The Ecology
Of Adventure

David Key

DECLARATION

This thesis is the original work of the author and has not been presented for any other qualification.

No part of this work has been developed from earlier research.

CONTENTS

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THE ECOLOGY OF ADVENTURE
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ABSTRACT

Outdoor adventure experiences can cause personal transformations toward pro-environmental behaviour. Such experiences are comprised of experiential elements that can be actively facilitated as part of an outdoor programme seeking ecological education outcomes.

A descriptive account of the author's personal experience generates a series of questions about the transformative power of outdoor adventure pursuits toward pro-environmental behaviour. These questions are explored through examples from literature of how outdoor adventure experiences have had similar outcomes in others in both recreational and educational contexts. Further accounts offer similarities with experiences and theories from a wider context, and these are also explored to provide deeper insight as to the nature and content of transformative experiences *per se*.

From this enquiry process, themes are drawn which suggest that transformative experiences with pro-environmental outcomes can be delivered through outdoor adventure education. These themes are then used to suggest a tentative model for the design and delivery of ecological education in the outdoor adventure education context.

This model is compared and contrasted against other ecological education and therapeutic approaches and conclusions drawn about ecological education's possible future development. Finally, suggestions are made as to additional research needed to further support this thesis.

from the pine tree
learn of the pine tree
and from the bamboo
of the bamboo

BASHO

'...the real truth of philosophy is accomplished, not when we arrive at, but when we remain in, our destination (being already there) - which may occur vicariously in this life when we cease our intellectual questioning'

J. A. SYMONDS

ecology, *the study of ecosystems where ecosystems are, a recognisable ecological system, comprising both living organisms and the non-living environment interacting with one another, defined over a particular area.*
(Diesendorf and Hamilton: 1997)

adventure, *a variety of self-initiated activities utilizing an interaction with the natural environment that contain elements of real or apparent danger, in which the outcomes, while uncertain, are influenced by the skills of the participant and circumstances.*
(Ewert: 1989)

SECTION ONE

GENERAL INTRODUCTION

CHAPTER ONE: ON BECOMING ROCK

We arrived at our campsite in the Yosemite Valley in the late afternoon of a clear-blue September day. It had been a dream to climb here, and now here we were - set deep in the heart of a world of sheer granite and giant redwoods.

The excitement was too much, and rather than set up our camp and rest after a long day of travelling, we opted instead to climb. A short easy route would surely set us up perfectly for the weeks climbing ahead?

It was the second to last pitch of the climb and I had just finished leading a section of about 40 metres of the most enjoyable climbing I'd ever experienced. I had been forced to stop my ascent because I had run out of rope - I was so absorbed in the climbing that I hadn't noticed this until the line became tight at my harness. I down-climbed a few metres to give myself enough rope to rig an anchor and there I set up a hanging belay, sitting in my harness adrift in a vast ocean of pale, warm rock.

After about ten minutes of belaying, I found myself looking across to the cliffs on the opposite side of the valley. I was seeking out shapes formed as the patterns of shadow changed with the setting sun. As the sun finally dipped below the cliff top, leaving a translucent hallow of pale yellow light arching above the horizon, I suddenly felt myself falling.

This sensation of movement only lasted a very short time before I realised I wasn't falling at all, but the rock face on the opposite side of the valley seemed to be hinging backwards from it's base, like the scenery on a poorly constructed stage set. I looked away, rubbed my eyes with the back of my hand, and re-focused. The rock face was still moving, it was moving away from me and, yet it was still where it had always been.

Next, I felt this incredible wave of warmth, like diving into a tropical sea. It ran right over me from head to toe. This was followed by a feeling of intense calm, my muscles seemed to relax to nothing, I could feel no tension anywhere in my body. As I became aware of this calmness I felt myself fall again, this time alarmingly backwards into the rock, *merging* with the rock face behind me. I *melted* into it, and I was suddenly aware that I was no longer a separate human form perched high on a granite wall – I *was* the granite wall. I could not feel myself as separate. This merging felt like continual movement, it was a sensation like swimming and the awareness of moving through liquid was very strong, although I had no concept of the surface of my skin.

I felt a sharp intense pain in my right quadricep, a hot needle of pain that seemed to burrow through to the bone. This had the effect of waking me up, an awkward term because I was not asleep, I was fully aware the whole time, in fact I felt intensely aware – the opposite of sleep. The burning sensation was a tear that had fallen from my cheek and landed on the skin of my bare leg. I was, by now, crying.

My state was different now, there was no melting into the rock and the valley walls were solid and static. But I was infused with a feeling of incredible calm, I felt elated beyond description, I was in tears of joy. I had the notion that I could easily untie the ropes and climb away without danger. I was immortal and it felt like there was no greater experience of life beyond the experience I had just had. In short, I could have died and it would have been perfectly alright.

CHAPTER TWO: QUESTIONS

It was two years later, in 1996, that I first told this story. My silence was driven by a deep embarrassment, people don't "melt into rock", as a rule. Experiences like this have rational explanations and scientific bases… or they are religious… or madness. I was no scientist, an atheist, no religious mystic and not, as far as I was aware, mad. What had happened to me had no place in my own world, it fitted no structure, could take no form - it made no sense. What else could be done but to keep quiet and try to forget about it? But it's not the kind of thing that is easy to push out of one's mind. It sticks with you, haunts you and is, ecstatic, obsessive and addictive.

I chose to tell this story first to a group of seven rock climbers. I felt one or two might understand and I was surprised to find that they *all* understood - all had enjoyed similar experiences. Excitingly, they also had their various explanations. As madness had become the only option left on the list, I felt relieved to say the least.

Releasing myself from the silence set me off on a new adventure – a journey of uncertainty into a great body of literature. I wanted to find other peoples accounts of, and explanations for, experiences like my own. So off I went, with two key questions firmly in mind:

1. Have other people written about experiences similar to my own?

2. What explanations are there for these kinds of experiences?

As I became more conscious of the quest, as I gave myself permission to explore instead of deny, I realised how radically my life had changed during that two-year silence. I had become very much less materialistic, was no longer interested in status or approval from the "powers that be"[1], my politics had changed to a more humanistic orientation, I found it intensely difficult to wear a collar and tie or formal clothes, and I had changed career from the commercial sector to outdoor education. Even my physical appearance had radically changed. But most significantly of all I had become acutely aware of my impact on the Earth and I had sought to make my life fit within the Earth's limits.

These shifts could be due to many things, but I knew that these things were mostly responses to having to adjust my worldview to make room for the kind of experience I had encountered there in Yosemite. Further, I had encountered more of these experiences since then and they were having a cumulative effect - the changes to aspects of my life were increasing. My career shifted again from outdoor education *per se*, to outdoor-based environmental education and two further questions emerged from my exploration. On the basis that these types of experiences seemed to have transformed my own life toward an ecologically sustainable lifestyle:

3. Can outdoor adventure experiences be transformative towards pro-environmental behaviour?

4. If so, how can they inform ecological education[2] design and delivery?

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[1]   This term is used generically although its relation to the work of Eric Fromm is notable in this context.

[2] The term "ecological education" refers to learning about the *interrelational* nature of the world of which humans are an integral part. This is metaphysically different to "environmental education" which treats "the world" as an objectified, "stage set" on which human activity is played out and which is observed and learned about as if separate from humans.

This thesis is a formal exploration of these four questions, which are significant in numerous spheres of concern simultaneously. They are part of my own continuing personal development process; they inquire into the heart of psychology and the notion of the "self"; they explore the processes of personal transformation and they challenge the boundaries of many conventional epistemologies. Further, from these questions lesson emerge about the nature of learning itself, and about how to create educational approaches that meet the challenge of living within the ecological limits of our planet.

But these questions also churn up the muddy silt of metaphysics, dive into the oceanic listlessness of subjectivism, and even, potentially, undermine the very idea of rational enquiry as it is known in the techno-scientific culture of industrial societies.

It is necessary then, to choose a vehicle in which to undertake the journey ahead, one that will allow the enquiry to progress without prescribing the destination or limiting the possibilities. The next section takes a look at the methods, and the methodological foundations upon which these methods are based, to provide this vehicle and to allow the journey to begin.

> *'Positivism and all the current structure of science cannot save us from the fact that all knowledge is uncertain, involves risk, and is grasped and comprehended only through the deep, personal commitment of a disciplined search.'*
> (Polanyi: 1958).

Method

I suggested previously that the last option available to me, if I was to allow the experience described in the story to become part of my life, was to believe I was mad! But perhaps there is a method to madness after all? This thesis is a formal enquiry into what I once thought might be a form of madness and, sure enough, a method has emerged.

Having already written an account of the experience that triggered my initial two questions and having identified two further questions as a result of the changes in my life catalysed by this experience, the logical method from this point is:

1. To record further similar narratives of my own and seek out those of others through a review of literature.

2. To explore the theories built around these narratives through literature review and analysis of my own experiential accounts.

3. To summarise the results of this exploration in the context of personal transformation towards pro-environmental behaviour.

4. To draw out any distinct themes that could inform the design and delivery of ecological educational.

5. To tentatively suggest a model based on these themes.

6. To compare the emergent model with existing ecological education theory and approaches.

7. To draw any salient conclusions.

Methodology

The method is primarily based on a "Grounded Theory" methodology (Glaser and Strauss: 1967), where a tentative theory or model is drawn in dynamic interaction with the ongoing process of enquiry so that, "generating theory and doing social research [are] two parts of the same process" (Glaser: 1978).

The process is given "grit and pith" (White: 2001) by a triangulation of techniques. These combine aspects of "ethnography" (Wolcott, 1994 in (Creswell: 1998), through selected accounts of "Personal Lived-experience" (Van Manen: 1990) by the author, and through an exploration of the body of literature treating it as the "field text" of a "Narrative Enquiry" (Clandinin and Connelly: 2000).

Interpretation of these collected narratives is through the study of the meanings attached to the various observed phenomena in the tradition of "Phenomenology" and "Hermeneutics" (Merleau-Ponty: 1962; Heidegger: 1962; Crotty: 1998) This analysis simultaneously provides an opportunity for critical reflection toward both the main aim of the thesis – to propose a model - and toward the inherent personal development goals of the author.

These techniques are further informed by the qualitative elements of the methodologies of Joy Palmer and Jennifer Suggate *et al*, in their study of "Significant Influences and Formative Experiences on the Development of Adults' Environmental Awareness", and of Thomas Tanner and Louise Chawla in their various studies referred to broadly as 'Significant Life Experience' (SLE) research (Tanner: 1980; Palmer, Suggate et al: 1998) (Chawla: 1998). The concept of seeking consensus on the reality of lived experience is drawn from phenomenologist Edmund Husserl and his work on "intersubjectivity" and consensus based metaphysics (Husserl, Elliston et al: 1981).

This methodological basket of approaches allows both the experiences described in the writing and the writing process itself to be legitimate parts of the body of data from which theory can be drawn. Acknowledging that the process of writing something down is both an abstraction of an experience but also a valid part of the experience itself - as it allows critical reflection as part of a learning process (Kolb: 1984) - is important to maintain the dynamic flow of interaction between the data, the research process, and the emergent model.

This "integral" triangulation approach (Braud and Andersen: 1998) has also been chosen to address difficult epistemological issues which are fundamental to the subject of ecological education itself, and which are discussed in the formation of the model and in the final conclusion. This methodology is one that suggests a gestalt quality to being - a *'gestalt ontology'* where experiences are believed to be made up of both *'concrete contents'* (Heidegger's *'Dasien'*) (Heidegger: 1962) and *'abstract concepts'*, and to display qualities that are only maintained so long as those experiences remain relationally complete. Drawing findings from such complex whole or *'field-like'* experiences (Naess: 1989) can be done through the use of themes, which hint at important structural components without destroying the integrity of the experience as whole (Van Manen: 1990).

It is interpreting these themes (adding etymology, a further triangulation element, to the methodology) that provides the structure for proposing a tentative model - one built on synthesis and a dynamic interaction with the research process in the true tradition of Grounded Theory.

This tentative model in place, the final methodological component is a comparative analysis through a further review of literature, this time specifically pertaining to ecological education, where the emergent model is explored against the backdrop of other extant educational and, as it turns out, therapeutic approaches.

The experience that started this whole enquiry was of rock climbing. It is logical then, to start my search with narratives drawn from others who have had similar experiences while rock climbing.

SECTION TWO

REVIEW OF LITERATURE & NARRATIVES

Flow Experience

The first material I came across to validate and explain my own experiences came from Mihaly and Isabella Csikszentmihalyi (1990) in their work on "flow experience". Their research included interviews with rock climbers who reported similar experiences to my own:

> *Hours may seem to pass by in minutes, or the intensity of the concentration and the heightened awareness may give seconds a feeling of incredible depth and infinity. This lack of preoccupation with the self, this loss of self-consciousness paradoxically allows people to expand their self-concept.*

Further that:

> *…one stops being aware of oneself as separate from what is being engaged in.*

Another climber reports:

> *You are so involved in what you are doing [that] you aren't thinking of yourself as separate from the immediate activity… you don't see yourself as separate from what you are doing.*

The Csikszentmihalyis' propose that these accounts describe "a state of experience that is engrossing, intrinsically rewarding, and outside the parameters of worry and boredom".

They state:

> *In our studies, we have found that people involved in adventurous pursuits such as rock climbing, solo long-distance sailing, polar explorations, spelunking [pot-holing] and a variety of similar endeavours, report a state of optimal experience we have called flow.*

They go on to outline four characteristics that make up a "flow experience", the first is:

> *A person in flow knows clearly what must be done, and gets quick feedback about how well he or she is doing…. The many ambiguities of everyday life are banished… Action and reaction have become so well synchronised that the resulting behaviour is automatic…*

The second characteristic suggests that:

> *A person in flow has no dualistic perspective: There is awareness of the actions but not of the awareness itself… one stops being aware of oneself as separate from what is being engaged in…*

Quoting from one of the studies' subjects:

> *… Your body is awake all over… Your energy is flowing very smoothly. You feel relaxed, comfortable, and energetic.*

The previous two characteristics are described as a "merging of action and awareness" made possible by the third condition, which is:

> *A centering of attention on a limited stimulus field… that is to say, one's consciousness is "narrowed" so that irrelevant stimuli are excluded.*

A rock climber subject reports:

> *…Once you're into the situation, it's incredibly real, and you're very much in charge of it. It becomes your total world.*

The fourth characteristic is "often described as 'loss of ego' and 'self-forgetfulness'", where:

> *… in some situations a person may lose touch with personal physical reality, in others there may be a heightened awareness of internal processes.*

Suggesting that:

> *What is usually lost in flow is not the awareness of one's body or one's functions, but only the self **construct**, the "I" as the actor or intermediary that a person learns to interpose between stimulus and response.* (Csikszentmihalyis' emphasis)

This work on "Adventure and Flow Experience" was derived from more generic, earlier psychological research on boredom and anxiety and "optimal experience" (Csikszentmihalyi, M.: 1975; Csikszentmihalyi, M. and Csikszentmihalyi:1988). The Csikszentimahalyis' findings were developed more deeply into the field of adventure-based learning by Simon Priest and Peter Martin (1986) with their work on "The Adventure Experience Paradigm". In his summary of this work, Simon Priest (1990) notes that this "paradigm" is based on the work of Ellis (1973), Csikszentmihalyi (1975) and Mortlock (1984). In his summation he proposes a model for understanding flow whereby a relationship is identified between:

> *...risk (the potential to lose something of value) and competence (a synergy of skill, knowledge, attitude, behaviour, confidence, and experiences).*

When these two relational factors are at optimal levels – where an individual's level of competence matches perfectly with their assessment of the risk in a given adventure activity – the participant will experience "optimal arousal", or flow as it has already been described. What is important about this "paradigm" is the inference that these kinds of experiences are a simple equation of two axes that can be balanced deliberately. But this is to hide the real ambiguity in the term "competence" which appears to contain numerous amalgamated elements that could easily have significant effects in their own rights. Never-the-less, at the time I discovered it, the model provided a useful framework that seemed to explain that day in Yosemite and subsequent personal experiences.

Beyond Adventure

After a sea-kayaking trip in New Zealand in 1998 I wrote:

> *We had been paddling for several hours on a cool windless day when I found myself behind a small island closed into a rocky bay overhung with native bush. I was alone, my partner somewhere up ahead, and I was totally relaxed, absorbed in the simple mechanics of paddling along.*
>
> *I wasn't really paying much attention to anything when I held my paddle away from the waters surface and waited for the ripples to disappear. As the water's surface calmed to nothing I suddenly found myself staring down into absolute crystal clear water. I could easily see the bottom, a broken mass of huge dark boulders. In places the depths receded to a deep black-green abyss. As I adjusted my eyes in an attempt to peer more closely at what lay underneath me, I lost the visual reference point provided by the water's surface and found myself 'flying' above the lake floor. At first I jumped like I had been knocked off balance, generating a tiny pattern of concentric circles that flowed slowly away from my kayak as a perfect footprint of the*

hull. But then I waited and the ripples again dispersed to nothing. This time I was ready for flight but as the sensation returned, I was surprised by the outcome...

It was as if I was somehow attached to the lake floor, like I was suspended above it on a pole, like the horses on a traditional merry-go-round. I felt like I was sitting on something solid and I was aware that there was no way I could tip the kayak over. I was anchored there in space. This felt extremely good, euphoric. There was also a feeling of intense exhilaration, like the moment before diving into a cold river off high rocks - a kind of fearful excitement.

This all seemed to last an eternity and I completely lost myself in the experience. It was like being absorbed in some highly delicate task. Eventually the sensation of being fixed to the lake bed dissipated and I felt that if I should move too quickly I would, in fact, fall to the bottom of the lake.

As I carefully twisted around examining the ground I was flying over, the tip of my paddle contacted the glass water, and I was immediately grounded, back on the surface of the lake. I felt elated and I paddled on with a feeling like I had seen behind some secret doorway, like I had been party to knowledge that was privileged. I felt like I belonged to something, but that this 'something' was way beyond my comprehension. It was a feeling of excitement mixed with the genuine fear of unknown things.

In his book "Beyond Adventure", Colin Mortlock (2001) - whose earlier work on "Peak Adventure" (1984) had partly informed the ideas behind "The Adventure Experience Paradigm" - gives several accounts similar to my own, he writes:

One afternoon, I was returning from a 10 mile training paddle in easy conditions on the north end of the lake. As usual, I was pleased to be in the boat, which I regarded almost as home, but I was very tired from the exertions. With about a mile to go, something happened which was never to happen again. I suddenly flowed. Water, paddle and I merged. Movement felt completely effortless. As I came into shore, onlookers commented on my paddling. Somehow they sensed that something special had occurred.

Later, while undertaking a long solo Sea Kayaking journey in Alaska he writes:

You are in a kayak on a journey along an exposed and wild coastline. You boat has a keel only just below the surface, which means there is always a high possibility of a capsize. As you paddle along, the balance of you and your boat are strongly affected by the wide range of different sea conditions. You react accordingly in terms of practical actions, always trying to keep the boat upright. Then, somehow and inexplicably, your kayak is given a keel so deep that it has no base. You have become completely stable. This idea is, of course, practically ridiculous, but I am referring to your psychological state.

The similarities are quite remarkable and largely speak for themselves, and both Mortlock's account and that of my own can be rationally explained through the notion of the "Adventure Experience Paradigm". In both cases adventurous activities were being undertaken where personal competence could be seen to be in balance with a level of inherent risk, creating the predicted experience of flow.

However, having written about this kind of psychological model in 1984, Mortlock had subsequently realised there was considerably more to his own experiences than could be accommodated in a simple two-dimensional dynamic. He had essentially come up hard against the ambiguity embedded in both the terms "risk" and "competence". The title of his book "**Beyond** Adventure" (emphasis added) supports this realisation. There is more to these kinds of experiences – beyond rational models of risk and competence.

Some years after coming across this work on adventure and flow, I had another experience that pushed my own boundaries of enquiry well "beyond adventure" too:

> *The sun was low sinking into the hills behind the beach. As it dipped finally below the horizon the sunlight split into a fan of sunbeams, bursting the sky in a spectrum of rich pinks. The clouds in turn passed this light show to the sea below them, drenching the deep blue-green waves in a dense purple.*
>
> *I was aware of coming to notice this spectacle as it occurred in real time but then this awareness stopped. I could no longer hear the waves. There was no sensation of the creeping cold from my skin. I can't even remember if I was breathing or not. I felt immensely calm… and that is the last thing I can remember.*
>
> *Next I am 'waking up'. My feet had sunk almost to the knees in the soft sand where I had been standing on the edge of the Pacific Ocean. I felt ecstatic, wild with excitement, once again I had that feeling of having left my own skin and travelled out into some kind of ethereal place - it was exactly like that day in Yosemite.*

Everything in Priest and Martin's idea of flow – risk and competence – and in the conditions and characteristics from which this model was derived, discussed earlier in the work of Mihaly and Isabella Selega Csikszentmihalyi, were present that day in Yosemite, and could be seen in the narratives of sea kayaking. But *none* of those conditions were present there on that New Zealand South Island beach. How much competence is needed to stand on a beach? How much risk is involved?

Several important points can be raised about the material presented so far. As you might expect in a scientific industrial culture the tendency is to explain all phenomena in largely scientific terms. These experiences can be formulated conveniently using relational elements that we understand in present terms and which can, seemingly, be clearly defined. Risk is simply a set of physical circumstances while competence can be measured in rock climbing grades and climbing wall competition results; through the grading of river rapids and; through the quantification of mountain experiences by measuring the altitudes reached. But even in seeking this culturally acceptable basis, Priest qualifies competence as being made up of numerous highly subjective ingredients. Further, in gathering data from various subjects, the language - which is of a psycho-spiritual nature in many cases - is ignored, except for seeking to spot the common elements that inform the model.

In short, the content of the participants' accounts is secondary to the primary concern of establishing that these experiences are genuine and that they can be explained rationally.

Looking more closely at the type of language used, John Miles (1995) writes that wilderness experiences can lead to:

> *….a sense of union with nature, which may lead to a sense of being at one with the universe, a highly desirable spiritual condition…*

This leads directly to questions about the role of the physical environment - beyond it's function as a provider of risk conditions or as a catalyst for physical performance. Miles is writing here about "Wilderness as Healing Place", where healing is not, "referring to its usual meaning as applied to our physical selves but to a process involving the physical, emotional, and even spiritual dimensions."

He concludes that wilderness "can be an antidote to the irritability and stress that comes with attention overload in daily life." That it "can lead to reduction of the compulsion to control" where, "people can be helped to cope with the contrasting conditions of alienation and anomie", which may "improve a person's ability to

learn", allowing "insight into the challenges back home" with a "consequent enhancement of self-image and confidence", and finally that, "we need contact with nature to be fully functioning humans."

Miles (1995) writes, of work done by Kaplan and Talbot (1983) that their

> *conclusions that people find experiences in natural environments highly satisfying and that they highly value the benefits which they perceive themselves to derive from experiences there…*

are "…less-than-startling".

Certainly there is much evidence to support his cynicism as, for example, Britain's busiest national park (the Peak District) received 22 million day visits in 2001 alone (UK Government Statistics Office: 2002).

Miles takes us away from the rarefied concept of flow by referring to differences between the arguments of Richard Mitchell (1983), and Kaplan and Talbot observing:

> *Mitchell… argues that it is the act of climbing that creates the flow experience, while Kaplan and Talbot suggest that the environment is the principle factor.*

What we are seeing here is a departure from the simple rational model, which is egocentric in that it focuses on the condition of the subject (supported in this example by Mitchell), towards one that implicates the environment itself as the primary affective factor. In short, we are moving away from adventure *per se* towards the wild contexts in which these adventures take place, and thus towards a broader relational conception of the outdoor adventure experience.

With this focal shift Mile's draws attention to Bacon's research with Outward Bound based on Jung's idea of archetypes, where patterns of understanding are partly embedded outside the popular psychological model of the individually bound ego. Miles suggests that, "one such pattern of archetype is Sacred Space" and quotes Bacon writing:

> *Anyone who has spent much time in the wilderness can easily recognise the parallels between it and the archetype of Sacred Space. Wilderness is difficult to get to and difficult to travel through. One passes a series of tests in order to exist within it. It is unlike the normal world in hundreds of ways. Above all, it pervades one with a kind of religiosity or mysticism – one of the most compelling things about nature is that it seems to implicitly suggest the existence of order and meaning.*
> (Bacon in Miles: 1995)

As we move away from the ego-bound adventurer and out into the landscape we also move, significantly, into the realm of "Sacred Space", "mysticism", and of spirituality. Notice here how we have gone from a "narrowing of consciousness" in the Csikszentmihalyis' terms, to a consciousness that is now informed largely by the wider physical environment and, importantly, by its metaphysical, archetypal aspects.

Robert Greenway (1996), in his research on the "Wilderness Effect" on groups of graduate students in North America records, from one participants account:

> *And then, without quite knowing how it happened, distance disappeared and there was an openness into ourselves that was an openness to each other, that embraced the pool, the river, and farther out into the wilderness, the "other world", the whole Earth, the universe.*

Notice the interesting contradiction that the "openness into ourselves" was also, "an openness to each other", and that this "openness", "embraced" the physical environment and elements that were termed "other world". This is very important as it suggests a conflict with the concepts of dualism that are rife in modern psychology and form the bedrock of such theories as the "Adventure Paradigm". The "openness" went perceptually both in and out, embraced both physical human and non-human elements and further, included metaphysical notions as well as reference to the largest physically whole system known to human science – the "universe".

In a study by Stringer and McAvoy (1995) looking at "Spirituality and Wilderness Adventure", the authors ask participants to give their own personal definitions of "spirituality" prior to undertaking a wilderness journey. This done, the subjects are then asked to recount their experiences, exploring them for content that met their personal predefinitions of being "spiritual". Participants' definitions included comments such as:

> I'll call it [spirituality] the life force which is common to everything – plant, animal, rock, bird… A definition for me would be connecting, feeling literally and intellectually a connection with that life force.

And…

> It's a sense of wholeness and being at one with everything that's around me, both with the people and the natural world.

Stringer and MacAvoy add:

> Most went on to say… that their opportunities to experience their spirituality were greatly increased while in the wilderness and that being in wilderness enhanced those experiences.

In discussing the outcomes of wilderness experience, one participant writes:

> I don't think you can experience the raw power of nature… without realising that there really are powers much beyond what you can even articulate and understand.

This study, like Greenway's, includes much important material for the educational questions posed in this project and we will return to it later. For now I wish to make the point that here within the relatively narrow field of outdoor adventure there are accounts of experiences that are very similar in content to my own. Further, that these experiences are explained away in a spectrum from the rational "flow" of clinical psychology, through the algorithmic, "Priestian" reductionism of the "Adventure Experience Paradigm" and on into less rational, more transpersonal terminology.

Outdoor Experiences & Pro-environmental Transformation

As I have stated earlier, my own experiences - which are descriptively similar to those given in relation to flow experience - transformed my personal attitudes and behaviour toward pro-environmental activism. But there is also a great deal of material to support the idea that outdoor experiences that are not so evidently dramatic, play an important role in moulding our environmental attitudes and behaviour. This suggests that there is a continuum of potential change with some experiences being very intense and revelatory and others being much more subtle, even sub-conscious. Similarly, the outcomes of these experiences can be sudden

radical shifts in behaviour, or a slow realisation, perhaps over many years, with behavioural change being equally subtle.

Joy Palmer and Jennifer Suggate *et al* (1998), in a study done on the "Development of Adults' Environmental Awareness" across nine countries, involving some 1259 individuals report that:

> … *it is clear that direct experiences of the natural world affected over half the respondents and was the most influential group of factors.*

Interestingly, they also point out that:

> *The effects of people, education and negative experiences were comparatively similar, being mentioned by between 38 and 40%.*

But they conclude:

> *Cleary the most important single factor by far was childhood experiences of nature.*

Adding:

> *Such experiences were most important in Australia and Canada with over 80% of the respondents giving them, whereas in Hong Kong they were given by only 37%.*

This latter point suggests that, while the influence of direct experiences of nature in childhood are critical in the development of environmental awareness, there are some definite culturally bound influences.

Palmer (1992) also showed in an earlier survey of 232 environmental educators that outdoor experiences had been the primary influence on their development of pro-environmental behaviour

In the body of outdoor education literature there are a number of useful sources for exploring the pro-environmental outcomes of experiences of natural environments, that is to say, for exploring the environmental education outcomes of outdoor education.

Outdoor educator Geoff Cooper (1994) suggests:

> *Direct contact with the natural environment, particularly in challenging situations, can be inspirational and lead to feelings of belonging or oneness with the earth.*

In writing about the role of "solo" experiences in outdoor environmental education, Richard Gibbens (1991) concludes:

> *Getting children down to earth, with their hands literally on the marvel and mystery of creation, would seem to be a pre-requisite for any kind of ecological sanity emerging from today's young people.*

Nicky Duenkel and Harvey Scott (1994) write:

> *Wilderness travel experiences… allow participants to interact and regain a sense of connection with nature in ways which enable an understanding of how powerfully the Earth influences daily actions and how, in turn, we are influencing the planet.*

They go on to propose several potential outcomes of wilderness experiences that can be enhanced by outdoor leaders, including:

> *Dispelling the myth of dualism and encouraging the feeling that humans are a part of, and not apart from, the natural world…developing a sense of humility…understanding that the world does not revolve around*

humanity…awakening the perception of how our everyday constructed reality has removed people from the natural world…encouraging critical, thoughtful and moral questions…moving towards a deeper understanding and awareness of the underpinnings of environmental problems.

And finally:

Transmitting the understanding that the thing to do is to find our way in the world while giving due consideration to the diverse interests of other beings.

These suggestions are all made in a paper that promotes environmental education as the "hidden potential" of ecotourism.

In a paper titled "The Place of Deep Ecology and Ecopsychology in Adventure Education", outdoor educator Robert Hendersen (1999) asks outdoor educators:

Have you ever taught canoeing at an indoor swimming pool?

He then proceeds to point out the fundamental qualitative differences between such purely skills focused experiences and those where the skills are part of a much more contextually bound experience, he concludes:

Real canoeing demands a relationship with the earth, with the wind on your face, and the life force ever outward with one's paddle stroke into the lake, river, watershed. Real canoeing involves feeling a resonance with the earth.

He illustrates here the essential shift from an anthropocentric experience of an adventure pursuit, where the focus is on the individual and their personal physical skills, to an "ecocentric" experience where these skills are seamlessly connected to an immediate natural environment, which is in turn intricately and palpably connected to the Earths' global ecosystem as a whole.

Of this ecocentric perspective, Andrew Brookes (1994) writes:

Outdoor experiences can impart tacit knowledge of place, including the knowledge necessary to understand an ecocentric world view.

Vaske and Kobrin (2001), provide a basis for connecting "knowledge of place" to "attachment to place", suggesting this attachment results in a consequential change toward environmentally responsible behaviour (ERB). They cite Sivek and Hungerford (1989/1990) in defining ERB as being,

when the actions of an individual or group advocate the sustainable or diminished use of natural resources.

They propose that attachment to place is a dynamic function between "place dependence" and "place identity". Ultimately, they conclude, a physical dependence on place precedes place identity and that an overall "attachment to place" increased environmentally responsible behaviour. Brookes' "tacit knowledge of place" could refer to a development of both these functional components simultaneously, where outdoor experiences provide a learning opportunity that is both "tacit" – functioning at a deep psychological level - and inherently holistic. Outdoor experiences can also increase perceptions of "place dependence" because participants are subject to the vagaries of such things as weather and terrain conditions. They depend on these factors being favourable for their survival, and so feel dependent on the landscape to a certain degree.

Carol Birrel (2001) further supports this claim in suggesting an experiential process that can be adopted by outdoor educators to help their clients develop "a deepening relationship with place".

"Critical outdoor education…", writes Peter Martin (1999) notably some years after co-writing about the "Adventure Experience Paradigm".

> .. is aimed at examining outdoor recreation and environmental issues in relation to their dominant social order.'

He goes on:

> What critical outdoor education tries to do is raise students' awareness of understandings about their society which have previously gone unacknowledged. Critical outdoor education goes to the bush, not just to recreate and have fun, but to look back with a critical perspective at the contexts left behind, particularly to those sets of beliefs which help shape human-nature relationships.

Concluding:

> Improving human-nature relationships through personal outdoor experiences is not only possible, it's profoundly rewarding.

This concluding remark introduces the idea that changing towards pro-environmental behaviour through outdoor experiences is not only compatible with a move toward ecological sustainability but that it also offers personal development potential as a "profoundly rewarding" experience.

Robert Greenway (1996) suggests, from a study of 700 participants of wilderness courses, that

> we can say about the psychological changes taking place in the wilderness that there is a shift from the culturally reinforced, dualism-producing reality processing to a more nondualistic mode.

As we shall see later, this shift to non-dualism provides an educational experience that leads to *ecological consciousness* - a non-dual consciousness of the unity of all things.

Steven Harper (1995) supports this non-dualistic experience in relation to the cultural gap between "wilderness" and "civilisation":

> Wilderness calls forth the instinctive animal self. Using one's instinctual sense more, living closer to the basic survival needs of food and shelter… we can begin to discover where civilization and wilderness intermesh and integrate.

Harper explains that this experiential process is one of healing that comes as we "re-identify" with our environment. He goes on to give an account of what this healing "experience of wholeness" feels like:

> On a two-month canoe trip across the Northwest Territories of Canada, I was blessed with such an experience. Near the end of a long day of paddling the sun was low in the sky and my mind had ceased its normal chatter. I had the sensation of becoming my paddling and all that was around me. Stroke after stroke I was called to merge with my experience until "I" was no more. Only perception existed, a perception that was more complete. More whole than any I have known in a usual state of consciousness.

With this reference, and with the work of Greenway, we are being brought full circle back – in descriptive language terms - to the type of experiences that the Csikszentmihalyis', Mortlock and myself refer to earlier. There appears to be a link between flow experiences and experiences that Matthew Fox (1990) refers to as being of an "ecologically transpersonal" nature, where:

> *"The environment" or "world at large" is experienced not as a mere backdrop against which our privileged egos and those entities with which they are most concerned play themselves out, but rather as just as much an expression of the manifesting of Being (i.e. of existence per se) as we ourselves are.*

As we have seen, experiences of the natural environment, in childhood or as an adult, as part of an outdoor education programme or as recreational experience, can have pro-environmental behavioural outcomes. The degree to which this is true varies widely it would seem, depending on numerous affective factors. The nature or intensity of outdoor experiences also appears to be diverse, from the simple increasing of cognitive awareness by using natural elements as learning tools, to profound shifts of consciousness.

Geoff Cooper (1996) leads the debate away from outdoor experiences *per se* and on into other material relating to descriptively similar narratives. He writes:

> *Peak Experiences: From experiences of working in outdoor and environmental education for some 15 years it is clear that occasionally some young people are inspired through very intense experiences. These may occur through adventure, through a deep awareness of the natural environment or the development of new skills and group relationships…*

He concludes:

> *There is much anecdotal evidence for inspiration or peak experiences leading to new interests and changes in attitude.*

Cooper refers here to "peak experiences" and thus to the work of Abraham Maslow. To take this enquiry to it's next phase – to broaden and deepen the context beyond outdoor adventure recreation and education – it is to Maslow we will turn next.

From my exploration of adventure literature I recognised that the kinds of experience I'd had might not be limited to adventure situations. The work of Abraham Maslow greatly expanded the scope of my enquiry by bringing commentary on the content and theory of, what Maslow termed, "peak experiences".

"I use one term – peak experience," Maslow (1976) writes:

> *– as a kind of generalised and abstract concept because I discovered that all of these ecstatic experiences had some characteristics in common. Indeed I found that it was possible to make a generalised, abstract schema or model which could describe their common characteristics. The word enables me to speak of all or any of these experiences in the same moment.*

The term "peak experience" then, is an umbrella term used to seek commonality amongst other contextually loaded expressions that refer to essentially the same phenomena. They are all accounts of the same type of experience which involved, writes Maslow (1970):

> *…feelings of limitless horizons opening up… the feeling of being simultaneously more powerful and also more helpless than one ever was before, the feeling of great ecstasy and wonder and awe, the loss of placing in time and space with, finally, the conviction that something extremely important and valuable had happened.*

He noted that, while they are the same experiences referred to in accounts of "mystic" and "religious" phenomena, theological interpretations were mistaken. These experiences were, writes Maslow, "a natural experience, well within the jurisdiction of science".

By using a "general and abstract" term and by insisting on a scientific basis, Maslow subsumes other terms into his own, making them "scientific". For example, "Cosmic Consciousness" is described as:

> *a special phenomenological state in which the person somehow perceives the whole cosmos or at least the unity and integration of it and of everything in it including his Self. He then feels as if he belongs by right in the cosmos.*

"Cosmic Consciousness" is taken from R.M. Bucke (1956), while "Cosmic Unity" or "Unitive Consciousness" is taken from Stanislav Grof. Maslow (1976) writes:

> *unitive consciousness. .. is the ability to simultaneously perceive in the fact – that is – it's particularity, and it's universality; to see it simultaneously as here and now, and yet also eternal, or rather to be able to see the universal in and through the particular and the eternal through the temporal and momentary.*

Grof (1976) himself, in his studies of transcendent experiences induced through LSD, cross-refers back to Maslow's descriptions of peak experiences by referring to them as an:

> *…experience of **cosmic unity.** Its basic characteristics are transcendence of the subject-object dichotomy, exceptionally strong positive affect (peace, tranquillity, joy, serenity, and bliss), a special feeling of sacredness, transcendence of time and space, an experience of pure being, and a richness of insights of cosmic relevance. Subjects frequently talk about timelessness of the present moment and say that they are in touch with infinity.* (Grof's emphasis)

Maslow (1962) also refers his peak experiences to the term "mystical experience" - which ensues largely from William James (1902), examples of which are given in the next section, he notes:

> *What their true relationship is I do not know. My best guess is that they are different in degree but not in kind. The total mystical experience, as classically described, is more or less approached by greater or lesser peak experiences.*

In each case he is using semantics to work toward his unified "Science of Religion". Most of the data Maslow gathered was drawn from various accounts of religious origin, which were therefore categorised by the likes of James as "religious" experiences. His hope was that all religions could be amiably reconciled if psychological science could demonstrate that religious experiences were scientifically explicable, providing a foundation for a common religious understanding, based in science (Thorsén: 1983). While I do not agree with Maslow's "Science of Religion", I do agree, based on the linguistic similarities in the given narratives, that these experiences are of the same phenomena, scientific or otherwise.

Maslow built his theories on narratives from 190 questionnaires, 80 personal interviews (Maslow: 1968), from the study of books on "mystical experience, religion, art, creativity, love, etc." (Thorsén: 1983) and from "50 spontaneously delivered letters" (Maslow: 1959). In short, from a wide body of data.

Particularly important to this study is that Maslow brings together numerous narratives and descriptions that attempt to explain experiences that are similar to my own and to those given in relation to outdoor adventure pursuits earlier. He does this while suggesting that they are all based on *common phenomena*.

Maslow (1970) also proposes that these peak experiences are part of a personal developmental process of 'self actualisation' where a complex of human needs are increasingly met, bringing about in the individual a "growth" toward their ultimate "potential". Further, that this process in the individual has social implications that contribute toward solving the "Big Problem" of social dysfunction

Interestingly, he stops short of applying his model beyond the anthropocentric realm. Despite alluding to notions of cosmic proportions, his theory remains embedded largely in the individual, social and spiritually transpersonal. He does not make any connections to an environmental or ecological consciousness, which perhaps might have lead, as Sarah Conn puts it, to a "fourth force", in modern psychology (Conn in Roszak, Gomes et al: 1995).

Throughout Maslow's work reference is made to William James, and it is to this source that our exploration takes us next.

William James (1902), quoting from one of his subjects in his seminal work "The Varieties of Religious Experience" writes:

> *Irresistibly it took possession of my mind and will, lasted what seemed an eternity, and disappeared in a series of rapid sensations which resemble the awakening from anaesthetic influence…. ['The trance'] consisted of a gradual but swiftly progressive obliteration of space, time, sensation, and the multitudinous factors of experience which seem to qualify what we are pleased to call our Self…. The sense of an underlying or essential consciousness acquired intensity. At last nothing remained except a pure, absolute abstract Self.*

Another of James's subjects, interestingly writing in reference to a prolonged journey undertaken on foot, reports:

> *We were on our sixth day of tramping and in good training… When all at once I experienced a feeling of being raised above myself, I felt the presence of God – I tell of the thing just as I was conscious of it – as if his goodness and his power were penetrating me altogether. The throb of emotion was so violent that I could barely tell the boys to pass on and not wait for me.*

And from an account in James written by Starbuck which relates strongly to my own experiences of the natural environment:

> *…the moments of which I speak did not hold the consciousness of a personality, but something in myself made me feel myself a part of something bigger than I, that was controlling. I felt myself one with the grass, the trees, birds, insects, everything in Nature. I exulted in the mere fact of existence, of being a part of it all – the drizzling rain, the shadows of the clouds, the tree-trunks, and so on. In the following years, such moments continued to come, but I wanted them constantly. I knew so well the satisfaction of losing self in a perception of supreme power and love, that I was unhappy because that perception was not constant* (Starbuck in James: 1902).

I can't over-emphasis how revelatory it was to read these descriptions in light of my own experiences, and those that I had read about in the outdoor adventure writings of others. James's book has so many remarkably similar accounts that a full analysis falls beyond the scope of this thesis. What is important to note though, in the absence of such a complete analysis, is that James suggests *'four marks of mystic states'*, which, in abbreviated form, are:

> **Ineffability.-** *… its quality must be directly experienced; it cannot be imparted or transferred to others.*

> **Noetic quality.-** *…they are states of insight into depths unplumbed by the discursive intellect.'*

> **Transiency.-** *… Mystical states cannot be sustained for long.*

And finally,

> **Passivity.-** *… the mystic feels as if his own will were in obeyance, and indeed sometimes as if he were grasped and held by a superior power.*

> (James's emphasis)

He goes on to conclude of his studies, amongst numerous other points:

> *These clinical records sound like fairy-tales when one first reads them, yet it is impossible to doubt their accuracy; and, the path having been once opened by these first observers, similar observations have been made elsewhere. They throw, as I said, a wholly new light upon our natural constitution.*

In addition to providing a great deal of discourse to validate the material he'd gathered, he also offers personal insights into the nature of human consciousness:

> *There is not only the consciousness of the ordinary field, with its usual centre and margin, but an addition thereto in the shape of a set of memories, thoughts, and feelings which are extra-marginal and outside of the primary consciousness altogether, but yet must be classed as conscious facts of some sort, able to reveal their presence by unmistakable signs.*

This statement smacks of Jung's (1923) "archetypes" and "collective unconscious", that "consciousness existing beyond the ordinary field", as James puts it. Could it also be Freud's "oceanic" state - actually a term taken by Freud from Walt Whitman (Thorsen: 1983), which Freud suggests is a pre-individuation condition of childhood psychic development.

In Lévy-Bruhl's terms, could it be his, "Participation Mystique" suggested as a condition experienced only by individuals of "les societies inférieures", where "the subject is unable to differentiate himself clearly from the object to which he is bound…" in "an *a priori* one-ness of subject and object" which he suggests is a "primordial condition" (Lévy-Bruhl in Jung: 1923)? It is interesting that both Freud and Lévy-Bruhl felt compelled to associate this phenomena with humans in various conditions which were considered "uncivilized" at their time of writing, namely young children and those of "primitive" cultures.

James quotes one of his subjects (Malwida von Meysenbug) as reporting that:

> *'I was impelled to kneel down, this time before the illimitable ocean, symbol of the Infinite. I felt that I prayed as I had never prayed before, and knew now what prayer really is: to return from the solitude of individuation into the consciousness of unity with all that is'.*

Here Freud's (Whitman's) "ocean" is represented in real physical terms as symbolic of the "Infinite", while the prayer brought about by this mystic experience sees a return into the *'consciousness of unity'*.

James continues later:

> *In mystic states we both become one with the Absolute and we become aware of our oneness.*

Some of these narratives refer to "God", while others do not have distinct religious connotations. All however, refer to sensible experiences of a transcendent loss of the traditionally ego-bound self, a shift from a dualistic ontology to one that is unified.

On the one hand I had found, in William James, a work that appeared to give my own experiences a degree of consensus and a framework of conceptual understanding that was unthinkable during the two-year silence following my experience in Yosemite. On the other, I had crashed head-on into a whole new matrix of questions, the most fundamental of which seemed to be, what is the 'Absolute'?

Luckily, saving me from such a potentially solipsistic question, James concludes with a clue as to where a satisfactory answer might be found:

> *Mystical conditions may, therefore, render the soul more energetic in the lines which their inspiration favours.*

James is pointing here to a very important point, and one that relates to all four of my thesis questions: As we have seen in the previous section where diverse theories are tied to remarkably similar stories, the *context* in which these kinds of experience

are embedded is of paramount importance to the meanings and interpretations that become allied to them.

Another translation of the mystical context can be found in Evelyn Underhill's (1911) book "Mysticism", which wraps more Judeo-Christian meaning around the transpersonal theme, often referring to James and frequently drawing material directly from the same subjects as James (for example, Starbuck). In the instance of Underhill the specific point of reference is Catholicism but even from this stated bias she quotes from Rudolph Euckern in conclusion that, "Man is the meeting-point of various stages of Reality". It seems the acknowledgement of diversity is at the heart of her work too.

James finally binds his work directly to the main subject of this project, leading us into a summary of this section, with the statement:

> *Certain aspects of nature seem to have a peculiar power of awakening such mystical moods.*

The Csikzentmihalhyis' provide analysis of flow experiences but they do not suggest if they have any particular function beyond the experience itself. The greatest value they offer this thesis is that they collate descriptively familiar data and suggest that there is more to human states of consciousness than is normally accepted within the traditional confines of popular science.

Taken into the field of adventure and outdoor education by Priest and Martin, flow becomes a simple function between risk and competence, which distils down to qualitative components providing a rational model in the "Adventure Experience Paradigm". Kaplan and Talbot, in contrast to Mitchell, place the emphasis of achieving flow experiences on proximity to the natural environment, while Bacon, Stringer and MacAvoy identify that these experiences might be better described as spiritual, or of being experiences of transpersonal "archetypes", in the Jungian tradition.

From these quite distinct and evidently dramatic types of experience, a selection of outdoor education and recreation literature provides examples of the potential of less descriptively exciting outdoor experiences for encouraging subsequent pro-environmental behaviour. This is achieved, it is suggested, through various mechanisms including such notions as "sense of place", "critical reflection" and psychological engagement with landscapes.

Palmer and Suggate go further, providing qualitative evidence that experiences of natural environments during childhood are the primary factors in the development of pro-environmental behaviour in adult activists, across a wide and culturally diverse sample of subjects.

Cooper refers to the power of "peak experiences" in promoting pro-environmental behaviour in young people. This provides a logical link, through the work of Abraham Maslow, between flow experiences in outdoor adventure situations and "peak" experiences, and on into material well beyond the adventure context.

Maslow enriches the subject matter greatly by proposing that "peak experiences" are the same type of experiences as cited by others as "Unitive", "Cosmic" and "Mystic". The commonality between accounts given under all these headings, and under the term "flow" in more recent times, leads to the conclusion that these are all labels for *essentially the same phenomena*. This notion can be further developed by subscribing to Maslow's proposal that a phenomenological "schema" exists from "mild" to "intense", so that those less dramatic experiences of nature studied by Palmer and Suggate, and others writing about outdoor and environmental education, could be accommodated within this schema.

Maslow then takes the debate still closer to the educational aims of this thesis by writing: "The peak-experience may then be exalted as the best or even the only path to knowledge…" proposing that these experiences are insights into an "ontological reality" which exists "independent of human consciousness" and which provide the datum for all knowledge.

Maslow (1962) proposes that this experience of "ontological realism" is part of a metaphysical gestalt that includes some elements of ontological reality and others that are socially and cultural constructed which, as a total perceptual field, make up the whole experience[3]. While Maslow suggests that this ontologically real insight -

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[3] For a detailed analysis of ontological gestalts see: Naess on "Gestalt Ontology": **Naess, A.** (1989). *"Ecosophy and Gestalt Ontology."* The Trumpeter **5**(4). Haluza-Delay on the social construction of nature: **Haluza-Delay, R.** (2001). *"Nothing here to care about: Participant constructions of nature following a 12-day wilderness program."* Journal of Environmental Education **32**(4). And Thorsén on

which Ken Wilbur (1996), refers to as a "Peek Experience" because it offers a "peek" into an absolute reality -is more common in some people than in others, he concludes:

> *But I have been able to get reports of this kind of perception in practically **all** the people I have questioned, in the highest, happiest, most perfect moments of their lives (peak experiences).*

It is possible then, that we all have peak experiences, somewhere within the "schema". Some are "plateau" in characteristic, lasting longer but being subtle and essentially cognitive and which, Maslow suggests, can be brought about through one's own volition. Others are "peak", which "suddenly happen to us". Further, Maslow states that some people are "self-actualised", and are both more likely to have peak experiences and to be closer to reaching their full human potential. "Self-actualisers", too, have the most to offer society in solving the "Big Problem" of social dysfunction, by bringing certain moral and ethical qualities to the societies to which they belong. This brings a personal and social development aspect to the peak experience debate.

Referring back to William James strengthens Maslow's proposal that these types of experience contain powerful forms of knowledge. James writes, as one of his "four marks of mystic states":

> *Noetic quality.- Although so similar to states of feeling, mystical states seem to those who experience them to be also states of knowledge. They are states of insight into depths unplumbed by the discursive intellect. They are revelations, full of significance and importance, all inarticulate though they remain; they as a rule carry with them a curious sense of authority for after-time.*

While Bucke (1956) writes of his "Cosmic Consciousness":

> *The prime characteristic of cosmic consciousness is a consciousness of the cosmos, that is, of the life and order of the universe. Along with the consciousness of the cosmos there occurs an intellectual enlightenment which alone would place an individual on a new plane of existence – would make him almost a member of a new species.*

So these experiences are "states of knowledge", that can lead to an "intellectual enlightenment" which would, in turn, make the subject "almost a member of a new species".

The defining characteristic of all experiences within the peak experience "schema" is that they lead to sensations of, or conscious insights into, the relational nature of the world/universe/cosmos. Critical here is not the content of the realisation – world/universe/cosmos, and in other examples Earth and God, but the common theme of being *connected* in some way to some greater entity.

My proposal from the literature and from my own narratives is that these experiences are primarily of *processes* rather than *contents*. They are experiences of the relational nature of reality – the reality that everything is connected to everything else. As James suggests, these experiences, "render the soul more energetic in the lines which their inspiration favours". In other words, these experiences will be interpreted according to the context in which they are

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Maslow and "addition-Gestalts" **Thorsén, H.** (1983). *Peak-Experience, Religion and Knowledge*. Stockholm, CWK Gleerup.

embedded – but they are still always relational without losing these various contextual meanings.

These are, then, experiences of ourselves as ecological – where ecological simply means seamlessly interrelated. This can be true biologically, socially, culturally, politically, emotionally, psychologically and spiritually… *simultaneously*… without losing the essential relational aspect.

This is to say that the kinds of experiences under review, while subject to numerous theories, can – also and simultaneously - be understood from the basis of an ecological model of the human self, Arne Naess (In Sessions: 1995) writes:

> *Traditionally, the 'maturity of the self' has been considered to develop through three stages: from ego to social self (comprising of ego), and from social self to metaphysical self (comprising social self). But in this conception of the maturity of the self, Nature is largely left out... Therefore, I tentatively introduce, perhaps for the very first time, the concept of the 'ecological Self'. We may be said to be in, and of, Nature from the very beginning of our selves.*

This idea of a process of "maturity", of a positive development in the human condition, supports Maslow's "self actualiser" model. It also supports the notion that the same "Self"[4] development model that improves the human condition *per se*, simultaneously leads to pro-environmental behaviour, improving the human ecological condition too. This type of Self-realisation is so complete suggests Naess that:

> *If reality is like it is experienced by the ecological Self, our behaviour naturally and beautifully follows norms of strict environmental ethics.*

Naess refers here to experiencing "reality" as part of the process of ecological Self-consciousness. Extrapolating from this, ecological education is about shifting the way we perceive the world, the way we "experience" it. It is about altering our consciousness, about changing our metaphysical frame of reference thus dealing with the "crisis of perception" that Fritjof Capra (1997) suggests is the single root of our contemporary ecological crisis.

There is no doubt in my own mind that the kinds of experiences discussed in this review are of exactly this process, albeit subject to different interpretations. The subjects are experiencing their relational, ecological Selves, and are gaining an insight that could, to varying degrees and depending on their context, shift their behaviour toward "strict environmental ethics".

In summary, what the literature suggests is that these experiences:

- Can be transformative but not necessarily in any particular direction.
- Are not knowledge based or merely the result of an increase in awareness of certain data, although this can be a component in contextualising the experience.
- Contain deeply rooted, psycho-spiritual phenomena, that is not necessarily present in other potentially transformative or educational experiences. For example, reading a book.
- When they occur in a natural environment context can promote a behavioural change that is made in favour of that context.

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[4] Naess uses a capital "S" to denote the Self as ecological rather than with a small "s" which refers to the self as egoic.

- Cannot be predictably induced in their extreme forms, but can be deliberately facilitated in forms that may cumulatively become more intense in a schema of experiences, over time. [5]

- Can have certain observable contents and conceptual elements. For example, can contain natural environments as content and adventure as a concept.

- Because they have observable qualities, they have the potential to be facilitated as part of a transformative process, at least somewhere in an experiential schema.

- Form the basis for most religious belief systems, implying that they could be a part of transformation to other fundamental belief systems.

- Could either be indoctrinating or liberating, destructive or life enhancing, depending on the context in which they are interpreted.

- Have potential in an educational context to facilitate personal, social and pro-environmental change.

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[5] For more on inducing these kinds of experience *in extremis,* see Grof on the effects of LSD: **Grof, S.** (1976). *Realms of the human unconscious : observations from LSD research.* New York, Dutton. And Arthur J. Deikman on meditation and "deautomisation": **Deikman, A. J.** (2000). *A functional approach to mysticism.* In Cognitive models and spiritual maps: Interdisciplinary explorations of religious experience. J. Andresen and R. K. C. Forman. San Francisco, University of California**:** 75 - 91.

SECTION THREE

THEMES & MODEL

CHAPTER EIGHT: THEMES

The overall aim of this thesis is to dynamically draw from the research process a "Grounded Theory" on ecological education. This theory will be presented in the form of a tentative model, drawn from themes that emerged during the review of literature. This emergent model will then be compared to extant educational approaches, the final step being to draw any salient conclusions about the direction and future development of ecological education.

To inform the development of the model I have analysed the literature review section to search for any emergent themes. In doing so I have focussed on the narratives rather than on the theoretical material that has been offered in analysis. We return to theoretical perspectives later, once the model has emerged.

Through this analysis I immediately observed that there were two distinct types of theme running through the material. The first type refers to the *material contents* of the experience, the second type referring to more *abstract conceptual* aspects. For example, the "natural environment" is considered *material content* while "sacredness" is an *abstract* or *conceptual* component.

Some themes could be argued to lie in both categories. The social construction of the natural environment, for example, has already been mentioned in the literature review (Haluza-Delay: 2001), suggesting that it is both *material* and *conceptual* simultaneously. My aim here however, is not to establish a hard typology but rather to examine these themes in the context in which they are presented. From this contextual analysis it is soon obvious which themes are referred to in a primary material role, and which are obviously used conceptually.

The two types then, are: *material contents* and *abstract concepts* with their primary role in each case being decided by their given context. Table 1 presents the material content themes and Table 2 details those identified as abstract concepts. In some cases definition notes are offered in a second column to add clarity to the terms used.

Table One

THEMES: MATERIAL CONTENTS	
THEME	**NOTES**
Physical activity	
Adventurous activities	Activities which involve uncertain outcomes
Away from "everyday" context	That is, context is physically different from the subjects daily life experience.
Physical danger	Either perceived or real where there is a risk of physical injury or death.
Physical ability	
Natural Environment	Includes wilderness, "free-nature"[6] and other settings away from the human-made environment.
Equipment	Where specific equipment: kayaks, climbing equipment, outdoor clothes etc. are a prerequisite to the experience.
Solitude	The absence of other humans
Weather conditions	
Duration of physical activity	E.g. prolonged and low intensity
Immediate social (group) context	Where the subject is part of a group who are all sharing the immediate physical context.
Time of day	
Diurnal conditions	E.g. Sunset
Ocean	
Geophysical power	E.g. storms, waves.
Not being "indoors"	Where "indoors" is specifically identified as being a negative influence on the subject.
New information	
Newness of experience	

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[6] This term was first heard by the author in a lecture by Arne Naess at Schumacher College in November 1998. It refers to any area that is not dominated by human activity.

Table Two

THEMES: ABSTRACT CONCEPTS	
THEME	**NOTES**
Intensity of emotion	
Concentration	
Heightened awareness	
Immediate behavioural feedback	
Relaxation	
Emotional comfort	
Feeling energised	
Control	
Surrender	
Risk	Where there is a potential for loss. E.g. physical, emotional, psychological, spiritual etc.
Confidence	
Linguistics	The type of language used. E.g. spiritual, factual, technological, political etc.
Reflection	Having the time and context to reflect critically on one's own life
Cultural context	Where norms are derived from outside the immediate group. E.g. industrial techno-scientific, oral, Judeo-Christian, Muslim, etc.
Sacredness	
Openness	
Spirituality	As part of a religious / philosophic subscription or otherwise.
Connection	
Non-duality	
Moral questioning	
Sense of time	The concept of time itself.
Conceptual "frame"	Where an experience is deliberately 'front loaded' to be interpreted by subjects in a certain light.

DISCUSSION

What these themes suggest is that there are numerous potential components, both material and conceptual, that create a schema of the type of experiences discussed in

the literature. Further, some thematic components are not unique to these experiences in their own right but are unique in combination. For example, "relaxation", "sacredness" and "openness" on the one hand and "physical danger" and "solitude" on the other, could all be found alone in numerous other experiences and in simple combinations. It is when many of these themes combine simultaneously that the experiences seem to "peak".

Further, that it's this unique combination that determines the specific outcome, for example whether it is religious, psychological, ecological or plural. Essentially, the experience is a gestalt where the whole is greater than the sum of its component parts, with the "greater" aspect perhaps containing the transformative power.

What is strongly suggested from the themes is that while material contents can play a role in forming the experience under review, this formation process is closely related to concepts brought to the experience by the subject and/or to new concepts introduced into the experience by others.

In order to move from these two broad types of theme toward a more specific model, I have organised each broad type into four categories. These are shown in Tables Three and Four respectively.

Table Three

THEMES: MATERIAL CONTENTS: CATEGORIES	
THEME	**CATEGORY**
Physical activity	
Adventurous activities	
Away from "everyday" context	
Equipment	
Duration of physical activity	**NATURE OF ACTIVITY**
Physical danger	
Physical ability	
Not being "indoors"	
Newness of experience	
Natural Environment	
Weather conditions	
Time of day	**ENVIRONMENTAL CONDITIONS**
Diurnal conditions	
Ocean	
Geophysical power	
Immediate social (group) context	**HUMAN CONTEXT**
Solitude	
New information	**DISCLOSURE**

Table Four

THEMES: ABSTRACT CONCEPTS: CATEGORIES	
THEME	**CATEGORY**
Immediate behavioural feedback	**EXTERNAL CONCEPTS**
Conceptual "frame"	
Linguistics	
Reflection	
Risk	
Cultural context	
Relaxation	**INTERNAL CONCEPTS**
Emotional comfort	
Intensity of emotion	
Concentration	
Heightened awareness	
Feeling energised	
Confidence	
Sense of time	
Openness	
Control	**PERCEPTUAL SHIFTS**
Surrender	
Connection	
Moral questioning	
Non-duality	
Sacredness	**TRANSPERSONAL SHIFTS**
Spirituality	

DISCUSSION

Although themes can be drawn from the narratives, and although they can be further sorted into categories, it is critical to note that all these reduced elements are dynamically interrelated in their actual context. Each real situation is a unique gestalt where the whole experience is greater than the sum of its parts and where categories are by no means rigid.

However, there *are* common themes, and the same material contents can be seen to be present in different examples, which suggests that they contribute to the experiences they form a part of. Similarly, a framework of common abstract concepts leading to increasingly complex and ultimately transpersonal experiences can be observed. This combination of ingredients can, in the examples given, result in a shift in consciousness towards the transpersonal, which in turn can lead to a pro-environmental change in behaviour.

These themes and their analyses are developed into a tentative model of ecological education in the next chapter.

CHAPTER NINE: MODEL

*The goal of our highest maturity is to live and work in the world with a
'compassionate intelligence' that combines a deep identification with nature with an
understanding of its processes.* (Cobb: 1977)

The themes show that common identifiable elements, which can be categorised as
either material contents or abstract concepts, are present in the experiences
reviewed in the literature.

The material contents of the experience have been further broken down into:

1. The nature of the activity.

2. The environmental conditions.

3. The human context.

4. Disclosure (of new information).

While the abstract concepts suggest a shift in consciousness consisting of:

1. External Concepts – conceptual conditions that catalyse the process.

2. Internal Concepts – emergent feelings (which tend to be experienced
   passively).

3. Perceptual Shifts – changes in the way the self is *perceived* in relation to the
   given context, which tend to be cognitive and represent a shift in
   understanding.

4. Transpersonal Shifts – changes in the way the self is *experienced* in relation to
   the context, which tend to be intuitive and represent a shift in identity.

The whole experience represents, in simple terms, a combination of "consciousness
as" with "awareness of", to give a profound gestalt experience with transformative
potential.

In Cobb's terms, and applied to the goal of ecological education, this experience
"combines a deep identification with nature with an understanding of its
processes", where what is *understood* about those processes is that they are relational
- an understanding that is simultaneously *experienced* through "deep identification".

A model designed on this basis would, logically, aim to bring material elements together with abstract concepts in a context that was geared toward pro-environment behavioural outcomes. Figure 1 is a two-dimensional representation of the model where each of the four material content elements interlink to support the transformation process, the whole experience being tied together by facilitation.

It must be noted that this two-dimensional representation – as indeed the exercise of separating out the various components of this type of experience – does not fully represent the gestalt quality of the experience as a whole. The directional arrows give an idea of how the transpersonal experience builds but they are by no means a rigid sequence, suggesting rather that the abstract concepts move around the material contents which in turn move around the facilitator that has brought them all together in time and space. This is then, a *tentative* model.
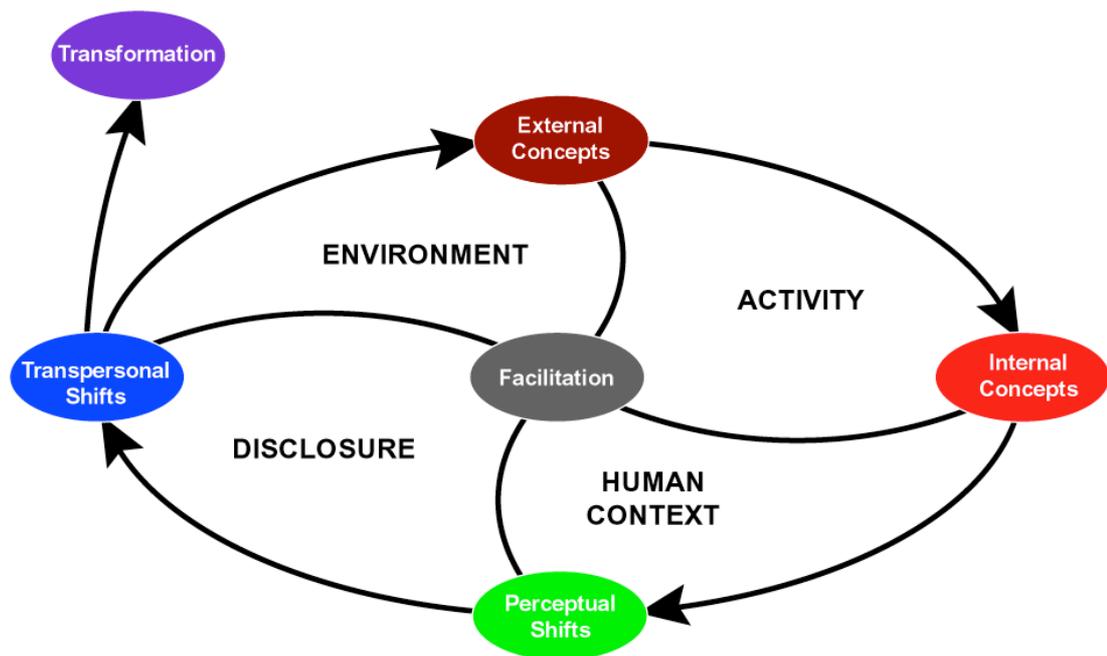
THE ECOLOGY OF ADVENTURE MODEL

Figure 1

The literature suggests that the kinds of processes at hand can be extremely significant life events, or be part of a greater sequence of such events. This means that facilitation styles will see a shift from more traditional educational models, for example "student-centred" approaches (Freire: 1996), to those based in counselling and psychotherapy, for example "person-centred counselling" (Rogers in Mearns

and Thorne: 1988). This model therefore, marks a blurring of the boundaries between education and therapy.

The implications of this for the facilitator are serious. The personality of the facilitator will play a fundamental role in the outcome of the experience and abuses of power and trust will destroy the pro-environmental outcome – or *any* positive outcome for that matter. The participants will be highly vulnerable and facilitators will need to understand, and be able to work with, any emergent processes. This places the model outside the scope of most contemporary outdoor educators (who would otherwise be ideally placed to bring all the models ingredients together).

The participant will also bring with them "baggage" from their own socio-cultural context as well as finding themselves in an entirely new context altogether. The newness of experiences and the presence of adventure – uncertainty and risk – will mean that facilitation cannot be heavily pre-structured. The facilitator will need to be able to work with issues as and when they emerge, in real-time.

Each application of this model will be a unique and highly complex system of interactions, which means that it cannot be rigidly standardised. In terms of praxis, the model would ideally be "disclosed" as part of the "new information" element of the outdoor adventure experience that the model itself was used to design. This would effectively generate, at least in part, the context that is suggested as essential to achieve pro-environmental outcomes.

SECTION FOUR

COMPARATIVE ANALYSIS & CONCLUSIONS

Much environmental education theory acknowledges the shortfalls in many contemporary approaches. Hungerford and Volk (In Chawla: 1998) write:

> *Many environmental education programmes are constructed on the false premise that knowledge about issues is sufficient, and that knowledge by itself will lead to action.*

There is, as Stephen Sterling (2001) writes, a "dominant assumption" that "environmental problems result primarily from ignorance". This assumption explains why so many approaches, especially those based on traditional classroom education, do not appear to have delivered the hoped for outcomes (Van Matre: 1990).

Sterling points out that contemporary environmental education

> *tends to dwell on prescribed knowledge, to engage the learner no further than their intellectual response, and to be deterministic.*

What Hungerford, Volk and Sterling appear to be suggesting is that knowledge alone is not enough and that, as Sterling puts it, "we suffer from an inadequate epistemology", going on to quote Laszlo:

> *We shall need more than incremental improvements on our current rationality; we shall need new thinking joined with new ways of perceiving and visioning ourselves, others, nature and the world around us.*

Sterling suggests that we must learn to, "recognise and acknowledge the roots of our worldview and thinking" through "meta- and epistemic learning" and he concludes that, "transformative learning depends on the nature of the learning experience." But he does not elaborate on this "experience", falling into his own trap of thinking that knowledge of this theory is enough to implement it.

Elsewhere Sterling does give examples of the kind of education that meets his proposals, citing such initiatives as "Education 21" and "Learning for a Sustainable Future (LSF)" as well as venues such as "Crystal Waters College", "Crispin School", "The Small School" and the higher education venue "Schumacher College", but he only provides a very general and intellectually based analysis – there is no coherent model that ties all his theories together.

David Orr (1992) shares Sterling's general analysis adding:

> *the way education occurs is as important as its content. Students taught environmental awareness in a setting that does not alter their relationship to basic life-support systems learn that it is sufficient to intellectualise, emote, or posture about such things without having to live differently.*

Orr goes further, suggesting that the context in which an educational experience is delivered, not just the "nature" of the experience, is critical to its' outcomes:

> *Experience in the natural world is both an essential part of understanding the environment, and conducive to good thinking.*

Sterling and Orr, through their synthesis of other works, and through their own original material, both strongly support the notion that a more holistic, experiential and less knowledge obsessed approach to education needs to be used for pro-environmental outcomes. I agree whole-heartedly with their analyses that knowledge alone is insufficient and that the "nature of the experience" is an essential part of the learning outcome itself. But while both authors offer an

excellent analysis and even some ideas about educational design, they both fall short of providing an accessible model for praxis.

The examples they offer – based on ecological campus design, institutional initiatives and independent education providers – are all more relevant to the individual who is already committed to pro-environmental activism. It is at the motivational level that their praxis is missing and while these examples offer opportunities for those already motivated, no amount of top-down design will compensate for an absence of ecological Self-consciousness in those who are not.

Further, none of the examples suggested are *radical enough* – they are still all bound within the cultural context that caused the problems they are attempting to solve. This could be true of any programme that is based entirely in a human dominated context, and the outcome of this lack of engagement with the "more-than-human" world (Abram: 1996) is that it takes much longer to achieve the outcomes hoped for, if they are achieved at all.

By way of example, Jack Mezirow (1990) writes:

> *Perspective transformation occurs in response to an externally imposed disorienting dilemma – a divorce, death of a loved one, change in job status, retirement, or other. The disorienting dilemma may be evoked by an eye-opening discussion, book, poem, or painting or by one's efforts to understand a different culture that changes one's presuppositions. Anomalies and dilemmas of which old ways of knowing cannot make sense become catalyst or "trigger events" that precipitate critical reflection and transformations.*

On a spectrum from "divorce" and "death of a loved one" to "an eye-opening discussion", adventure can be toward the former. Facilitating an adventure experience, where the participant is experiencing a level of risk they perceive to be extremely high, but that the professional outdoor leader knows lies at a manageable level in real terms, can provide a "trigger event" unsurpassed in an education programme. Only in the field of outdoor adventure education could this be done safely and competently, where operatives are highly trained in managing and facilitating positive experiences with high levels of perceived risk.

In summary about environmental education theory: Other theoretical approaches that share commonalities with the model proposed in this project do not provide a practical and widely accessible praxis, or one that operates at a motivational level. The applications they do identify are all long-term, restricted to those already committed to pro-environmental behaviour and, they are perhaps still part of the systems they are attempting to challenge. Further, most of the examples given are still highly embedded in a human dominated context, meaning that learning is always an essentially anthropocentric experience. While I am not suggesting that human dominated contexts are unimportant (the emergent model suggests they are a critical *component*), I am suggesting that being in environments where human dominance is secondary – an experience the impact of which can be greatly enhanced through adventure – is more effective, more widely accessible, and more timely bearing in mind the imperative of achieving ecological sustainability.

In comparing the emergent model with other approaches then, it is safe to exclude any forms of environmental education that do not include adventure experiences of the "more-than-human" environment. This effectively removes most contemporary environmental education models. Also removed from comparison are those approaches that are outdoor-based but that focus on gathering knowledge as a primary objective, for example "Field Studies" and environmental interpretation. These fall into the trap of assuming that knowledge is enough to facilitate change, while letting the potential advantages of being in a natural environment be left to chance.

In short, there are very few approaches that compare. There are other outdoor environmental education models, but none of them explicitly acknowledge the ecological Self-identity aspects discussed here, and so they can be excluded from the comparison. This is not to write-off other approaches, but merely to say that none of them compare functionally to the model presented here, and thus none of them could make the same ecopsychological claims. There is, in the final analysis, only one approach that offers some comparison.

The "Earth Education" model proposed by Steve Van Matre (1990) is strongly grounded in the ideas of ecopsychology and deep ecology. Van Matre suggests that environmental education has been "trivialised" as it has been co-opted into various educational formats. He identifies critical differences between Earth Education and "environmental education" for example that environmental education is:

> *Supplemental and random; classroom based; issues oriented; activity based; relies heavily upon conducting group discussions to achieve its instructional objectives…*

And that it is:

> *… infused with "cornucopian" management messages and views.*

Meanwhile Earth Education is presented as:

> *Integral and programmatic; natural world based; lifestyle oriented; relies primarily upon participatory educational adventures to achieve its instructional objectives…*

And that it is:

> *… infused with the ideals of deep ecology.*

Van Matre proposes that outdoor education is too shallow, focussing on "recreation skills and outdoor pursuits" rather than asking the more environmentally oriented question, "how are we personally tied into those systems [where outdoor pursuits take place] in our lives?" (Parenthesis added).

But Earth Education, despite its similarities to the model I have proposed, for example in its references to deep ecology from where Naess's "ecological Self" model originates, is non-the-less very different. For example, Earth Education is extremely heavily structured and standardised placing the emphasis on a fixed sequence of specific activities. This makes it, ironically, very mechanistic, where the focus is on the system of delivery rather than on the participant. Van Matre has worked hard to franchise the Earth Education approach and it is well known in the environmental education industry that he is almost obsessive about strictly adhering to "the programme", likewise the material he uses is vigorously copyrighted so that it's contents can be controlled and so that the '"trivialisation" referred to as the failing of environmental education *per se*, does not take hold of the Earth Education approach. This standardisation represents a lack of reflexivity, which flies in the face of the fundamental facilitation characteristics that have been identified as fundamental in applying my own model.

But probably the most salient difference is that Van Matre's approach, as he is first to point out, is "outcome focused" and is therefore, prescriptive. The model emergent in this study is entirely non-prescriptive, allowing instead that the only possible conclusion to a true experience of ecological Self-realisation is that, as Naess puts it, "our behaviour naturally and beautifully follows norms of strict environmental ethics". Failing that, the individual will, hopefully, start or continue on their journey of ecological Self-development – at their own speed and in their own context - perhaps resorting to non-human environments to re-establish their ecological datum.

Within the field of education then, the proposed model is unique.

As we have seen, the model of the ecological Self is core to the educational approach that has emerged from this study. This ecological-Self model though, was not originated in the educational field of enquiry. It is both a philosophical position ("ecosophical" in Naess's (1989) terms) and a psychological self-concept model ("ecopsychological" in Roszak's (1995) terms). While the ecosophical position can provide a basis for an educational approach (as indeed it appears to have done in the model that has emerged), it is hardly an educational approach in and of itself.

However, ecopsychology does have a definite praxis in "ecotherapy" and to provide a satisfactory comparative analysis for my own model, this praxis should be explored.

'Ecopsychology…' writes Jane Goodall (In Roszak: 1992),

> *provides a powerful new dimension to the environmental movement, suggesting that by living in greater harmony with the natural world we shall not only help to save our planet from ultimate destruction but shall also improve our mental health and be happier and more fulfilled human beings.*

There are two distinct elements to this definition. The first is earth-centred, or ecocentric, in that it refers to the health of the planet. The second is human-centred, or anthropocentric, because it is concerned with the health of the individual. Of course, the beauty of this definition is that both these health care objectives are mutually inclusive. In deep ecology terms, this is because ''Self" and "Earth' are inseparable elements of the same complex system – to heal one is to heal the other.

Most ecotherapeutic approaches enter the ecopsychology arena from either one of these perspectives, in the knowledge perhaps that both entry points lead to the same mutually beneficial place. But there are subtle differences, mainly to do with the *use* of natural landscapes. Some techniques are highly introspective, for example "ecotherapeutic methods for reducing stress" and "finding help in nature for death anxiety", which offer no explicit benefits for the planet. This is true also of the synthesis of extant psychotherapeutic approaches into the ecotherapy field where "Cognitive Behavioural Therapy" (CBT); "Relational and Social Systems Therapy"; "Social Context and Radical Therapies"; "Spiritual" and "Body" therapies (Clinebell: 1996), can all be seen to integrate into the ecotherapy idea by drawing from natural environments rather than contributing, directly, to their flourishing.

The idea too, of "Adventure Therapy" which is very much part of the outdoor education movement is often utilitarian, where outdoor adventures are the medium for specific therapeutic outcomes (Ewert and McCormick et al: 2001; Herbert: 1998). Other approaches are more balanced, with caring for the Earth being an important aspect (Beringer: 1999), but the whole notion of therapy is usually didactic and the tendency is to favour the human perspective.

On the other hand, such approaches as Wilderness Therapy (Kanner and Gomes: 1995; Harper: 1995; Greenway: 1996) have lead to experiences that are descriptively similar to those that have resulted in the model presented in this thesis:

> *It is common… to report dramatic breakthroughs that shake the individuals to their core. When the natural world reawakens in every fibre of our being the primal knowledge of connection and graces us with a few moments of sheer awe, it can shatter the hubris and isolation so necessary to narcissistic defences. Once this has happened, ongoing contacts with nature can keep these insights alive and provide the motivation necessary for continued change. It is these experiences that will ultimately fill the empty self and heal the existential loneliness so endemic to our times.* (Kanner and Gomes: 1995)

This would suggest that the model "grounded" in this thesis is, in fact, a "Wilderness Therapy" model. There is though, still the tendency for this therapy to be anthropocentric, with it's primary outcomes being the benefits experienced by the participant. Essentially, deliberate disclosure of "new information" is a differentiating aspect that shifts my approach from "Wilderness Therapy" *per se,* to ecological education that utilises wilderness therapy elements. This synthesis implies that the healing of the individual is deliberated toward healing of the planet and to explicitly determining that these two are one and the same. This is also to say that ecological education *is* a healing practice while not being *purely* a healing practice as in "ecotherapy".

SUMMARY

The emergent model has no comparison in the field of education. It does, however, share strong defining characteristics with the field of "Wilderness Therapy" while remaining unique in several important ways.

CHAPTER ELEVEN: CONCLUSIONS

When we get out of the glass bottles of our ego,
And when we escape like squirrels turning in the cages of our personality
And get into forests again,
We shall shiver with cold and fright
But things will happen to us
So that we don't know ourselves.

Cool unlying life will rush in,
And passion will make our bodies taught with power,
We shall stamp our feet with new power
And old things will fall down,
We shall laugh, and institutions will curl up like burnt paper.

D. H. Lawrence

"Have other people written about experiences similar to my own?" Yes they have, and we have seen examples from the clinical laboratories of the University of Chicago, to the solo sea kayaker in modern-day Alaska; from the beaches of the Southern Pacific Ocean to the Wilderness of Canada's Northern Territories. There are more examples too, from the Tungus nomads of Manchuria (Eliade: 1964), to the Catholic Saints (Underhill: 1911) and from the Hopi Nation (Abram: 1996) to the Zen Masters of the Ming Dynasty (Watts: 1990) but they have been omitted from this report in the interest of "word count".

There are so many examples in fact, that it is almost ironic to seek to validate these kinds of experience when they are the basis of so many religions, traditions and forms of art. Once "tuned in" to the language of transcendence, these narratives are everywhere.

But they are not in rational science, except at the peripheries of the fragmented field of psychology. To the science of our dominant industrial culture they are "mumbo-jumbo", without basis, without proof. And, perhaps, that is their greatest quality. They are *beyond* science, religion, art, beyond even, human culture, and it's myriad complexities.

"What theories surround these experiences?" In this dissertation alone we have seen explanations in clinical psychology, sociology, mysticism, adventure, religion, spirituality, the cosmic, the universal and the biochemical. But at every turn, the descriptions are qualitatively the same, they are of the *same essential experience*.

My own theory is that they are experiences of our selves as ecological, of ourselves woven seamlessly into the vast fabric of the Earth. They are a glimpse past the vagaries of human subjectivity, into the great Anima Mundi, the Soul of the World. This experience can be spiritual, and it can embody the transcendent, the animistic and the shamanic. But it can also be physical and biological - we simply *are* woven into the Earth's fabric. This is a fact that even the narrowest science can prove beyond doubt – try holding your breath indefinitely and you will experience you ecological Self in biological terms. Bringing the transcendent, the culturally embedded, the solipsistic and the debatable, conceptually together with the biological facts of life - through direct experiences heightened with adventure - appeals to every conception at once. It leaves us without any doubt as to who we are. But this is just a theory.

Ultimately, as Hegel (1970) suggested, perhaps every theory, every philosophy, is indeed "it's own time comprehended in thought". Perhaps our era – a time of great ecological destruction and injustice – is a time that needs to be comprehended in ecological thought. Whatever these experiences are of, is, ultimately, irrelevant - as long as they add meaning to life, to the process of life. I am proposing here that the meaning we need today, in our "own time", is one that leads us to a life that is sustainable within the ecological limits of our habitat. Perhaps in another epoch, these experiences will necessarily be interpreted differently.

"Can outdoor adventure experiences be transformative towards pro-environmental behaviour?" This is probably the most difficult question to answer. There is quantitative evidence that outdoor experiences per se, do, and there is more work being done to support this notion. The addition into this question of "adventure" though, is relatively new. Most of the evidence is anecdotal but I hope to have shown here that the link is not tenuous, but qualitatively robust and well theoretically grounded at very least. I would also add that I have worked for the last 8 years exploring the relationship of adventure and environmental behaviour as an outdoor educator, and I am convinced the potential of combining these two for ecological education is profound. I am also convinced that outdoor adventure education might be *the most* effective medium for delivering the kind of shifts

toward pro-environmental behaviour that we hope environmental education will deliver. And that, indeed, the future of our species demands it does.

"How can transformative outdoor adventure experiences inform ecological education design and delivery?" The way ecological education is currently conceived must be changed. Ecological education is not just about, "learning about the environment", it is a personal development process that leads to a realisation of our ecological nature – our ecological Selves.

Inherent in most contemporary approaches is the same metaphysical dualism that lies at the root of the current ecological impasse. Our industrial culture is not compatible with ecological sustainable living and it is a culture built on the objectification and domination of nature, the separation of subject from object, the alienation of human from environment. Any education that reinforces this notion is ecologically suicidal.

Adopting a model of education that seeks to deeply and tacitly shift self-identity toward an ecological realisation of "Self", depends on dismantling the dualistic "myth". This can only be done through experience. It is *before* abstraction – lying in the ontological "forestructure" (Heidegger: 1962); it is *beneath* duality - in the underlying "quality" of metaphysical wholeness (Pirsig: 1974), it is *beyond* epistemology which itself is dualistic, treating knowledge as an object of contemplation.

It is a myth that we, in industrial nations, are so deeply embedded in, that it will take nothing less than a transpersonal experience to shatter it – a kind of ecological "satori" or awakening.

Adventure in wild places can provide this awakening - it can provide the "trigger" to transformation, as Mezirow puts it. Facilitated compassionately, intelligently, and from the perspective of the Earth itself, that is to say ecocentrically, it could play an important role in educating for an ecologically sustainable future.

In context, this marks a shift from the social justice orientated "Student-centred" approach of Paulo Freire, through the rigidly standardised, lifestyle-deterministic approach of Steve Van Matre's "Earth Education", to an ecocentric approach; an *Earth-centred* education. This Earth-centred approach allows the student to *identify* with the Earth itself, to realise the interdependency – tacitly - and to live out the social justice and lifestyle implications of this realisation without feeling duty-bound, or morally obliged.

Furthermore, the literature would suggest that there is no model like the one presented here. There are similar approaches in ecotherapy, and indirectly embedded in the holism of outdoor education *per se.* But there is no educational programme that uses outdoor adventure to inform ecological Self-identity - as it's primary *modus operandi*. It is, therefore, unique.

In summary, this research shows that:

- Outdoor adventure pursuits can result in experiences that are highly descriptively similar to a group of experiences commonly referred to as "transpersonal" in that they give a sensible experience beyond the individuals physical and conceptual self.

- These experiences can be explained in numerous theoretical ways, which tend to be allied to the socio-cultural context of the subject and that can, within this qualifying condition, be associated to the notion of the ecological Self where this notion is itself considered part of a socio-cultural framework.

- These experiences can be transformative toward various behavioural outcomes in the subject and that the direction of these outcomes is informed largely by the context in which the experience itself is placed. In the case of natural environments this can be toward pro-environmental behaviour.

- Common themes can be observed through the given body of narratives that logically lead to a tentative model for outdoor adventure education toward pro-environment behavioural outcomes.

Research on this subject though, is far from complete. The link between adventure and peak type experiences is quite robust, but the link between peak experiences and ecological Self-identity is largely tenuous, beyond the anecdotal. Further, the schema of experience needs additional exploration. It is quite easy to identify the more extreme forms but it is problematic to identify those more subtle experiences. Is it that calm feeling that results from a walk in the forest? Is that transformative? Some of the research reviewed would suggest that simple, uneventful, experiences of natural environments in childhood lead to pro-environmental transformations in later life. I am curious to know more though, and perhaps what implications these results have for outdoor adventure education specifically.

The next step on from this thesis is to design and run a series of programmes based on the tentative model that has emerged, and to build around these a longitudinal study of outcomes. This needs to be triangulated cross-culturally, with gender and age specific analysis. Such a study might help to increase understanding of the links between adventure, natural environments and pro-environmental behaviour and might even lead to the introduction of outdoor adventure education into the National Curriculum, where the imperative of ecological education will surely bite hardest and first.

In the meantime, it would be a mistake to, as Alan Watts (1990) puts it, "eat the menu instead of the dinner". If there is one thing this thesis demonstrates beyond doubt, both in it's content and through the process of writing it, it is that there is no substitute for experience. If the reader wishes to truly understand the Ecology of Adventure, then nothing less than a journey in the wilderness will do.

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