn states "…even the existence of crisis does not by itself transform a puzzle into a counter-instance. There is no such sharp dividing line" (1996: 80).

In the same year that Kuhn first published the *Structure of Scientific Revolutions* (1962) Rachel Carson's *Silent Spring* shot forth as the spark for the modern ecological movement in the West. Since that time numerous individuals have, in fact, come to perceive that puzzle solving activity is creating an increasingly unwieldy "system", that a fundamental crisis already exists and that society needs to move beyond the "normal science" of our time, since it is inherently unsustainable (Korten, 1981; Shiva, 1989; Bowers, 1993; Kennedy, 1993; Fraser & Restrepo-Estrada, 1998; Brown & Starke, 2000). Early on Garrett Hardin, in his classic essay, recognised that the tragedy of the human population commons required an "extension in morality"(1968). Three years later, Meadows et al reported in *The Limits to Growth* that the growth-paradigm of economics required revision if social systems were to avoid collapse. More recently, Donella Meadows said "if you want to really restructure a system so that we can have a peaceful, just or sustainable world – that means changing the paradigm in our heads" (Meadows, 1991: 59). An initial trickle has developed into a larger portfolio of planned efforts aimed at creating change to the dominant and underlying worldview or paradigm of human society, with people seeking to engage in Learning II (Bateson, 1972), encourage second-order change (Bartunek & Moch, 1987) or foster double-loop learning (Argyris & Schon, 1978) for sustainability. As opposed to the merely simple action-oriented and single-dimension developmental pattern of first-order changes, these efforts regard fundamental, multidimensional transformation of consciousness and cultural re-education as a central focus of their practice.

The emergence of the notion of Sustainable Development, following the publication of the Bruntland report, *Our Common Future* (World Commission on Environment and Development, 1987), was regarded as a rallying call to the challenges faced by humanity in the face of humanly induced global environmental problems. The increasing rate of the emergence of environmental and social problems meant that an action-oriented search for solutions became one of sustainable development's loudest and most resonant sounds (Brown & others, 1997; Brown & Starke, 1999). However, although its urgent call to action gained in popularity in numerous discourses - picked up by a diverse range of actors and "commentators" from government departments, industrialists, schools and activist networks in civil society, to economists (Pearce, Markandya, & Barbier, 1989; Bolo, Maler, & Unemo, 1990; Daly & Cobb, 1989), psychologists (Roszak, 1993), geographers (McAfee, 1999), biologists and more - the definition and meaning of "sustainable development" became, almost from inception, a hugely contentious issue and contested domain (Pezzey, 1992; Nieto & Durbin, 1995; Ayres, 1998; Murphy, 1996).

Arguably one of the most important arenas in which such as contest has taken place has been with regard to economic theory and practice and the implications of the meaning of "limits to growth". Certain groups have sought to build upon Boulding's (1966) notion of "closed-system economics" to explore economics in the light of an eco-centric understanding, that living in an essentially closed and whole system, there are explicit limits to the ways that society can act without disrupting the system integrity and our position within it (Daly & Cobb, 1989; Gilman, 1990; Henderson, 1991; Gilman, 1992).

However, the majority of economists have been unable, or unwilling, to question the underlying progress and growth centred individualism of "open-system economics". It is not that there is a rejection of the notion that we might be meeting some kind of limits to growth. It is that the appearance of limits is not considered as being a particularly novel phenomenon in human experience; *homo oeconomicus* cannot stand the terrible inefficiency of pushing up against limits and while he (sic) is increasingly aware of the shrinking space around him he looks to the past as indication of the ability of mankind to provide technical solutions to master the limits to growth. According to Ayres, this is exactly the kind of interpretation of sustainable development that mainstream institutions such as the World Bank and IMF have adopted (Ayres, 1998). It is from the premises of neo-classical economics that the notion of sustainable development has come to be interpreted as "eco-development" transforming "ecological politics from a call for new public virtues into a set of managerial strategies" (Sachs (1980) cited in Purser, 1997). Such a reversion to a language of planetary or global management

"conjures up images of economists and policy experts sitting in a computerised control room, coolly pushing buttons and pulling levers guiding the planet to something called sustainable growth" (Orr, 1992: 53). For some there is "a vast difference between working to transform industrialism to a sustainable society through personal and social transformation versus sustainable development reform measures that assume an unlimited time horizon of technological and economic opportunities" (Purser, 1994).

From the view of individuals seeking "eco-centric"/deep ecological change, the placement of the terms "sustainable" and "development" next to each other has come to represent the oxymoron of "green developmentalism" (Rowell, 1996; McAfee, 1999). This is because uptake of sustainable development has tended to revert towards a technocentric orientation of the ecological and human condition, in which the thing that is sustained is not nature but development (Bowers, 1993; Shiva, 1989). The attestation to "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" in the Bruntland report (World Commission on Environment and Development, 1987) is seen as having presented a rhetorical gateway - an opening - that has allowed Western society to escape from the need to accept challenges and changes to fundamental beliefs and "basic assumptions about nature, economic growth, technology, consumerism, power, politics, education and human values"(Purser, 1997: 362).

However, in the light of the various crises that seem to be plaguing our existence to greater and greater extents, an outright rejection of first-order changes offered by eco-developmental initiatives is often quite difficult to make. A range of practices that reduce human impact upon the planet or improve the quality of life for millions - energy and resource usage is reduced by improved product design, environmental friendly products replace toxic ones, depressed regions of countries are revitalised through infrastructure construction projects, basic healthcare and contraception is provided to developing nations - have emerged with considerable pageantry as well as some considerable pragmatic "success". From an eco-centric view, the wins that these developments offer are, at the same time, huge and tiny. While they offer significant direct benefit to the marginalised or alleviate pressures of system bottlenecks that are close to collapse, these successes can be seen to have helped to promulgate "sustainable development" as an organising principle towards planetary management. They have allowed society to hold on to and, some argue, further entrench a metaphor that is not commensurate with an underlying recognition of the integral and closed nature of the Earth system - a metaphor that is highly concordant with the mechanistic worldview as conditioned by the Enlightenment.

Whilst for many agents looking for change some of the underlying premises behind "sustainability" offered the opportunity to adopt a new root metaphor for society, they have also seen sustainable development become co-opted in a way that ultimately endangers the positions of the weakest members of society and the environment. This co-optation also seems to make the fundamental crises that society will face that much further away and that much more extensive. Instead of accepting the challenges thrown up by sustainability as indicators of crises and, therefore, being able to mourn the loss of an ontology, which arguably served humanity well over the last 400 years, society seems to be stuck within a puzzle-solving frame of mind.

2.2   Transforming anomaly: orienting to co-optation and entrenchment

Work on belief systems also, however, tells us that they are very efficient at doing their job in terms of providing a "cognitive framework to interpret new experience" and "ward off threatening aspects of reality" (Harman, 1988:64). As suggested above, when any challenge to a paradigm occurs, those involved in the current framework will tend not to regard it as a counter instance or point of crisis and, therefore, as a reason to change paradigm; they will instead institute first-order changes as a response. In this way, the dialectical interplay between first-order change, in terms of minor action-oriented developments, and second-order change, in terms of consciousness level transformations, is the very essence of changes in belief system. Entrenchment through accommodating, first-order changes is the very essence of the endless game of paradigms and worldviews. In terms of Kuhnian paradigm work, first-order changes made under the guise of sustainable development will tend to enfold the challenges to the system. However, in doing so, the first-order changes will make a recognition of crisis and therefore an actual transformation of worldview that much further away.

The preferred outcome for a transition in worldview would be for first-order developments to *increase* the perceived viability of the second-order transformation that is being alluded to. There would be a reduction in the perceived appropriateness and, hence, persuasive potential of the current worldview. Eventually, the transition to a new worldview would occur smoothly, avoiding the highest point of collapse altogether. Such a vision would seem to represent an antagonistic tension between supporting the current worldview through sufficient change to prevent further deepening, intensified local crises on the one hand, while attacking the worldview to enable ultimate transition on the other; a conundrum of how to allow within-system change and in parallel attempt actual change of the system.

Institutional theorists Devereaux Jennings and Zandenberg seem to agree with such a position suggesting that together a "cumulative process that involves instilling values, diffusing practices and building institutions" - first-order developments - combined with the building of localised cultures as small pockets of innovation, where the extent of a new belief system is articulated - second-order transformations - will create a transition towards sustainability (1995). They go on to add that ultimately a crisis-induced revolution would deliver the second-order changes, that exist in the pockets of innovation, to the rest of society through the channels laid by the first-order changes. In order to differentiate these two notions we might like to refer to *sustainability transformation* when referring to second-order consciousness-level changes that accord fundamental and deep changes to our ways of thinking and being and *sustainable developments*, when referring to first-order action-oriented developments that concern simple changes to ways of doing and acting.

Given that the actions/solutions orientation of the sustainability agenda and presence of co-optation are inherent aspects of transition to sustainable society, then an important question arises over how we are to orient towards this reality of entrenchment. With the adoption of a neo-classical economic definition of sustainable development in mainstream and powerful institutions, the concern for many of those who recognise that a need for "retooling" has arrived is that we cannot sit by, waiting idly for a crisis of sufficiently huge dimensions that will shift societal belief systems onto a more appropriate consciousness for the current state of the planet, while the powerful are creating institutions in their own image. As Kuhn recognises, in attempting to negotiate a change in paradigms the argument is circular, since "each group uses its own paradigm to argue in that paradigm's defence" and therefore, "whatever its force, the status of the circular argument is only that of persuasion" (Kuhn, 1996:94).

If, in fact, it is persuasion that determines the decision between competing arguments, then those paradigms that are able to "crowd out" other arguments – by preventing the recognition of anomaly in the current system or reducing the perceived viability of alternatives - are likely to succeed in maintaining their position. However, at the same time we are reminded that first-order changes that crowd-out fundamental transformation of values and beliefs are to be expected. Given the dominance of the current worldview and many of its proponents are we - and here I am locating myself (and therefore the remainder of this work) rather firmly alongside an unknown circus of people who believe in the need for second-order change (catalysts for system transformation, if you like) - are we to throw our hands up and allow changes to bide their time? Or more positively, how am I able to deal with first-order changes

that offer tangible readily visible benefits but that as "green developmentalism" seem to co-opt these other movements, entrench our present dominant worldview and also nullify the hope that exists in a prospect of transformation?

An important perception of co-optation, since the inception of the modern environmental movement (as well as a host of other "new social movements" (Ford, 1999; Sklair, 1997)), has centred upon the role that individual powerful actors have sought to play in ensuring that change to the dominant ontology does not take place. Thus, following Carson's *Silent Spring,* the attempts by the chemical industry first, to de-legitimate her work and then, to offer alternative first-order changes through the Wise-Use movement have been seen as the work of powerful actors protecting their interests (Rowell, 1996).   Again and again this form of backlash or subversion has been identified with the intentional work of powerful actors in shoring up shaky foundations of legitimacy (Beder, 1997; Rowell, 1996; Shiva, 1989; Park, Brydon-Miller, Hall, & Jackson, 1993). The result of this has been that those concerned to enact and encourage an ontological redefinition have either turned away completely from these powerful actors and concentrated upon raising the consciousness of the powerless or have sought to shame and shock powerful monopoly-holding elites into changing behaviour.

2.3   Looking at change and power through the lens of an organic metaphor

These last two are valuable and important ways of orienting to entrenchment and co-optation. However, both seem to be based upon an underlying mechanistic metaphor. The metaphor can be revealed if we look towards the implications for change and power inherent in such positions. With a mechanistic metaphor of a system, operation is based on the place that individual parts occupy within the system; the overall "machine" is suggested to have a fixed design and there is a redundancy of parts (Morgan & Ramirez, 1983). A mechanistic vision of system change would suggest that there must be complete, simultaneous and virtually stepwise transformation of all parts of the system in order to maintain any kind of system operation in a period of change. It would also suggest that the design of the new system is known before system transition. In adopting such an attitude we are likely to view any kind of non-transformational first-order change as inhibiting - getting in the way of - the important work of transformation of consciousness and likely also to isolate belief from action and values from practice.

If "systems catalysts" (Korten, 1987) were to concentrate exclusively upon such a metaphor it could be easily forgotten that we do not yet know what an ecologically sustainable and socially

just society looks like, that system design is in a state of creative emergence. Additionally, power would be conceived in terms of a strictly limited "pie", which has to be shared out within society; the aim of catalytic efforts would be to challenge hegemonic centres of material and knowledge production, in order to appropriate power-resource for the oppressed or for the overall project of ontological transformation. However, such a zero-sum notion of power, even as extended by Lukes' (1974) third dimension, tends to regard the faces of power in solely repressive dimensions.

If we draw upon an organic vision we might also then view persistence (first-order, entrenching developments) (Watzlawick, Weakland, & Fisch, 1974) and change (second-order consciousness transformations) forming a dialectical, generative pattern of interweaving. This then also allows us to adopt a different orientation towards interaction with powerful actors. From the work of psychologists, such as Laing, we have come to realise that since "we cannot give an undistorted account of 'a person' without giving an account of his relation with others" then "all 'identities' require an other: some other in and through relationship with whom self-identity is actualised" and who "fulfils or completes self" (1969: 81-82). The "complementarity" of identity has been expressed in the duality, described by Freire, in which the powerless and oppressed internalise the form of the powerful oppressor (Freire, 1993; Chambers, 1997). A range of postmodern perspectives, taking this definition of identity as existing in relationship, have developed a notion that power is "a network of social boundaries that constrain and enable action for all actors" (Haward 1998 cited in Gaventa & Cornwall, 2001).

An organic metaphor - similar to but more dynamic than the holographic metaphor suggested by Morgan and Ramirez (1983) - permits us to see and accept current redundancy *within* the parts. It would indicate that transformation towards sustainability comes from each of the parts developing self-organising, reflective learning capacities for action, based upon their relationships within the system, simply

> "because creatures in the universe do not come from some place outside it, we can only think of the universe as a place where qualities that will one day bloom are for the present hidden as dimensions of emptiness"(Swimme & Berry, 1992).

Thus, we are able to accept that we do not yet know what an ecologically sustainable and socially just world might look like. By developing alternative concepts and practices of power, such as empowerment coming from within the individual (Rowlands, 1995) or de-centred,

subject-less power consisting of discourse, institutions, actors and a flow of events (Hartsock, 1990; Nelson & Wright, 1995) we can see that

> "power may have a synergistic element, such that action by some enables more action by others. Challenging the boundaries of the possible may in some cases mean that those with relatively less power working collaboratively with others who have more, while in other cases it may direct conflict between the relatively powerful and the relatively powerless." (Gaventa & Cornwall, 2001)

These alternative representations of power suggest then that *as well as* tackling the very real issue of co-optation and entrenchment by powerful actors from an antagonistic external assault, change agents may work from "within", by developing more co-operatively oriented relationships with powerful actors. A consideration of collaborative relationships sits comfortably alongside a range of perspectives coming from more institutionalised expressions of sustainability, such as the importance attached to global partnership in the Agenda 21 documents.

The organic metaphor also suggests that, while distinctions can be made between various levels, depending on our purposes, we might also be able to understand these as fundamentally interrelated. Thus, connectivity between activity at various levels within any particular system, say personal/psychological, may be understood as whole in themselves, at the same time as being part of some other common "wholeness" at wider or narrower system level. Thus, for example, the micro practices of power and repression within the psyche may be considered in relation to discourses and practices of power at institutional levels. In this way the extent to which we open up our definition of the boundaries of an "ecology" can largely be a function of some cocktail of pragmatic, in-the-moment normative concerns.

It also accords with the work on people-centred global social change done by David Korten (1981; 1987) and by Suresh Srivastava and his colleagues (Bilmoria et al., 1995; Cooperrider & Pasmore, 1991b, 1991a; Ludema, Wilmot, & Srivastava, 1997), Morgan's action learning perspective (1983; 1982; 1980; Morgan & Ramirez, 1983; Morgan, 1998), and the on-going inquiries of Peter Reason and William Torbert towards an epistemological transformation of social science (Reason & Torbert, 1999; Torbert, 1976, 2000b).

These various perspectives might be summed up as calling for patterns of reflective, reflexive, on-going, action-oriented inquiry in ecologies of generative, value-laden self-other

relationships, in which a dialectic of the practice and theory of relationship is considered pivotal.

However, according a three-line definition to such a deeply rich metaphor is perhaps a massive (although swift) injustice; in the remainder of the thesis, then, I look to undo such through exploration, engagement and reflection upon two empirical tracks of collaborative relational practice - the relationships between Non-Government Organisations (NGOs) and business and the relationships between "knower" and "known" - in the context of attempts at catalysing transition towards sustainability.

In order to go forward with this I must first take a small step back - backward both in terms of this document and the recent history of Western epistemology.

At the very beginning of this chapter I cited work from the Worldwatch Institute and from the ICSU, concerning the current state of the planet and the human dimensions of environmental change. There was also a citation from the UNDP. The citation of these two sources established the importance and gravity of the problems currently facing the humanity and planet, and by inference the importance of my research. Or did they? To what extent did such evidence as cited there contribute to the sense of solidity of my expertise in conducting and presenting this research? Given that I do not even know what the acronym ICSU stands for, whilst "everyone knows the importance of the United Nations Development Programme", can I be accused of merely playing a game of signification and representation that is academic inquiry? Is "solidity" an appropriate, correct, just or sustainable frame of reference for understanding research inquiry?

The fact that I am asking such questions is placed in the context of the poststructuralist and postmodern challenges to the epistemological certainty of Enlightenment rationality, as well as an emergent participatory worldview. Both of these challenges seem to accord a central role to the relationship between "self" and "other" in the re-conceptualisation of the dominant ontology and epistemology of our time.

2.4   Dominant ontology and epistemology

The ontology that has shaped the world most considerably over the past four hundred years is based upon a dualistic metaphysic in which matter is suggested to give rise to mind (Harman, 1988). Associated with the era of Modernity, the moment at which this worldview came on the

scene and began to dominate and whether in fact the notion of a *single* modernity can be posited is the subject of some discussion (Toulmin, 1990; Wallerstein, 1995). With these caveats in mind, one may suggest that the dominant view of the modern era in the West is one in which there is a single, tangible and real reality that is fragment-able and fully apprehensible (Lincoln & Guba, 1985).

The positivist form of science that has emerged from this ontology has been characterised in a mechanistic metaphor of inquiry; the aim of science is to progressively accumulate knowledge towards the end of uncovering a global Truth or unitary theory (Toulmin, 1996; Tarnas, 1991; Gergen, 1999). According to positivism, while the Truth is fully knowable, in order to achieve *the* answer the dispassionate knower must be distanced from the known such that the level of "interference" in the knowledge determination process can be *controlled* (Lincoln & Guba, 1985). As Richard Tarnas says " modern science is founded on the conviction that if you are to know the world as it is in itself, then you need to cleanse your mind of all human projections, such as meaning and purpose, onto the world" (2000). Since the knower is considered able to transcend the self through the use of appropriate method positivist epistemology makes only a limited connection between power and knowledge; value-free inquiry is seen as both a theoretical possibility and necessity. Additionally, "from Descartes' time on, attention was focused on timeless principles that hold good at all times equally: *the permanent was in, the transitory was out"* (Toulmin, 1990: 34); the axiology of positivism is that "propositional knowledge about the world is an end in itself, is intrinsically valuable" (Lincoln & Guba, 2000).

However, according to Tarnas, the sacredness of scientific objectivism and the very discourse by which academic inquiry has been legitimated over the last four hundred years was called into question by the realisation that emerged, in the wake of relativity theory, that

> "because induction can never render certain general laws, and because scientific knowledge is a product of human interpretive structures that are themselves relative, variable and creatively employed, and finally because an act of observation in some sense produces the objective reality science attempts to explicate, the truths of science are neither absolute nor unequivocally objective" (1991: 359)

While for many this has signified the death of reason, certainty and any solid ground on which to stand, for others this "crisis of representation" has formed an important place from which to mount a critique of the still dominant epistemology and ontology of the present moment.

And more than this, subjecting such meta-narratives to active questioning has come to be seen as a potential source for the elucidation of an alternative ontology or, perhaps more appropriately for the Wittgensteinian "generation", the elucidation of a "family" of ontologies and epistemologies or even, for the Batesonian "mind-system", an "ecology" of ontologies and epistemologies.

2.5   Constructing the world anew

The linguistic turn in social science has mounted a fierce attack upon a plague of dualisms that seem to characterise Enlightenment rationality.   From within this poststructuralist and postmodern frame it has been suggested that reality arises from local and specific cultural interaction in society (Lincoln & Guba, 2000). Truth is constructed in social relations (Gergen, 1999) and is therefore rendered plural; as a result the recourse of positivist science towards objectively attaining *the* truth is revealed as a fallacy. The linguistic turn of postmodernism has told us that the privileged (generally male) voices that made promises of objectivity and truth were perhaps not as all-knowing and all-seeing as we were led to believe. From a place of certainty - or at least promised certainty - we are made aware that our epistemology creates our world; in this way epistemology and ontology have been framed as overlapping domains (Lincoln & Guba, 2000), such that we recognise the way in which we create our world through our knowledge of it. The constructivist attempts to reveal hidden but inevitable lines between knowledge and power that positivism had insisted were not there. Since "postmodernism *suspects* all truth claims of masking and serving particular interests in local, cultural and political struggles" (Richardson, 2000: 929, italics in original) the constructivist worldview suggests that in bringing the authoring process out into the light we are more able to see the way that certain discourses seek to privilege one truth over another (Gergen, 1999).   Doubt is the watchword here.

In order to move on from the modernist "betrayal", one form of the postmodern worldview has gone onto a logical and final conclusion and replaced modernist certainty with the contention that everything, including epistemology, truth and consciousness, is culturally constructed. Whilst the suspicion of meta-narrative from the linguistic turn provides an important scepticism upon reified discourses, it has often been pointed out that the very positing of a lack of unified discourse by deconstructivists is itself an attempt at an overarching discourse (Gergen, 1991; Spretnak, 1991). Moreover, at worst, such a position seems to ignore the very real existence of ecological destruction and social injustice that people and species experience (rather than think about) in their daily lives (the existence and perception of which

arguably led to a need for a deconstruction of the modernist grand narrative). From a position that argues that "all knowledge is so epistemologically compromised that it is impossible to know or do anything about anything" the result is a "nihilistic self removal from the field of social engagement" (Greenwood & Levin, 2000). Like the positivist worldview matter and mind remain separated, although the deconstructivist position ends up reversing the separation by emphasising the ultimate dominance of the human mind over matter (Reason, 2000).

2.6   Experiencing the world anew: a participatory worldview

The perception of the importance of multiplicity of voice and revelation of the fallacy of transcendental objectivism is not as *post*modern as we might think. Ancient Jain philosophy developed the doctrine of *anekant* (many-sidedness or manifold aspects) as a reminder of the incredibly rich and complex nature of reality. This attitude to the world suggests that, because of the "beginningless past and the endless future, a common person cannot perceive the innumerable qualities and infinite modes of an entity (*sat, dravya)*. At a single moment he/she can be aware of one or few qualities and modes of the substance" (2001). However, unlike the deconstructive postmodern position, Jain philosophy is grounded in an appreciation of the universe and world as the sensory basis for *anekant*. The corresponding doctrine of *ahimsa* goes further, by positing the need for an ethic and practice of non-violence towards the human and more-than-human world, in recognition of the deep interconnectedness of the cosmos.

Building upon such wisdom from the ancient spiritual traditions of the East, another response to the discovery of modernist illusion has matured to provide a more organic and animate metaphor for the world/universe and our place in it. As well as drawing upon Jain, Buddhist and Hindu philosophy, the movement finds alternative ways of experiencing and knowing reality from native and indigenous peoples, female archetypes (for example see Shiva, 1989; Spretnak, 1991), as well as integrating some of the directions coming from the forefront of modern science (such as complexity theory, physics and systems theory), philosophy (Swimme & Berry, 1992; Berry, 1988; Capra, 1982; Cilliers, 1998) and the linguistic turn of the postmodern. While the essence of this ontology probably comes through far more strongly in the felt experience of the individual, it may be described as a reality in which there is deep and systemic connection between all the parts of a greater whole, and where interaction between parts, that are at once independent, differentiated and interdependent (and in themselves whole), creates autopoetic tendencies from which new forms and order are in continuous emergence across multiple "times".

It seems to me that there is considerable resonance between the sustainability agenda and the umbrella of such a participatory worldview[1]. The mutual amplification is one in which there is a notion of significant presence beyond the human world but in which the human self is also a "creative intelligent nexus embedded in the larger context of the *anima mundi*" (the world soul) (Tarnas, 2000). Such a participatory view of the universe has been promoted by the developing understanding across a range of academic disciplines (including physics - a previous stalwart of dualistic ontology now turned guerrilla warrior) that there is deep interconnection in the universe (Prigogine & Stengers, 1984; Spretnak, 1991; Swimme & Berry, 1992; Elgin, 2001). The forging of an understanding of the centrality of relationship in the universe has also come from the part of the deep ecology movement that, through science, reaffirmed the notion of a living Gaia (for example Lovelock, 1979). There has been a growing appreciation of the spiritual dimension of the interconnection in the universe, as the West has come to draw upon Jain, Hindu and Buddhist wisdom and the creation centred Christian tradition (Macy, Gomes, & Kremer, 2000; Fox, 1983). And the personal-societal dimension of this universe and ecological connection has been made by eco-psychology, which "proceeds from the assumption that at its deepest level the psyche remains sympathetically bound to the Earth that mothered us into existence" (Roszak, 1995).

Whilst these particular "discourses" may also be subject to radical deconstruction, the sensuous experiences upon which such interconnection and participation has been "constructed" seems harder to put down to a turn in our language (Spretnak, 1991; Shiva, 2000). David Abram describes Merleau-Ponty's phenomenology as an approach to language that has its source in a carnal field of participation - for example the ground we stand - that "subtends the strictly human universe of instituted and inert meanings…which can never be grasped in a purely human act of comprehension for it has, from the start, been constituted (or "constructed") by many organic entities besides ourselves" (1996: 281). So, instead of sensing and thinking that mind and matter exist separately, this (re)newed understanding of the universe and world tells us that mind is immanent in the whole (Bateson, 1972) - a whole which includes the more-than-human world. We live in an alive, animated and spiritual universe in which difference and differentiation render a creative complex of forces that are continually destructive and creative. The boundaries that we have been drawing and still draw are ephemeral and fragment in ways that we are now seeing as artificial and reified.

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[1] I wonder whether "worldview" is the right word in the context of what is, following the linguistic turn, much less a picture of the world as a way of looking and acting within and alongside it. Perhaps then we could call it a participatory "world-tool", or "world-lens" or, most poetically "world-kaleidoscope".

2.7   Relational praxis and sustainability

An important aspect of this participatory worldview, then, regards the acknowledgement of relationship; in contrast to the tendency of the positivist to elevate the parts to centre stage, the organic metaphor of the constructivist and participatory worldviews help to shift our attention away from an isolating interest in the parts towards a (re)consideration of relationship as a central organising and sense making nexus.

In the context of sustainability, the associations between the social, environmental and economic domains and between the global consciousness and the local action have, at the same time, allowed and required us to conceive of the challenges and problems in a more complex pastiche of lights. For some, the human rights abuses and subsequent assassinations of environmental activist and writer Ken-Saro-Wiwa in Nigeria and environmentalist/trade unionist Chico Mendes in Brazil brought home the deep interconnection between these different, previously unconnected domains (Rowell, 1996). Additionally, the emergence of truly global environmental problems has also had the effect of shifting the perceived channels through and artificial boundaries across which problems could be addressed (Cairncross, 1991). Meanwhile, the (re)emergence of systemic understanding in the light of complexity has spurred the recognition that single parties no longer possess sufficient ability to comprehend situations that involve multiple perspectives, causalities and effects (Allen, , 1988) and also that it may be possible to facilitate accelerated learning within the system, working at a micro level for macro-transformation.

Agenda 21, like other institutionalised expressions of sustainability such as the Bruntland report, suggested that generative relationships were figural in the transition towards sustainability, positing that "no nation can secure its future alone; but together we can: in a global partnership for sustainable development." (Agenda 21, 1992: Chapter 1). An important aspect of the increased acceptance of the need for and value in partnerships is, as Murphy states, "the assertion that global partnership would only be effective if based upon new levels of co-operation between *all* key sectors and government" (Murphy, 1998: 1, italics mine). Agents of social transformation have seen, in the emergent understandings of deep interconnectivity and relationality, that "more of the same" fragmentation will not work. Some have framed this in terms of the need for collaboration with powerful actors in order to foster or catalyse second-order learning from an appreciative, rather than purely antagonistic stance; a stance in which generative learning processes between "self" and "other" are required. The challenges of catalysis, however, do not seem simple.

Whilst sustainability is replete with complex uncertainties, paradoxes and challenges of social and environmental change, the lack of firmness in our propensity for sustainability and participation (as opposed to destruction and fragmentation) in many of our relationships and, more significantly, the unknown nature of what it is that we are striving for afflicts everyone. We are all tainted by a fragmented epistemology, if by nothing else, then by association. The implication is that we must somehow all engage in this becoming. Agents who are seeking to transform our ways of being are challenged with the sense of urgency that seems to abound, alongside the important realisation that even they require time and attention for an up-building learning process, whereby "what they know" and "how they know" can "ongoing-ly" be challenged by the process of ontological metamorphosis that is being enacted.

In the light of the kind of organic/holographic metaphor that I have been working with in this chapter, I move into the rest of this thesis to look at two groups of relational practice - the relationships between NGOs and businesses and the relationships between knower and known in inquiry. I explore the experiences (challenges, paradoxes, serious play and more) of, and in the case of the inquiry relationships to also try and exhibit, the dialectical constitution of system development and transformation through collaborative engagement with powerful actors in transition towards sustainability. Throughout I consider these relational practices by interweaving between personal, organisational and social levels of reflection and action and returning constantly to the touchstones of change, participation and power.

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