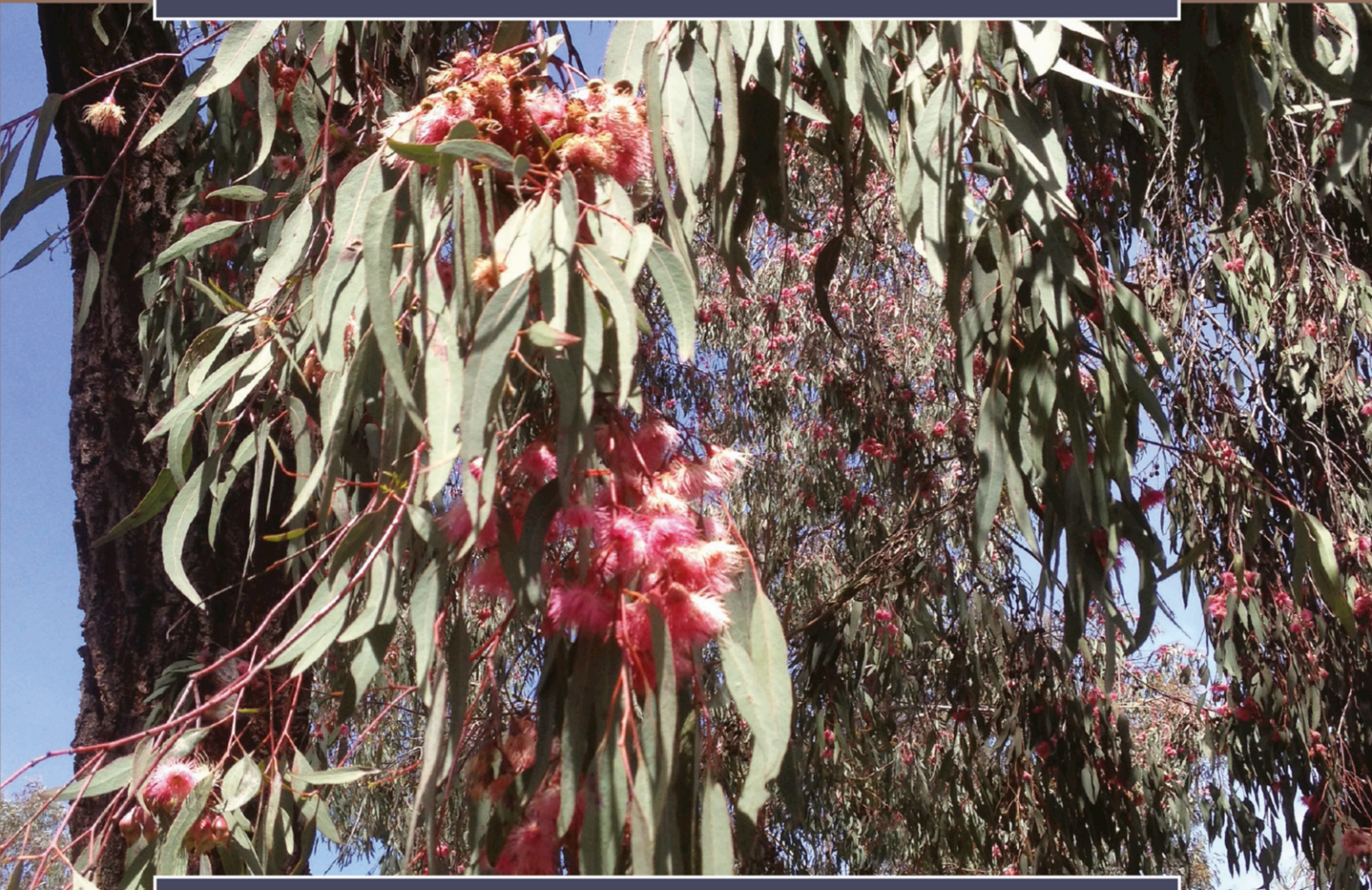# Experiencing the Outdoors

Enhancing Strategies for Wellbeing

Margaret Robertson, Ruth Lawrence and Gregory Heath (Eds.)

Foreword by Pete Hay

*Sense*Publishers

Experiencing the Outdoors

RESEARCHING ENVIRONMENTAL LEARNING

Volume 2

Series Editor

David B. Zandvliet, *Simon Fraser University, Canada*

Scope

There continues to be growing concern about the state of the environment, yet we are often confused by the complexities of economic, ethical, political, and social issues related to it. Daily, there are references in the news media to environmental issues such as global climate change, ozone depletion, dwindling resources, famine, disease, loss of biodiversity, pollution, and continuing job losses in many BC communities. The problems we face both as individuals and within our broader society are now so pervasive and ingrained within our cultural ways of being that we can no longer look to education about science and technology alone to solve these problems. Resultantly, environmental learning can and should include a sustained critique on dominant societal and industrial practices that often contribute to widespread and localized environmental problems.

We must also turn to ourselves as individuals, as researchers and as educational professionals to make change and develop a new ethic – a responsible attitude toward caring for the earth. Working to integrate environmental learning within all subject areas promotes this change in attitude by providing students with opportunities to experience and investigate the relationships linking individuals, societies, and natural surroundings. Education 'about', 'in' and 'for' the environment provides students with opportunities to learn about the functioning of natural systems, to identify their beliefs and opinions, consider a range of views, and ultimately make informed and responsible choices for themselves, their families and communities. This book series aims to look at environmental learning and the associated educational research related to these practices from a broad and international perspective.

Experiencing the Outdoors

Enhancing Strategies for Wellbeing

Foreword by Pete Hay

Edited by

Margaret Robertson, Ruth Lawrence and Gregory Heath
La Trobe University, Australia

Printed on acid-free paper

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PETE HAY

FOREWORD

Outdoors. Not, Therefore, Indoors

Here is one of the great binaries of lived experience, and it is a binary replete with portent. Step outside and you cross one of the great divides of daily existence. Life becomes elemental. You are *within* the weather, and while you remain outside there is no escaping it. In all sorts of other ways, too, you are vulnerable. There are dangers inside of course, but outside they multiply and proliferate, lurking everywhere. But there is also promise and *prospect.* Around every corner, every bend in the trail, adventure awaits. There are fortunes to be had: these do not usually manifest as material riches, though they may.

Phenomenologically speaking – experientially – the contrast between the *being* of outdoors and the *being* of indoors could hardly be more pronounced.

This being so, it is puzzling why the multi-faceted nature of the 'outdoors' should have been so little explicated in the literature extant. Here, though, is a book that goes far towards rectifying this deficiency. It is a huge task, and the contributors to the book come at their subject from a bewildering variety of perspectives. For some, spiritual and phenomenological framings are foregrounded. For some the focus is pedagogical – this, indeed, is a prominent theme linking the individual contributions. How can, and what might, we *learn* from experienced encounters out of doors? What might we learn that can be imparted to others?

These are questions of very great import. Though some of the relevant surveys may be of questionable reliability, the evidence suggests that we spend perhaps as much as ninety percent of our time indoors, and about two-thirds of our waking hours interacting with digital media.

This represents an extraordinary change in how we are in the world – in our very *beingness,* we might say. In centuries past a much higher percentage of time was spent outdoors. This rapidly changed in the twentieth century; a change that is one of the most profound, one of the most portentous, of all the changes wrought to the human condition in that most revolutionary of centuries. The new technologies that do so much to individuate and to privatise life have, in many ways, been a boon. But it has not all been to the good. One of the most significant consequences of this change is, I think, the growth of subtle but powerful barriers between us and the quick and living world that sustains us. Nature is experienced through the medium of 'tv docos'. We shop on-line and the product-saturated world comes to us. We install a complete home entertainment package and the social facet of recreational activity is deleted from our lives. We withdraw behind the walls of 46 Maple Street, now, to all intents, its own little fortress.

In doing this we deny our very species-being, which is, in its very *essence,* that of a communal animal – an animal that negotiates its humanness in interaction with other humans, and with the context of the living processes within which it moves. We are no longer *grounded*; no longer sure of where and how we fit within a wider world. An indoors life, then, is one that brings on a crisis in the meaning of what it is to be human, and can only result in pathologies of which we have, as yet, seen only hints.

We must all get old, and this is happening to me. I know that most of the peak experiences of my life have already occurred. I look back on them and, yes, some of them have occurred indoors such as memorable concerts. But most of the peak moments in my life have taken place outdoors.

Some of these have occurred in urban (or, at least, human-constructed) environments, and involve momentous happenings. In 2011 I dropped into the middle of the great and joyous *indignados* protests in Madrid, and as I struggled through the throngs on the *Paseo de Prado* my life changed. But some have not involved momentous happenings, or not at the time of my presence there. Standing by the simply potent memorial at Mouquet Farm on the Somme, in which concentrated World War I charnel ground my great uncle Bert Frimley fell, is one such moment. These experiences changed my life in profound though ineffable ways – and could not have been experienced had I not, on those days, taken the decision to step across the threshold and emerge from under the sheltering, life-softening roof.

More often, though, such life-redefining experiences have occurred in settings in which the evidence of human passage is minimal. Again, these may take place within a time otherwise quiet and meditative. Watching the stunning spotted livery of the exquisitely small, soft-eyed Eastern Quoll – a species that is functionally extinct on the Australian mainland – as it goes delicately about its carnivorous business in the light bush of a Bruny Island dusk is one, and a recurring one at that. And, of course, life-shifting moments will occur at times momentous. With one of the contributors to this book I have rafted the Franklin River. I floated under enormous cliffs tricked out in the endlessly variable subtle greens of Gondwana rainforest, and there learned a humility, a realisation of my place in the grand tides of change working an inexorable path through deep time. I came to appreciate the context within which my life unfolds, and what was learned in relation to the elemental world was readily transposable to the human realm. I looked up and out on the Franklin, then – but I also looked down – into the micro worlds at my feet, complex worlds of infinite wonder. 'Nature loves pizazz', the American writer, Annie Dillard, once observed, and I knew it to be so. Pizzazz, yes, and so much more besides.

I could never have learnt any of this had I stayed indoors. To know my world, and my place in it, I needed to go out to meet it, not quarantine myself off from it behind the four walls on my house. Of course, the greater part of this knowing is ineffable. It is absorbed through the receptive pores of the skin; taken in, in fact, by all the senses. It defies my poor attempts to give it voice. But it is there, and it is known.

That so much of this knowing is slippery makes the task undertaken by the contributors to this book difficult, but all the more timely. As Lawrence, Robertson and Heath signal in the title of the final essay, 'the outdoors [i]s a fluid concept'. Most of the contributors herein are at the beginning of their academic careers. I hope they stay with 'the outdoors', and look forward to further pathfinding works of scholarship on this important phenomenon.

Pete Hay
The University of Tasmania

MARGARET ROBERTSON

PREFACE

As editors of this book titled *Experiencing the Outdoors: Enhancing Strategies for Wellbeing* we set out to achieve three aims. First, to develop a conversation around the meaning of 'the outdoors'. Second, to bring together an international group of scholars from diverse background and opinions who would be willing to share their ideas on the themes of being in the outdoors and associated wellbeing. Third, to provide an opportunity for early career researchers working in complementary fields of outdoor and environmental education who with recent research discoveries bring fresh perspectives to related knowledge. In the twenty chapters that follow we see the outcomes of this project. Overall our feelings are of deep satisfaction for both the process surrounding the development of this book and its contents.

Our intention to focus on the outdoors as a meaning making experience is in part recognition of a shared belief in how to achieve a well lived life. If we consider that one of the driving elements of daily life is to attain a sense of happiness and the avoidance of pain and distress then the focus of wellbeing can be linked with a psychological sense of positive thinking. Crum and Salovey refer to this state as 'emotionally intelligent happiness' (2014). To 'flourish' is to "mean feeling well and functioning well" (p. 81). Referring to Eastern philosophers and Buddhist thinking, happiness is associated with finding an inner sense of emotional equilibrium. Locating this state requires "the radical transformation of consciousness" (p. 81). Continuing this argument Crum and Salovey conclude: "Emotionally intelligent individuals … are highly in tune with the weather pattern of their own dispositions" (p. 81). In this sense positive emotions are subjective. The propositions we put forward in the following chapters link this state of wellbeing with nature, the outdoors and activities that add resilience to our psychological and physical fitness. There is a mutual dependence between the body and mind that gains enrichment from being in the outdoors.

How we live our lives is a personal journey. However, the links between our mental and physical wellbeing are well acknowledged. Complementing the research relevant literature World Health Organisation indicators of wellbeing reveal the dynamic relationship between mental health issues including self-esteem, optimism, confidence and achievement. Environment and circumstances in early life as well as changing contexts throughout life will bring encounters with physical and emotional stressors that can impact on physical and mental health. As the global agent of health advocacy The World Health Organisation's Report[i] (2013) sets out a plan for universal health coverage including: "Basic education supports universal health coverage by enabling healthy lifestyle choices and informing health-care decisions" (p. 10). At the global level of discourse the goal is

commendable. Who would want to deny the opportunity of living a life well for any human being? Our 'being' deserves access to all that our planet earth can provide in terms of health, education, shelter and protection, and food. That is all the basics that sustain life. However, we need to recognise and value much more than our survival needs. Culture, the arts, media and the emergence of built landscape aesthetics, as well as the infinite social and communications networks are all part of an increasingly complex set of interacting interrelationships we have with each other within our immediate, or local context as well as 'out there' in the other spaces of time. The inevitability of ageing and our preparation for sustaining a sense of wellbeing throughout the years are cause for closer scrutiny beyond public policy and global watch agencies.

Popular media and advertising materials provide an abundant stream of 'Healthy lifestyles' advice and suggestions for how the population with disposable incomes can hand over their money. New devices for exercise, exercise programs and personal trainers, member only leisure and recreation centres, meditation therapies and appropriately designed clothing to match the requisite activity are promulgated in the popular media as must-haves. Formal channels of education curriculums and public policy are also 'guilty' of feeding these persuasive claims. Added to these influences the commodification of travel and affordances of rapid transit communications make getting to distant places easier for people with reliable incomes. Living a good life can be subsumed in a glow of objects, and machines and exotic places all far removed from the basics of life: food, shelter, clean air, water and energy. If we try to supress all the arguments related to the global advances of consumerism, and indulgences made possible with personal wealth associated with increasingly urbanised populations, in particular, and consider alternative options or counter arguments for living a life well, perhaps our priorities can return to a more inclusive view of what really matters. Hence, many of the chapter themes in our book are unintentionally provocations about how we can refind nature; the outdoors and a path towards a more engaging, sustainable, and healthy lifestyle. Can we blend an aesthetic that embraces our natural surroundings with the benefits of technological advances and human successes? Finding the 'right' pathway may be a personal journey. However, education provides capacity building for populations to continue the quest for more inclusive life packages that lower the human impact on planet earth; minimise the influence of the Anthropocene, and help build strategies for developing more sustainable built spaces and connections globally.

In Chapters 1 and 2, Margaret Robertson and Genny Blades provide a framework for discovering the powers of our connection with nature through walking. This connection between the outdoors as experience, and the pedagogy of the outdoors opens the discussion for the threads which follow. In Chapters 3–6 Erik Mygind, Gregory Lowan-Trudeau, Mike Brown and Sharyn Heaton, and Barbara Humberstone expand the themes in the contexts of Danish, Canadian, and Maōri worldview in Aotearoa New Zealand and European philosophy connecting nature, the body and philosophy. In Chapter 7, Gregory Heath develops the

philosophical dimension further, and challenges us to reimagine the outdoors in our pedagogical approach.

Following these first seven chapters our book begins to focus more on applied areas of research and related areas of action learning. In Chapter 8 Chris Townsend and Ruth Lawrence open this section of the book with a consideration of canoe trails and how we can enhance accessibility for the public to the outdoor experience. That sense of adventure in the outdoors is expanded in Chapters 9–11 by Paul Beedie, Marcus Morse and Lesley Hodgson. In Chapter 12 Irene Nga-Yee Cheng and John Chi-Kin Lee help connect with outdoors as experience with their theoretical analysis of curriculum options including fieldwork, learning spaces within the school context and affordances for learning design with advances in technology, notably Geographical Information Systems (GIS). In Chapters 13–15, Colin Hoad, Glyn Thomas and Brendon Munge, and Lucas Bester explore further aspects of the outdoor learning environment including its affordances for learning and the increasing need for connections between the pedagogy and related matters of personal safety. The tension in the latter is clearly one of concern for professional practitioners, and a source of continual review for finding a balance between cautionary behaviours and allowing 'space' for the experience to occur. Chapters 16-18 take a further turn to more specialised thinking. In Chapter 16, Peter Martin outlines a research based approach to finding out what school age learners know about their place – the flora and fauna. He concludes that whilst young people spend time in the outdoors their knowledge is limited. Their education and 'knowing' about nature appeared to have little connection to their formal learning experiences in school. In Chapter 17, Peter Holmes broadens the focus to include the important connections between education and the workplace. What are the responsibilities for Outdoor Education programs in the context of professional accreditation processes? This leads into the chapter written by Eric Tsang. Writing in the context of Kong Kong, Tsang expands the agency role of non-government organisations and illustrates with his case study how the teaching and learning materials available for Outdoor Education can be considerably enhanced with their contributions. This kind of collaboration highlights the complementary benefits within the social community. In the penultimate chapter Noel Gough challenges us to look beyond the narrative story and consider carefully the intertextual meanings and metaphors adopted in our pedagogical choices for learners. As a compilation of theoretical constructs the chapter provides a fitting conclusion to the complexities of issues considered in previous chapters.

In the final chapter, the editors reflect on the outcomes of this book project with some interesting suggestions for further research and cross-global collaborations.

We hope you enjoy the read.

NOTE

[i]   See http://apps.who.int/iris/bitstream/10665/85761/2/9789240690837_eng.pdf?ua=1

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Crum, A. J., & Salovey, P. (2014). Emotionally intelligent happiness. In S. David, I. Boniwell, & A. Conley Ayers (Eds.), *The Oxford handbook of happiness* (pp. 73–87). Oxford: Oxford University Press.

MARGARET ROBERTSON

1. AN EARLY MORNING WALK

In Search of 'the Outdoors'

An early-morning walk is a blessing for the whole day
(Henry David Thoreau)

An early morning walk ritual wakens the body and stirs the mind. It marks a transition from the dreams and drowsiness of sleep; an exit from the cloisters of the bed into the outdoors. In this act of movement the mind is stirred and sensory antennae shift into gear. Like a landscape documentary objects, sounds, movements, smells all reconfigure with each step forward. Except that this is an audience of one and the moments in time are not recorded for viewing by others. Self-referential the unfolding process is one repeated by journeys undertaken countless times in multiple locations that span decades of living. Different locations and places; different spaces and different journeys generate a mosaic of lived experience that create personal meaning. A well lived and enriched life one might argue is built upon the richness of our everyday lived experiences. The question is can we read the multiple layers of meaning making in ways that can contribute to a better understanding of how we as individuals experience the outdoors? Is there a collective wisdom that can be unlocked in the process of discovery? If so can we take these deeper understandings forward in our teaching in ways that will help the coming generations discover connections with their outside and inner wellbeing? How do we define wisdom?

There can be no solace in age, length and breadth of experience. Each step along every path unfolds as it happens. There is no fixed state of being or material certainty as we might experience in an artist's canvass or a photographer's image. Experiencing, ideas, representations and interpretations of events unfold in dynamic ill-defined space. Perhaps fixed in place and time all else is fluid and open for happenings, instances that warp the senses in meaning. In his 'last' public lecture Yi Fu Tuan (2014) speaks with some authority on these moments of time when he states:

> … I, an octogenarian, *feel* no wiser now than I did when I was a graduate student. Such awareness used to depress me, but no longer because I have come to realize that immaturity is a defining characteristic of the human species. A wise old dog or chimpanzee, that I can accept, though not a wise old man or woman. The image of a guru sitting cross-legged on a mountain ledge or of a professor corseted in thick layers of arcane knowledge is to me not only distasteful but comic. Why? Because both self-satisfied figures seem

to take pride in having lassoed their roaming mind long before their bodily death.

Back to this morning's walk. It was marked by a grey sky and threat of rain. Accentuating the bleakness the coolness is evidence of the time of year. It's cold outside and a reminder of place and seasonal change. Spring will come but not for some weeks. The naked trunks of trees in winter we associate with cool temperate settings. However, here in this place where this walk takes place the temperate latitudes support eucalyptus forests. The deciduous trees are the newcomers. And, with this observation the observer's mind switches into action. Imaginaries evoke other places and times. Exotic to the natural landscape the widely admired deciduous trees belong to another aesthetic from another place far removed from the local. Indigenous Australians recognise the truth. The deciduous and pine trees planted over a century ago belong to the period of settlement associated with European arrival. Material evidence of an outsider's vision for the area reflects the long gone past. The colonial period that has marked Australian settlement since the late eighteenth century brought to the land a foreign landscape aesthetic. No doubt fulfilling a memory of home and belonging in some distant places, the planting of trees native in their collective memory must have helped create a new sense of belonging. The new landscape aesthetic juxtaposed its pre-eminence especially along the clear felled coastal littorals. Altering the ecological balance the flora and fauna of the landscape in the outdoors have undergone change. Some species have not survived. This we know from dedicated researchers (for example, environmental historians). Others have emerged as predatory. Like the American Pekin ducks that glide along the water of the lake around which this walking track takes place. They don't seem to mind winter and remind us again of their species origins in a much cooler landscape. Just as the generations of settlers who took up residence nearby, the wildlife has somehow adapted to bring about the changed ecology. Indigenous wildlife co-exist with exotics. Cause for some reflection on the context encourages the mind to wander to the thoughts of others past.

In the first of a collection of essays on nature, place and the human experience, American philosopher and environmentalist Ralph Waldo Emerson (1836) writes: "Our age is retrospective. It builds the sepulchres of the fathers. It writes biographies, histories, and criticism" (p. 36). Building on Emerson's assumption there appear to be infinite ways of grasping at meaning. Specialists in their fields contribute many-faceted sides to the puzzle; each contributing large volumes of work all worthy of much more than a passing word. Nevertheless, to ignore any acknowledgement is to limit the possibilities for the exploration of ideas and the theorising we can associate with being reflective and contemplative about our context today. Archaeologists, environmental historians, cartographers, poets and novelists provide a legacy for the curious mind. Landscape artists, for instance, have represented the images that surround them from the beginnings of civilisation. Carvings, etchings, pottery, canvases, and buildings are both monuments and evidence for discovering how the present in our surroundings appears to the subjective eye. They provide a rich resource for reading the landscapes of nature

and provoking the interpreter to look deeply into the meanings that can both surround our bodily self and exist as separate entities within our thoughts. Is it as Gold (1980) describes simply that "stereotypes are an essential element in the way that people cope with environmental complexity"? (p. 9). None of this is missed by cultural geographers like Carl Saur (Williams et al., 2014) in the Unites States and W. G. Hoskins (1955) in the UK (for an overview see Wylie, 2007). In Australia, too, there is ample evidence to support this conclusion. Like many nations around the globe the history of Australia is historically marked by colonial invasion. The arrival of Europeans in the late eighteenth century cast a dark shadow over the indigenous inhabitants. Aborigines had occupied these lands for more than 40,000 years. Adapted to living off the land and from the sea, Indigenous Aboriginal cultures, multiple languages, and customs were considered 'uncivilised' by the invaders. Their lands became occupied by military and naval personnel; convict prisoners banished from their native lands, and along with more and more settlers from other lands have marked the nineteenth century as an era of irrevocable change to the landscape. Seddon (1997) describes this process as "transferred English values" (p. 73). He notes from the diaries of early European settlers: "Early naturalists showed this conventional orientation when they regarded the flora and fauna of this continent as aberrant" (p. 73). Clinging largely to the coastal littorals initially before venturing inland for fertile lands the settlers cleared the land, planted their foreign crops, fished the seas and killed the native kangaroos and wildlife for their daily food. The ancient rhythm of the land was threatened and in more densely populated locations the ecological balance has largely been destroyed or replaced by a mixed metaphor of the past, the local, and perhaps something that can be considered to be an emergent outcome from more than two hundred years of jarring Indigenous and European based lifestyles. James Boyce (2008) in his history of Van Diemen's Land helps clarify this differentiation in the context of colonial Tasmania. Recognised as home to one of the largest British convict transportation sites, this experimental resettlement of mostly poor English and Irish 'villains' developed at Port Arthur, was world heritage listed in 2010. Unlike the convicts, the military and management personnel sent from England to run the colony were often far from poor and more likely to be of elite, well-educated backgrounds. Hence:

> The common apprehension that "almost everything the settler did was a re-creation of the world which had been left behind" [quoted from Shanon Morga, *Land Settlement in Early Tasmania: Creating an Antipodean England*, Cambridge: Cambridge University Press.] reflects the experience of a relatively small elite. The fact that this articulate and literate group produced most of the written accounts of Van Diemen's Land explains, but does not justify, the assumption that their history was shared by the majority of the settlers. Indeed, the written accounts share a pervading concern: that in the convict districts a way of life very different from that in rural or urban England had emerged. (p. 8)

Boyce adds to this account with detailed notes on the Aboriginal-settler conflicts thus guiding our images back to times when 'convict society' (p. 9) forged different connections between people and place than those rated highly by their ruling masters. The convicts and their subsequent families contributed to a diversified economy in the colony and one that needs far more discussion than possible in this context. Hence, this brief digression into early Australian colonial history is limited. The point to be made is that the landscape emerging from this period is much more nuanced than simply considering pre and post-colonial settlement. Recognising the sensitivities around these debates is where this divergence into the recorded past should end. What we see and observe, however, cast into the present mindset an awareness of causality and reference to other dimensions that include Indigenous Australia, power and hegemonic dominance.

Shifting back to ways in which we comprehend nature, Bonnett's (2004) philosophical analysis is one way to redirect our thinking. He asks do we 'act within' or are we '*looking at* nature' (p. 36)? Bonnett states: "… nature is being disrupted not only physically but metaphysically" (p. 9). His simplistic solution to this complex problem is to propose a composite of webs. He argues: "Just as it is clear that nature itself is composed of highly complex relationships that extend organically throughout time and space, so it clear that understanding nature and our relationship with it will not permit of a straightforward linear relationship" (p.9). Immersion in the present is seemingly elusive for tangible or visible realities. Just as the philosopher Wittgenstein envisaged there is need to learn to live with the ambiguity we can associate with language (Mulhall, 2007).

BACK TO THE PRESENT

The flora, the fauna and the water feeding the lake are all reminiscent of colonial agency and settlement, and whilst initially with little appreciation of the original owners of the land, there is now some recognition in the name of the site and local signage. Located in the Australian city of Bendigo, the place – Lake Weeroona – formed part of the nineteenth century urban city plan. Its name means 'place of welcome' and comes from the Indigenous language of the first inhabitants of the landscape – the Dja Dian Wurrung people. Generations of inhabitants and visitors will be familiar with this place. A boardwalk surrounds the lake making it accessible for walkers, runners and cyclists. Disabled access, a rowing facility and recreation picnic facilities are included. The place is attractive for recreation – circumnavigating the lake provides a manageable and enjoyable experience for anyone. Like many cities whose origins lie in the colonial period, Bendigo's style in the present reflects a period of wealth and status linked with a more opulent grand narrative that has retained some of its original heritage whilst adapting to change. Bendigo emerged on the back of gold mining in the area and today its heritage of fine Victorian period architecture and grand homes, built around the turn of the twentieth century in a period known in Australia as Federation, are an important part of the fabric of the city. An architectural and environmental palimpsest may be a stretch too far in the conceptual meanings of

the language but the mind of ideas in this setting is allowed to shift and range over multiple landscapes including indigenous, colonial past, present and future, as well as social and cultural memory. The more intense gaze of the observer can penetrate beyond the surface symmetry to see sharp boundaries and clashing symbols of conflicting ideas, aesthetics and tags of belonging. Literature and the arts are part of this cultural memory, and if we reflect, in the post-structural tradition, on the intertextuality issues of meaning making then the subjective becomes increasingly powerful and relevant for our musings. Experiencing the outdoors grows in complexity and poses questions about the construct of what we mean by 'being outdoors'.

Pausing this idea to return later and moving back to the morning's reflective walk the layers of meaning have now expanded to include the impact of history on the landscape including indigenous peoples; the eclecticism of the moment and ongoing alteration of experience; a glimmer of reference to the flora and fauna with implicit references to sustainability, as well as the element of wellbeing that seems to underpin the reasons for taking a morning walk. The surrounding objects observed and touched by the senses during this process have form. They exist and stimulate the slow moving body and provoke multi-layered thoughts. The next observation relates to the other people using the path. Not by any element of familiarity other than observations of passer-by behaviours.

It's another day. Still cold and the slow awareness of the mobile phone alarm is not welcome. Sleep envelops the body and protects the mind from making decisions. Still, there are those friends on the outside waiting for their paths to be crossed. This is enough motivation to crawl out of bed, dress and rug up against the weather. One step and the inside is now the outside. In the material sense this is fact. The body has left the warmth of a building where objects are settled and appear to be little changed from yesterday or indeed last year. Outside with the protection of the grey sky all matter is on the move. The crisp air challenges the exposed parts of the face and seems to whip them into gear. There's a vitality that springs the mind and body into action. Cold and grim skies aside, the birds are chirpy this morning. They go about their daily business of food gathering and preening their feathers, taking a quick dip in the water for refreshment and communing with one another. Like companions of long standing their gatherings appear as contentment and pleasure in their surroundings. The human presence is of no consequence – taken as part of the place of their chosen habitat. There is harmony in the relationship. A daily ritual is taking place and its rhythm is comforting. Like old friends meeting again there is pleasure in reconnecting. The body and mind are again at peace and ready to give of their best.

This morning the boardwalk is not popular for walkers. The coffee vendor is just starting up so that may bring more takers into the space. The regulars include an elderly man who appears to be walking with purpose but not pleasure. The slant of his gait and robustness of his body suggest a medical condition and perhaps an instruction to 'get walking for your wellbeing'. A friendly 'good morning' may help the process of transitioning to a more active life and all its rewards. At least this morning there was a response and an attempt to make eye contact. Staying

inactive and sedentary is the enemy for dogs and humans. The next soul to pass also greeted the passer-by with a friendly 'good morning'. His companion was a very small dog clad in tartan. One suspects this gave the owner more pleasure than his canine friend. On the lake there is a kayaker too far from view for any social contact.

However, preparing to enter the water is a group of women. They provide a new dynamic. These women are about to join forces in their dragon boat. Like women all over the world they are participants in this team effort water therapy for breast cancer. Building community and commitment to the team are helping muscle strength for physical enhancement as well as providing social interaction for resilience and wellness. These women are friendly and actively seek to engage in conversation. Their team 'spirit' is uplifting. Their enthusiasm deflects the cold especially when compared with the boardwalk sports-team sprinters who next arrived and with smiles adrift steadfastly rushed forth with apparent singular determination. No friendly interaction from this group. The remaining human occupant on the boardwalk journey was a female walker – the lycra cladding suggested a serious athletic; the kind who could be happier in a gym paying exorbitant prices to use designer exercise equipment. The runners looked expensive and ready for action. No eye contact, no 'good morning', ear plugs in. In space in 'our place' this walker/runner was tuned to somewhere else. Why? Can't this person see all the wonders of nature that make up this place where she is treading. Do the birds sense a non-believer or have they made their own adjustments to this human diversity – live and let live. Yesterday there was a cyclist who acted in a similar manner – riding like the sprint in a stage section of *Le Tour de France* he was totally focussed on traversing the ground space quickly. Like the runner/walker, with ear plugs in, bodily awareness in real space appears to be minimal. Or is it? Is the outdoors also a place of escape; a place to push physical limits; feel in control and powerful – away from the gaze of others? In this sense access to personal space for inner calm suggest the outdoors as a place of refuge; an escape from indoor restriction and someone else's rules of engagement to a space where personal control over events is possible.

SUBJECTIVITY AND OBJECTIVITY COLLIDE IN THE OUTDOORS

Whilst the outdoors is not conceptualised as synonymous with nature, and should not be used interchangeably in this book, there is inevitable overlap in the literature and relevant theory. Reference to Bonnett's book (2004) titled *Retrieving Nature: Education for a Post-Humanist Age* helps to theorise the constructs. The other issue to raise at this point is how much nature and by implication 'the outdoors' have become politicized (Hay, 2002; Macnaghten & Urry, 1998). Acknowledging the power of political context, and its role in shaping opportunities for individuals throughout their life's journeys, the focus here is on the experience as an *act*, where thought and action collide; objectivity and subjectivity intersect; matter is navigated, interpreted and reconfigured with images from memory and past experience. The freedom of the outdoors allows each person to be in an open free

flowing space; to navigate the terrain (constructed and structured space as well as environmentally 'natural') on 'my' terms and augment the subjectivity of the personal experience. In their analysis of the writings of Gramsci's search for connection between subjectivity and objectivity, Ekers and Loftus (2013) note: "Nature, as with space, is not simply static and immutable: it is ever changing, depending on interactions with other moments that might be historicized and situated within specific geographical contexts and practices" (pp. 27–28). What may appear as the everyday is in reality deeply entrenched in hegemonic struggles. Warren (1993) makes this judgement in his analysis of leisure spaces as cultural artefacts. They can on one level represent the high achievements of mass culture and on another level encourage 'placelessness' where personal needs are denied. In his critique of everyday life Loftus (2012) goes further to argue that 'reality' requires us to "dismantle the false boundaries out of which the social and the natural are separated" (p. ix). Many have tried to rewrite the content of how our lived lives are or ought to be, played out. Consider: Marxist social and political theory that shaped destinies in the twentieth century; Lefebvre's interpretation of the production of space and everyday life (1991); Gramsci's *Prison Notebooks* related to the hegemonic role of the intellectuals in the process of rising to a better existence (Lemert, 1999); Bourdieu's construct of 'habitus' (1993) or learned cultural practices; Foucault's (1971) *The Order of Things;* challenges to capitalism in the 1960s (Gibson-Graham, 2006), and the rising power of feminist and queer politics (Pile & Thrift, 1995). Added commentary on socio-cultural and political change is reflected in Harvey's explanations of post-modernism, post-capitalism and cosmopolitanism (2009). Included in his collection of works Harvey's book book titled *Spaces of Hope* (2000) provides a welcome shift in emphasis towards virtue in the contemporary world. Other important voices include: Masseys' conceptualisation of fluid space (2005); Bauman's articulation of the individualised society (2001); the rise of green politics (Hay, 2002; Sutton, 2004), and most recently conceptualisations around happiness and positive psychology (David, Boniwell, & Conley Ayers, 2014). All contribute to the theoretical conundrums of the present. Finally, and added to this European based history of ideas and philosophy, are important contributions on post-colonialism and alternate Eurocentric perspectives including: Bhabha (1994), Nandy (2005) and Said (1979). The struggle to find meaning in the everyday lives of human populations is part of the perpetual intrigue we all face around our existence of 'being in the world'.

MILLENNIAL CHILDHOOD, TECHNOLOGY AND NATURE INTERSECT

The temptation is to associate the behaviours of our runner and cyclist with youth. The millennial childhood of Generation Z and most recently Generation Alpha (since 2010) is inseparable from smart phones, computers and interactive technologies. It's the 'App' for life generation where response immediacy is demanded and generally received. Technology and always-on connectivity to social media help remove the material world from the conscious mind. There is no need to acknowledge other humans in the material here and now. The mind is fully

occupied with the stream of music and voices being pumped into the conscious mind from somewhere far removed. Like an intravenous drip feed this infusion of matter blocks out immediacy. Sounds of nature are not needed. Space in real time is being used for a different reason. Its affordance can be privacy from unwanted observers and intruders. There is no real need to connect with real space other than as ground traversed; perhaps used for exercise routines or simply accessing the freedom to be able to drift into personal thoughts without interruption. Mediation of the real world through digital devices has impact on cognition and development in ways scientists are only just beginning to unravel. Most notably in the field of cognitive disability and brain damage tests where mobile devices appear to be assisting with the recovery of lost functioning (Grace et al., 2014) What is certain is that adults of the future will make meanings of their surroundings in ways that differ from their parents and grandparents. The learning and educational experience is being tooled differently. So too is how we experience the outdoors.

THE OUTDOORS IS NOT EASILY DEFINED

The ritual of the morning walk has now entered the most puzzling phase. The complexity of the lived experience as observed in the human behaviours and artefacts of time and space creates inner discord. Why is it that the cyclist rushing through the boardwalk seems brutal and inappropriate in these otherwise calm surroundings of nature and the outdoors. As if to rebuke the simplicity of this reaction, Payne (2003) suggests in relation to questions of "embodied nature and environmental relations" (p. 177) our need for deeper reflection. As he explains we must seek a strategy that can help to 'reconcile' our 'inner', 'social' and 'outer' worlds. In the context of technologies Payne concludes:

> In total, technologies simultaneously construct the lifeworld and mediate the embodied (and discursive) human experiences of that world. They are a non-neutral form of human/bodily, social, cultural, and ecological capital. (p. 180)

The quiet reflective solitude of the morning walk now takes on a more serious role of seeking meaning. In Payne's interpretation of the fluidity of this complexity, in our experiences in the outdoors, or environmental space, phenomenology and ontology are intertwined. Together they create a two dimensional 'wholeness' (p. 181). Whilst the phenomenon being interpreted is the *form* of the lived experience the place/space association *is* the lived experience or ontology.

THE OUTDOORS DEFINED AS ONTOLOGY

Clarifying our terms is important. This is not a book exclusively about nature, or the environment, or space and place as independent constructs. Nor does it confine our construct to outdoors versus indoors theory. Our concept is both abstract and material; recognition of multiple ontologies. Yang and Worboys (2011) in their work-in-progress paper titled *A navigation ontology for outdoor-indoor space* conceptualise a model of multiple ontologies; a taxonomy of levels that incorporate

indoor and outdoor space as well as navigation space which includes geo-spatial technologies (Geographical Information Systems) but with capability of seamless navigation between indoor and outdoor space. Particularly in the context of safety and disasters, such as fire, this view of the indoor/outdoor interrelationships is important. Modelling the relationships and identification of the navigation domain knowledge between the two spaces is argued as important for emergency procedures and protocols.

There is a sense, however, that this definition does not meet the needs of an outdoors ontology as conceptualised in the philosophical literature. In the latter the textuality of space and place create a discourse that connects with post-structuralism (Derrida, 1985), and the ideas being explored in this text that ground abstract constructs of experiences in the outdoors. Reflecting on Freud's observations of the meanings and purposes of play Derrida, for instance, pushes against the idea of play as games and rules, Rather he argues: "Once play is no longer simply play in the world, it is also no longer the play of someone who plays" (p. 69). Closer to the ideas being presented is the argument used by Jensen (2013) to ascribe meaning to 'otherness'. Couched in the context of 'the outside' he explores the construct through the writings of Carlos Castaneda (ethnographer) and Maurice Blanchot (novelist). Insights include: "… the outside is not in the end an inside (mind). Rather, the outside is an energetic, agential world, which both produces and transforms the inside" (p. 317). The philosophical and linguistic turns explored in this analysis are tantalising for the mind; a source of fresh ideas. At the same time they twist around a corner into the previously unchartered knowledge domains best left to experts. However, what we can conclude is that for the researcher the landscape complexity does not respond to conservatism and traditional lineal approaches. Like the *bricoleur* the toolbox for understanding needs multiple paradigms all of which contribute to the puzzle (Denzin & Lincoln, 2008).

Another day, another place, another walk – perhaps the defining walk? Winter gloom remains and the house is warm and welcoming. A strong will is needed to rug up and step outside. That will is used to propel the body from its sedentary pose in front of a computer screen into placing one foot in front of the other. Knowing that the journey ahead will bring rewards is the major catalyst. Exercise of the body also feeds the mind with new ideas (Stolz, 2014). It starts with a search for that rhythm and comfortable pace known only to the walker. This is a solitary journey. It's late afternoon and daylight is diminishing. The first human interaction is a runner (with ear plugs) who passes but looks back kindly and smiles. The walk draws the walker across parkland where children can be observed playing on their school sport field. Their laughter suggests they are having a good time, and importantly, enjoying the company of each other whilst engaging in the healthy pursuit of physical activity. Two ticks from the observer. A young runner passes by and smiles. The journey is no longer solitary. The birds are still there too. So much is familiar along this journey and yet it is different. A little further on two men are exercising their dogs. Separated by some distance each appears to be working through a routine with the animal. Like a test of obedience and conditioning the

dogs are commanded to repeat simple tasks of throw and fetch. They (the men) must finish work early to be free for this activity. Or is this the assumption of the walker of a kind of normality in the working day that has no place here? Another tangent related to time and place begins to take shape. Like a mind game the imaginary stories of the lives of others leap to the fore and the ground walked over is soon gone to another time and place. Next stop the local village and a chat with the postman. He steps outside the shop for a cigarette and some privacy. Not to be, as walker reminds him of the benefits of a healthy lifestyle and engages him in a conversation about the changes in the village. Like old friends meeting this encounter underlines the familiarity and sense of all being right.

Complacency is short lived. As if to unsettle this calm the return journey of the walk brings an unwelcome encounter with cars, noise and fumes. Amusingly, the motorised vehicles along this busy road included a scooter – the stand on variety equipped with a small motor. Although it looks to be practical for small distances the vulnerability to collisions with larger and high speed vehicles is obvious. This final stretch is dotted with pedestrians, residents chatting in the street and children making their homeward journeys. Energy starts to diminish the pace and with the prospect of a steep rise to the comfort of home, left an hour ago for this walk, there is need for renewed conviction to finish.

Journey over there is a sense of wellbeing through reconnection with familiar friends. Themes recalled are many. This is field work for a purpose. The outdoors nurtures the body and the mind. The affordances of the outdoors and its influence on our personal wellbeing; the social inclusion associated with participation in cultural events; risk and resilience including tests to personal boundaries physically and psychologically, and how we represent the everyday dimensions of life associated with 'being outdoors. Affirmation of a personal ontology – an inner and external being making its own meaning in ways repeated across time and place. Jenkins (2008) sums this vagary in the following way; "the self is unimaginable without mental processes … Both mind and selfhood must be understood as embodied within the routine interaction with the human world, neither strictly individual nor strictly collective" (p. 59). Many layered, both spatial and temporal there can be no one solution for the question we pose for this book. As Castree (2014) deduces our quest to distinguish our relationship with nature can result in manipulative political misuse or "ontological gerrymandering" (p. 160). Vigilance that is needed over how we are guided to interpret the relationship between self, nature and the outdoors almost demands recognition of the exploitative power of 'others'. There is an endless search for reason in the moment that unsettles the past and urges us to continue the journey. Whilst we can concur with Saldanha (2009) that the power over thought and reason associated with European supremacy has lost potency and philosophers, such as Foucault (1970), have spurred on the cultural and linguistic turn, the quest for understanding our lived experiences is endless. Experiencing the outdoors and finding our wellbeing is bound to be subjective, self-referential and unique. Revisiting Emerson (1836):

> When we speak of nature … we have a distinct but most poetical sense in the mind. We mean the integrity of impression made by manifold natural objects. It is this which distinguishes the stick of timber of the wood-cutter, from the tree of the poet. The charming landscape which I saw this morning, is indubitably made up of some twenty or thirty farms. Miller owns this field, Locke that, and Manning the woodland beyond. But none of them owns the landscape. There is a property in the horizon which no man has but he whose eye can integrate all the parts, that is, the poet. This is the best part of these men's farms, yet to this their warranty-deeds give no title. (p. 10)

Returning to Australia and to conclude this chapter the poetry of widely admired poet Les Murray seems to capture some of the sentiments surrounding this journey of self-discovery in the outdoors in his poem titled *The Buladelah-Taree Holiday Song Cycle*.

> The birds saw us wandering along.
> rosellas swept up crying out we think we think; they settled further along;
> knapping seeds off the grass, under dead trees where their eggs were, walking
>   around on their fingers,
>   flying on into the grass,
> The heron lifted up his head and elbows; the magpie stepped aside a bit,
> angling his chopsticks into pasture, turning things over in his head.
> At the place of the Plough Handles, of the Apple Trees Bending Over, and of
>   the Cattlecamp,
> there the vealers are feeding; they are loosely at work, facing everywhere.
> They are always out there, and the forest is always on the hills;
> around the sun are turning the wedgetail eagle and her mate, that dour
>   brushbrook-faced family:
> they settled oin Deer's Hill away back when the sky was opened,
> in the bull-oak trees way up there, the place of fur tufted in the grass, the place
>   of bone-turds. (1985)

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Margaret Robertson
La Trobe University
Australia

GENNY BLADES

2. WALKING THE GROUND

(Re)storying Footprints

The path which one follows is never straight because the walker is a sensual being who is in the world, not simply treading the surface.
(Lund, 2012, p. 233)

BEGINNING

I take my first footsteps on the Lurujarri Heritage Trail in Broome on a warm, clear sunny day in July 2011. Walking with a large group of people from all around Australia and some from other countries, we make our way through back streets dusted in red sandy soil, passing signs on fences that declare 'no gas' and on the footpath 'gas free Kimberley'. Already, I sense something bigger than us.

The Aboriginal custodian leading the walk calls us to gather on a sand dune, our first gathering place on this coastline. I listen with intent to a dreamtime story in and of this place. Ancient knowledge lingers in my mind and body as I walk bare foot along the vast expanse of beach at low tide. The sun is slowly setting and the colour of earth, sky and water change and mingle in the softening sun rays of reds and blues. My eyes gradually re-focus to the darkness and all I hear is the movement of water lapping on the shoreline. In the distance I see the faint glow of a fire which tells me I am getting closer to our first night's camp. (Blades, 2011, personal journal)

This is an excerpt of writing from a walk I did along an Aboriginal songline that is lead annually by the local Goolarabooloo[i] community. I would like to acknowledge the elders past and present, the custodians of this region, and pay respect to their on-going care of Country and living culture.

This walk will be shared at more length later in this Chapter, but to begin with, my impressions of my footsteps in rhythm with the tide, the time of day and the stories, evoked a sense of being welcomed to this place. I felt humbled and an immediate sense of respect emerged. It was a pace that allowed me time and space to attune to this place I was walking through. I have adopted the metaphor 'a dialogue of foot-to-ground' that was used by Mulligan (2003), to help bring forth my attention to the texture and movement of my footsteps. As an outdoor educator this metaphor has been a reference point for me to reflect upon and re-conceive my perspectives on walking and its broader contribution to the wellbeing of people and place.

The footsteps I have taken have been in multiple places, evoking multiple meanings. These have included bushwalking in Australia, tramping in New Zealand, trekking in Nepal and pilgrimage in Tibet. Walking in beautiful places, busy places, disrupted places and spiritual places, all have evoked diverse experiences and responses. My intent has been to attune to the particularities of a place, where time, the rhythm of walking and the storied and peopled landscape coalesce to bring forth meaning. This also abides with attention to inner experiences, noticing the subjective emplacement of the walking body. John Muir's often quoted conundrum captures this:

> I only went out for a walk and finally decided to stay until sundown, for going out I discovered was actually going in. (Muir, cited in Wolfe, 1938, p. 427)

In exploring the physical nature surrounding him, he was, in effect, engaged in a meditative-like exploration of himself. This resonated with me as I began to appreciate and understand the value of this spectrum of awareness of outer to inner and its broader relevance in our modern lives and everyday lived experience.

This chapter explores walking as a lived experience which situates the exploration within the lens of hermeneutic phenomenology. This is not about examining how walking occurs in outdoor education, but rather, seeks to examine the nature of the experience of walking. Lived meanings emerge as we walk and the aim of this Chapter is to interpret these meanings in rich and deep ways that may, as Van Manen (1990, p. 9) suggests, offer us "the possibility of plausible insights that bring us in more direct contact with our world". To begin with, the experience of walking in outdoor education will be explored. Here, the nature of the experience is examined in relation to skills that are outwardly directed or, to consider this experientially, as acts of doing. The term 'performative conventions' (Edensor, 2000a) is used to reveal the nature of these acts of doing and then consider this experience as an encounter which I propose may exist along a continuum of performative to intimate.

The second part explores the significance of place in relation to walking encounters and locates this in Australia. The term 'peripatetic sense of place' (Adams, 2001) is used in order to highlight the significance of movement and the role of the body in relation to meaning making.[ii] Peripatetic derives from the Greek word *peri*, meaning around, and *patein*, meaning to walk (Adams, 2001, p. 187). By using the word peripatetic in front of sense of place, my intention is to implicate the walking experience within a place and examine the meanings that emerge from walking. In Australia, walking on Country is intimately connected to cultural traditions of Australian Aborigines that are strongly embedded in place. In this Chapter, an autoethnographic account of a walk I did along the Lurujarri Heritage Trail on the north-west Kimberley coast in Western Australia, forms a 'peripatetic sense of place' narrative that seeks to reveal walking as an encounter of dialogue of foot-to-ground.

Throughout this chapter, walking is acknowledged as a subjective embodied experience that, in the context of the contemporary environmental crisis, seeks to

counter a pervading sense of a separate self that is 'not implicated in the world' (Mathews, 1991, p. 13). This situates wellbeing in ways that goes beyond the popular social practices of walking, such as benefits for fitness. It is about considering wellness as a state of being that is rendered through the walking body.

WALKING ENCOUNTERS IN OUTDOOR EDUCATION

The growth of the western industrial society transformed the social and cultural significance of walking. Everyday walking experiences became compartmentalized and reduced to sets of activities that removed the subjective nature of phenomenon from the experience. For example, Mulligan (2003) claims that the activity of bushwalking has many layers in between the foot and ground that accentuate degrees of separation:

> Whenever we go, we recreate the frontier between the settled and the wild, and when we travel we are cocooned by our technologies. Even in our most dedicated efforts to 'get back to nature', we carry backpacks loaded with the 'necessities' for survival and we encase our feet in robust hiking boots…we need to keep in mind the degree of separation if we want to become more attentive and empathetic with the non-human world. (p. 284)

Walking is a common activity in outdoor education and in Australia, is referred to as bushwalking. Students often venture on foot as part of purposeful journeys outdoors carrying all the necessities to be in a place (usually semi- remote or remote) for a number of days. Whilst there are pragmatic reasons for the use of technologies such as safety, if these go unquestioned or unexamined in the context of an educational experience, then does this attention to the outer necessities distract from, or reduce, the possibility to engage fully in the subjective nature of the experience?

In outdoor education the walking experience has conventionally involved the learning of a particular set of skills such as navigation, and learning to walk in different terrain that usually requires attention to site-specific safety issues. The emphasis of walking using the guides of topographic maps and compasses has the walker constantly monitoring their direction, progress and location. Edensor (2000b, p. 97) suggests that "rather than an uninterrupted occasion for contemplation and sensual pleasure, such disciplines lead to continual physical self-control and spatial orientation". The perceived field then becomes a 'mapped space' defined by a prescribed route. This is an example of where the experience of walking can be reduced to particular sets of activities with the unintended consequence of not implicating ourselves in the world.

In Australia, during the early 20th Century, tracts of land in the east were set aside for conservation reasons and became National Parks. Bushwalkers were instrumental, in many cases, in the establishment of these areas (Harper, 2007). Outdoor education has adopted the bushwalking practices of that era where venturing on foot into wilderness areas became a primary motivation. Slattery (2009, p. 20) argues that in outdoor education this adoption has generally gone

unquestioned and includes assumptions such as 'entitlement to remote places is earned through mastery of skills' and that 'the pursuit of inaccessibility is a motivation, a lure, a challenge in its own right'. Furthermore, the choice to go to remote areas, with the absence of human impact, may be underpinned by an assumption that a heightened experience on personal and spiritual levels may occur (Slattery, 2009).

Choosing to venture into remote places does necessitate a degree of preparation around physical fitness and technology. Here, the nature and extent to which the walking experience is mediated comes under question. For the student, the question is, to what extent, and in what ways, do continuous encounters with technologies such as navigation aids, mediate their experience? This is not to say that experiences can become void of mediation but one can become aware of the nature of the mediation in order to be attentive and empathetic to the experience of walking in and through places. These examples of outwardly directed attention to skills illustrate performative conventions of practices that, if left unquestioned, may create busy acts of doing for students and subsequently reduce the possibility for the richness of their subjective experience to emerge.

In order to bring this awareness forth, expands the experience into something more whole and is why I choose to use the word encounter. In seeking to walk with awareness and reciprocity, enacted as a dialogue of foot-to-ground, encounter evokes interaction and considers the ways in which we observe and notice the world. Buber's dialogic philosophy has informed my research and he describes encounter with attention to the nature of the interaction:

> I would rather think of something unpretentious yet significant – of the glances which strangers exchange in a busy street as they pass one another with unchanging pace. Some of these glances, though not charged with destiny, nevertheless reveal to one another two dialogical natures.

> But I can really show what I have in mind only by events which open into a genuine change from communication to communion, that is, the embodiment of the word dialogue. (Buber, 1970, p. 21)

To reveal dialogue in this way, shifts one's attention to communion that invites a level of intimacy and mutual engagement. Buber is popularly known for his philosophy of dialogue expressed as the 'I-It' and 'I-Thou' principles that were first published in 1918. The relevance of this philosophy to outdoor education has been explored elsewhere (Blades & Bester, 2013; Blenkinsop, 2005, 2004). For the purposes of this Chapter, it is worth briefly noting that 'It' assumes an orderliness and predictability and the 'I-It' relationship "objectifies and alienates the world that Buber believed must be revered and related to" (Blenkinsop, 2005, p. 294). In other words, the inter-subjective nature of experience is the 'I-Thou', where the subjective 'I' encounters the subjective 'other'.

To consider encounters as inter-subjective, requires attention to the performance of outwardly directed skills to shift to inwardly directed attention to qualities such as awareness and presence. This embodies a sense of mutual engagement, and is what Buber (1970) referred to as 'intimate encounters', where moments of unity

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claim our attention. For instance, have you ever experienced walking through a pine forest and having that uncanny experience of being scrutinised amidst the whispering rustle of pine needles? Abram (1997, p. 130) describes this as 'patient receptivity', whereby our senses can open up and attune to the place. As educators, bringing these qualities to our attention acknowledges the emergent and unpredictable nature of the walking experience, rather than the dominance and reliance upon ordered, reflexive positions. Edensor (2000b) argues that the latter has largely imposed 'normative, unreflective codes' upon walkers.

> Thus, walking can indeed be particularly suitable for stimulating reflexivity, yet the moment it becomes devised and practised as such, an awareness of practical conventions can obscure the chance occurrences and multiple sensations that stimulate a different sort of reflexivity, one which embraces the difference, the alterity of nature, the contingent, the heterogeneous, the decentred, the fleeting and the unrepresentable. (p. 102)

This requires a degree of trust from the educator in order to allow meanings to emerge in the multiplicity of situations and places we take students walking. This also requires a revision of traditional educational epistemologies and as Osberg, Biesta and Cilliers (2008, p. 213) suggest, alternative 'temporal' understandings of knowledge are called for. These authors explore how knowledge and reality are part of the "same emerging complex system which is never fully 'present' in any (discrete) moment in time". This, they claim, points to the importance of acknowledging the role of the 'unrepresentable' or 'incalculable'. In relation to the embodied experience of walking, diverse epistemologies of the sensual, the cognitive and movement exist in all their complexities.

It is these spaces in-between, the unknown places steeped in ancestral stories, the space in-between each footstep that the following section explores via an autoethnographic account of a walk I did along an Aboriginal songline. As Humberstone (2011, p. 495) suggests, "autoethnography can provide for unique insights into the embodied experiences of the life-worlds of 'being' in nature". In the narrative that follows, my intent is to represent in some way, my embodied experience of *being* walking, rather than an account of *doing* walking through this place.

PERIPATETIC SENSE OF PLACE: SONGLINES AND DREAMTIME STORIES ON THE LURUJARRI HERITAGE TRAIL

There is a tangible relationship between the walking body and the ground that brings us into immediate contact with our surroundings. Here, I am interested in the Australian context of place and the meaning of the ground beneath our feet that Aborigines refer to as Country. To situate this in post-colonial Australia, our (white Anglo Saxon) relationship to the ground is relevant to explore. The language used by Carter (1996) provides a textual resonance to colonization in the way he describes our relationship to the ground:

> we glide over it … to render what is rough (as) smooth, passive, passable; we linearize it, conceptualizing the ground … as an ideally flat space that can be traversed without hindrance … We walk on the ground as we drive on the road; that is, we move over and above the ground. (p.2)

This, he argues, denies us of our inhabitation of land. We need to focus instead on the ground at our feet, and "pay attention to its folds and inclines" (Carter, 1996, p. 2).

The Lurujarri Trail is a nine day cultural walking journey that is conducted by members of the Goolarabooloo community. I had the privilege to walk this Trail in July 2011. It is situated along the northwest Kimberley coast, in Western Australia and stretches about 130 kilometres from Minyirr (Broome) north to Minarriny (Coulomb Point). The Trail traces part of a song cycle of the Jabirr Jabirr, Jukun and Ngombal peoples. Songlines depict the life and journeys of ancestral beings or Dreamtime spirits and serve as an oral history map of Country. Short components relate to particular places and the entire sequence forms a map of the ancestor's journey (Sinatra & Murphy, 1999). The Lurujarri Trail was an enactment of a dialogue of foot-to-ground for me, beginning with exploring my sense of relationship with Country.

Walking on Country is a distinctive phrase in Australia and bears witness to the ancient wisdom of the indigenous culture and their deep relationship to this land. Chatwin (1987, p. 63) explains that all our words for Country are the same as the words for line and these lines exist as an interlocking network of 'ways through'. In relation to walking, this links with Ingold's (2013) notion of a network of lines, or lines of movement that manifest from inhabitation and threading their own paths. This relationship with the ground resonates as an intimate encounter and speaks of the Country as a living place as if one is speaking about a person or friend (Rose, 1996, p. 16). There is a dialogue embedded within this relationship and as Mulligan (2003, p. 276) explains, we are obliged to enter into this relationship with 'interactive responsibility'.

The following words are spoken from an Aboriginal law holder speaking about walking on Country of the Lurujarri Trail:

> We have to dig a bit deeper, but we settle on the surface. We don't go to what is in our bones, that feeling. In order to experience this, we have to walk the land. Then we wake up to feeling, what we call le-an here, and we become more alive, we start feeling, we become more sensitive. And that's the time you start to experience, when the land pulls you and takes over.

> We have to learn to see again, learn to walk, to feel all these things again. So if there's a process where we can be guided through to learn to get to the stage of making contact with the land again, we get some calling of responsibility our self. (Roe & Hoogland, 1999, p. 11)

To learn to 'see and feel again' invites us to consider how we might walk through places. Along this Trail there was an unfolding narrative of walking, of pausing and listening to Dreamtime stories that are deeply embedded in this place and

brought alive on this walk. Within this Country, the creator being is traditionally perceived as the Emu man 'Marella' whose journey as narrated in the song cycle, correlates site-wise with that of archaeologists' discoveries of three-toed prints that they speak of as dinosaur footprint. Aboriginal cosmology makes explicit the relationship between the spiritual and the practical where land is both a source of livelihood and a sentient landscape created by the Ancestral being (Wall, 2010).

As I walked, the interaction between the material and the imaginal emerged in unexpected ways. During the walk, we would sometimes meander and wander off the Trail, pause, sit for a while, and listen to a custodian share Dreamtime stories: stories about women's place and anthill dreaming, stories about snake dreaming and more. We were, to use Snyder's (1990, p. 145) metaphors, 'on the path' yet 'off the trail' where the 'path' is the material line followed and 'off the trail' refers to 'the relentless complexity of the world' that invites us to wander through, to learn and memorise slopes and gullies as if 'holding a map in the mind'. This metaphor enabled me to be open to the narrative of this land and for meaning to emerge. It became my inner map that was just not the features I could see. I was humbled by this sense that we are connected to a greater act of creation that goes beyond the geomorphic formation.

The Dreamtime stories represent a dynamic and on-going relationship with Country that supports the wellbeing of Country. Furthermore, the Dreaming is functional, meaningful and alive as poignantly described by Benterrak, Muecke and Roe (1996, p. 19):

> [The Dreaming] is not a set of beliefs which is being lost because it is no longer valid, it is rather a way of talking, of seeing, of knowing, and a set of practices, which is … as mysterious and beautiful as any poetry … it depends on people living in the country, travelling through it and naming it, constantly making new songs and stories.

As I walked in between these stories, my thoughts seemed free of evaluation. Was this my dreaming? A space entered into where imagination and stories meet? In this sense, the landscape is the text, not in the sense of a map representing the contours and the vegetation types, but as a map representing intimate knowledge (Arbon & Lowe, 2003). This meaning also had a profoundly human presence, one which was far removed from the colonial settler text of terra nullius (human absence). Therefore, the Trail is a lived space, where meaning emerges and where new songs and stories are made, that enables the exploration of old topics in new ways (Benterrak et al., 1996).

Another dimension of the encounter involved the invitation by the custodian to listen to and read the landscape. The stories told of the land evoked feelings of its aliveness and interconnectedness. For example, water held different meanings: running water was living water; ponds or lakes were holding or resting water. We observed an array of sharp stones and grinding stones on a midden site, evidence of people having lived there. This spanned a long section of sand dunes. I sat for a while at this place to bear witness to past time laid out before me. In the act of *being* walking, I began to notice that *listening* and *seeing* became the same thing.

For example, I heard the wind blow as well as seeing the unseen such as the wind-carved sand dunes. Therefore, the landscape and the elements of weather such as the wind were intertwined. When walking on my own, this became a walking meditation as I would observe my in-breath and out-breath, keeping it in time with the rhythm of my walking. Mindfulness is the process of being aware of the present moment and this enabled me to engage in 'patient reciprocity' in order to listen and to see. Ingold (2010, p. 122) describes a mindful body as a living, breathing body and the earth and sky are not external components but are 'rather regions of the body's very existence'.

We walked through clusters of saltwater paperbarks and freshwater paperbarks, observing and collecting some native berries along the way. All of these were a rich source of food and water. There was something about these stories that held me in those places. It was as if they were going through my body rather than my body walking through them. An analogy to this is when reading poetry, when words resonate to the core of your being and you feel your body connect to their trail. Here, my body was connecting to the Trail beneath my feet as well as the space around, enfolding the stories, the place and experience that brought forth a constant sense of connection. For instance, the temporal encounter of seeing ancient grinding stones and dinosaur footprints connected me to a continuum of the past, present and future.

The focus on footsteps calls into question footwear as a material layer and the nature of its mediation in the walking experience. Footwear has been considered as an invisible technology in the examination of the role of technology mediating the human relationship with nature, yet Michael (2000) suggests it can reveal the diverse and multifaceted relationship between humans and nature. The walkers on the Trail are supported with the transport of their camping gear to each campsite daily that enables them to just carry a light day pack. This provided supportive conditions to pay attention to the ground and the surrounds. Use of footwear for me was a personal negotiation of going barefoot, wearing rock booties (a light rubber sole) or light weight boots. This was dependent upon the physical conditions of the ground but also entwined in that was the opportunity to pay attention to the nature of contact with the ground. For example, it enabled me to feel the texture of the ground, its subtle inclines and declines, as well as changing my pace and rhythm of walking. Of course there were practical choices in this, as I was unaccustomed to walking barefoot and needed to protect my feet from the hot ground or from abrasion or rubbing from sand or coarse rocks! It would be simplistic to suggest that changing footwear enables the degrees of separation to be peeled away, but the process of making choices did open up my senses and awareness to the changing surfaces.

However, this responsiveness can reveal the contradictions and complexities of places. The nature of this relationship of foot-to-ground is not a negation of the ground (Carter, 1996). Instead, walking brings the stories of the ground to life in all their complexities. So rather than perceiving each footstep as distinct and purely functional, the footstep becomes a footprint to the next step – a past, a present and a future – unfolding meaning along the way, telling a narrative (Ingold & Vegunst,

2008). The material impressions of walking on the Trail were a mixture of meandering, wandering, pausing and walking with purpose, such as having to beat the incoming tide to navigate our way across watercourses! These were irregular and unpredictable, weaving on and off the beach, the sand dunes and inland through forests and wetlands. Figure 2.1 presents an imaginal perspective of footprints as texts, connecting them from past time to the present day. These images contrast the continuity of ancient time and the Dreamtime stories (Marella) entwined within them, with the present day human presence of walkers who, for a brief moment, pass through this place. In acknowledging the complexities embedded within a dialogue of foot-to-ground, acknowledges the heterogeneous nature of the human relationship to nature. The convergence of the material, the sensual, the cultural and the historical texts reveal the contested nature of places. The location of this Trail is idyllic in its natural sense. It is a place of significant biodiversity on a global scale. However, for many years, this Country was a contested site as corporate and government mining interests planned to develop of a major liquid natural gas port and processing facility in the middle of this song cycle at Walmadeny (James Price Point). This was recently overturned.[iii]
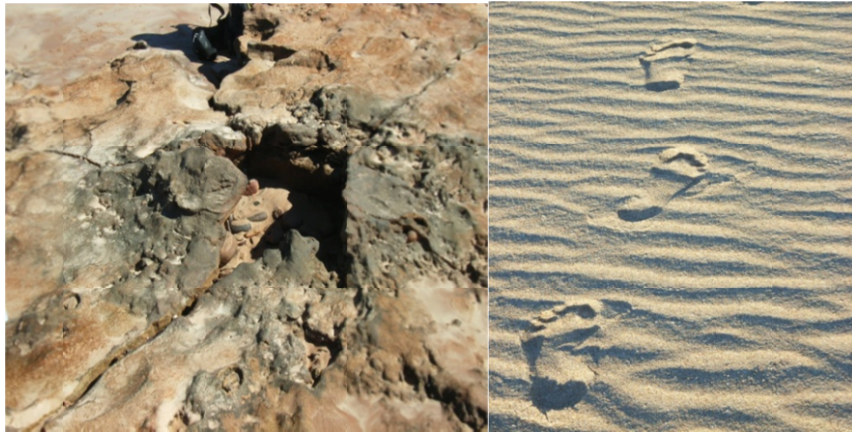
Figure 2.1. Marella's journey and the human journey. (Source: Author)

Finally, the spaces in-between, the familiar and unfamiliar, all intersect in these lines of movement. There was the daily routine of getting up, having breakfast, packing and loading the truck, then setting off on the Trail and arriving at camp in the afternoon which became very familiar. There was also the unfamiliar, particularly the Dreamtime stories. As I listened to the words I understood their literal meaning but there was a dimension of unknowing as I am not embedded culturally in these stories. However, I could bear witness to the pauses in the stories, the gap between each footstep taken, as if they held an unspoken story that emerged in those in-between spaces. These qualities resonate with the notion of 'spirit of place' that Rigby (2003, p. 114) considers can be a model of ecological

aesthetics. This is about what arises in the 'in-between of atmosphere' and involves 'the coupling of physical manifestation and sensuous perception'. This attributes to walking an agency that offers both sensory and perceptual awareness. As Roe and Hoogland (1996, p. 11) said, "we wake up to feeling, what we call le-an here, and we become more alive". Walking the Trail was an embodied walk through this place and as an outdoor educator, gave me cause to reflect upon my 'interactive responsibility' to places I walk through with students.

RESTING

> The path which one follows is never straight because the walker is a sensual being who is in the world, not simply treading the surface. (Lund, 2012, p. 233)

This quote evokes the attitude of the bodily experience, via the mobility and corporeality of walking, as a means of making meaning in the world. From a phenomenological perspective, Merleau-Ponty (1968) explains this by way of the ground, of all our thought, beneath our feet:

> … there remains the actual ground that we stand on, the earthly ground of rock and soil that we share with the other animals and plants. This dark source, that we can readily point even in the silence, will outlast all our purely human philosophies as it outlasts all the other artificial structures we erect upon it. We could do well, then, to keep our thoughts and our theories close to the non-arbitrary ground that already supports all our cogitations. The density beneath our feet is a depth we cannot fathom, and it spreads out on all sides into the horizon and beyond. Unlike all the human-made foundations we construct upon its surface, the silent and stony ground itself can never be grasped in a purely human act of comprehension. For it has, from the start, been constituted (or 'constructed') by many organic entities besides ourselves. (p. 155)

This attributes a quality of being deeply responsive, and for educators to trust in the emergence of what constitutes an interactive dialogue of foot-to-ground. As Osberg et al. (2008, p. 213) state, that with this understanding "knowledge reaches us not as something we receive but as a response, which brings forth new worlds".

It is an ecological responsiveness that seeks to bring forth walking encounters that attune our bodies, mind and place. Van Wensveen (2000, p. 32) describes attunement as a virtue which "cannot be taught or learned solely at the level of reflection" but rather, we "cultivate an attitude of attunement". This attitude, when considered as a virtue, brings forth the moral significance of cultivating this as our 'interactive responsibility' in walking through places. This invites us to slow down, to see and to feel, and in the words of Goolarabooloo custodians:

> We have to learn to see again, learn to walk, to feel all these things again. So if there's a process where we can be guided through to learn to get to the

stage of making contact with the land again, we get some calling of responsibility our self. (Roe & Hoogland, 1999, p. 11)

The nature of the walking encounter can be opened up, and our senses become fully alive, as we bear witness to the ground beneath our feet and the emergence of meaning. This is not the surface layer, it is the enfoldment of layers of experience and meaning that are intricately entwined. It is not a sublime surface either, but rather, the surface reveals all its complexities and ambiguities that are unrepresentable and unpredictable. Therefore, if we pay attention to the qualities of being that stimulate a deeper reflexivity, we open up to the possibility of encounters with moments of unity between the known and the unknown.

NOTES

[i] Goolarabooloo means Keepers of Law and Culture for Jabirr Jabirr and Ngombal (Wall, 2010).

[ii] Wallace (1994, p. 18) states that peripatetic claims concerning the benefits of walking have changed through history and as the industrial revolution shifted travellers' attention to the process of travel, this altered the "socio-economic content of walking". Walking became desirable both in "practical and metaphorical ways": the re-creation of the self; reconnection with nature and with the divine; continuity of sense, mind and spirit and; community and connection with a communal past.

[iii] This issue was and is of major significance to this region and pressures to maintain its cultural and ecological integrity continue. It is beyond the scope of this chapter to examine the political relevance of the Lurujarri Trail. Refer to Wall (2010) for more background to the issue.

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Genny Blades
La Trobe University
Australia

ERIK MYGIND

3. A CANADIAN WILDERNESS EXPEDITION FROM A DANISH PERSPECTIVE

Culture Analysis and Reflections

It is interesting how different the legislation is in Canada and Denmark. Danish university students never sign a written document, because the legal rights are based on the 'Bonus Pater Familias' (a term derived from Latin that literally means 'the good father of the family'). It is a kind of legal term, a fictitious legal person who would act reasonably and sensibly in a given situation.

A DIFFERENT CONFERENCE CONCEPT

During the summer of 2010, I attended a conference titled *Wilderness Educational Expeditions: International Perspectives and Practices* where we paddled on the Mara and Burnside Rivers in Nunavut, Canada. We were a group of 14 academics from Norway, Denmark, Sweden, Scotland, Canada, and Japan, organized by Morten Asfeldt from the University of Alberta, Augustana Campus and Simon Beames from the University of Edinburgh. The conference goal was to:

> … allow an international group of academics who use expeditions as a part of their teaching to share a specific element of their practice along with its underpinning theoretical foundations.

The conference provided a forum for rich discussion about the varying international practices of wilderness educational expeditions and has been a foundation for ongoing research and teaching partnerships. The wilderness conference contrasted with most traditional academic conferences because of the unique setting and the large amount of formal and informal time which allowed us to combine practice and academic reflections while sharing and learning from each other. It was a hope that this type of conference would influence participants' future teaching and also inspire future international research collaboration and add to the body of related literature, which it has.

CONTRASTING ASPECTS

I found this conference of significant interest for several reasons. First, a conference concept where researchers replaced powerpoints and indoor presentations with outdoor teaching, reflections about Outdoor Education

(OUTDOOR EDUCATION), and research discussions sounded refreshing after years of attending traditional academic conferences where we often sit in fantasy hotel ballrooms discussing issues of wilderness and expeditions. Secondly, the combination of theory and living a simple outdoor life (known as *friluftsliv*) with research and teaching colleagues was extraordinary and facilitated a high degree of reflection on OUTDOOR EDUCATION university programs at my own university in Copenhagen. Thirdly, it allowed me to question traditional conference formats and practices and to consider how to restructure them to increase opportunities for relationship building and information exchange. Finally, it was life-giving and inspiring to see the vast wilderness and wildlife of the Canadian north. In Denmark, we do not have wild nature and it is not a surprise that a Canadian wilderness expedition would have a specific attraction. I visited another educational culture, country, and nature and therefore the aim and focus of this article is to highlight situations where my own cultural and Outdoor Educational background was challenged and confronted. When and why would I be surprised? As a leader, teacher, researcher, and administrator of OUTDOOR EDUCATION programs at the Department of Nutrition, Exercise and Sports (NEXS), University of Copenhagen, since 1981, I saw this wilderness experience as a unique and useful tool to develop new ideas regarding theory and practice and serve as a supplement to my present experience from OUTDOOR EDUCATION courses in Norway, Sweden, Iceland, and New Zealand (mainly canOutdoor Educationing, kayaking, hiking, and winter activities).

THEORY – CULTURAL ANALYSIS

A useful way to find a structure, organize, and present characteristics, when meeting a different culture, is to examine those elements of Outdoor Education that carry significance and as pointed out by Kayser-Nielsen (1997) the intention is:

> … through everyday phenomena to analyze deeper cultural patterns, which say something about basic social values and understandings. (p. 68)

From a comparative perspective I want to analyze differences and similarities between my personal experiences in this particular wilderness expedition conference and contrast it to *friluftsliv* and OUTDOOR EDUCATION programs at NEXS (Ehn & Löfgren, 1982, 2006). The term cultural analysis leads from thoughts and reflections through a process where a course of action is split or broken down into its constituent parts and subsequently reassembled into new wholes, synthesis, and interpretation. Cultural analysis is thus an interaction between exposure of the details to creation of models or coherence that can explain or create an understanding. Interpretation may be the most important cultural analytical tool, but at the same time I am aware of how difficult it is to explain, understand, and make plausible as it unfolds from an 'actor-oriented' perspective (Ehn & Löfgren, 2006, p. 95). A key approach to cultural analysis is the process of asking questions about the reality I face. Ehn and Löfgren (1982, p. 107) suggest five different angles on the interpretation process to make it operational and give it

structure: perspectives, contrasts, dramatization, homologation, and testing. My focus here will be on perspectives, contrasts, and dramatization.

WILDERNESS EXPEDITION OR TRIP?

The professional and academic objectives or goal oriented elements and the basic values of *friluftsliv* or process seemed to work hand in hand during 14 days on a river in Canada and at the same time held the unique potential of creating social relations with other researchers. As highlighted in the invitation:

> wilderness educational expeditions have a long history in education and continue to play an important role in education programs around the world shaped and defined by unique regional and national influences such as culture, history, and geography; institutional history, philosophy, and pedagogical practices; instructor passion and skills, and a variety of other factors.

What struck me about the quotation above was the use of the words 'wilderness' and 'expedition' because these words are rarely used in the Danish Outdoor Education context. An intensive cultivation of Denmark has resulted in a landscape extremely influenced by human processes and today less than 1percent of Denmark's landscape is identified as a wilderness area.

As pointed out by Chris Loynes (2010) the word 'expedition' is important, because it conjures up something specific that is somehow different from 'journey', 'trip', 'travelling', 'touring', 'backpacking' or 'voyage'. For some, 'expedition' implies a wilderness setting. For others, it means contrasting cultures and landscapes. At NEXS 95percent of all types of Outdoor Education courses take place in Denmark and therefore the word trip (tur) might be more appropriate to use in a Danish context.

PERSPECTIVES ON SAFETY RULES AND REAL RISK

Of course a Wilderness Educational Expeditions Conference or a wilderness expedition with Canadian students, just as an Outdoor Education trip with Danish students in Denmark, needs thorough and detailed information and preparation before 'take-off'. Therefore, at first it was not surprising to receive a lot of information from Morten Asfeldt about the expedition including travel plans, gear, personal equipment, food, etc. One interesting and contrasting aspect – as a Dane – is that 'danger' is hardly an issue on a Danish educational trip.

> During our time on the river, we will be very difficult to contact. We will bring a satellite phone and will be able to contact the outside world in case of an emergency. However, this phone will be turned off so no one can contact us due to power limitations. The only means of contacting us is by sending an airplane to look for us. This will be very expensive and even if the airplane finds us, it may not be able to land where we are. In any case, we also bring a radio with us that allow us to speak to the pilot in order to receive the

> message. The cost may easily be $5000.00 to $10,000.00 CDN. (from Itinerary and Back-up Plan, Augustana Faculty, University of Alberta, June 25-July 13, 2010)

Back-up plans, contact persons, mobile phones, a Plan B, emergency, illness, weather forecast, etc. are all part of trips in Denmark with university students and the time frame is typically between two and five days. This a great contrast to the norm at Augustana Campus where wilderness expeditions often last two or three weeks both summer and winter. How do different time schedules influence our students' Outdoor Education competences, values, social learning, and practical skills? What are the factors and historical backgrounds that can explain the different approaches and timeframes at our two universities in Canada and Denmark?

Today, a cell phone can reach 99 percent of Denmark and at most places to which we travel, the battery can be recharged from an electric plug within an hour. In the Canadian tundra, this is impossible and a satellite phone is the only connection to the civilized world. What happens if somebody gets seriously ill or suffers some kind of serious injury? What are the competencies in the group if one or several canoes capsize on the river, or if it was attacked by a Grizzly Bear? It could take days before rescue is possible. In other words, this adventure expedition adds extra demands and pressure on the leadership role; sloppiness could be fatal. 'Real risk' is very real on this sort of wilderness expedition.

MEDICAL AND CONTACT INFORMATION FORM, WAIVERS AND THE DANISH 'BONUS PATER' CONCEPT

In Canada as well as other English speaking countries, it is a normal procedure to fill out medical forms and waivers before participation in Outdoor Education programs or wilderness expeditions.[i] This is in contrast to security and legislation rules and traditions in Denmark (and Nordic countries) with no signed waivers before field trips, field schools, research projects, and courses or activities offered off campus.

Before the wilderness expedition, I had to sign a medical form and agree to 'accept important legal obligations and waive certain legal rights' and acknowledge that 'I am aware that by participating in the Field Activities I will be exposed to many inherent risks and dangers that may result in, among other things, mild or severe illness, physical injury, partial or total disability, death, and/or property loss or damage.' followed by a very detailed description summarising everything that could possibly happen to me within the following categories: terrain and physical environment, travel, weather, locations, non-human life, equipment, machinery, or other devices, other hazards, and free time. Finally, 'I agree with the foregoing and freely accept and fully assume all Risks and acknowledge the possibility of, and agree to be solely responsible for personal injury, death, disability, property damage or loss resulting from the Risks'. In other words, by signing the waiver the University of Alberta is free of any kind of responsibility during my participation in the wilderness expedition and in this

connection any liability to pay compensation. But, what happens if the instructor or supervisor makes a mistake that brings about some injury to me? Or, worst-case, I die?

It is interesting how different the legislation is in Canada and Denmark. As mentioned, Danish university students never sign a written document, because the legal rights are based on the 'Bonus Pater Familias', a term derived from Latin that literally means 'the good father of the family'. It is a kind of legal term, a fictitious legal person who would act reasonably and sensibly in a given situation. If a person (instructor or student) causes a loss during an outdoor trip or activity, he or she will be prosecuted if acting with carelessness (e.g. not upholding the standard of 'bonus pater'). If you behave as a 'bonus pater', it is expected that you have no liability to pay compensation. Though, some professions are subject to a stronger legislation. For example, lawyers, accountants, doctors are held to 'optimus vir' standards. However, during winter in 2012 there was a severe accident in Denmark with a fatal outcome at an 'efterskole' (a lower-secondary-level boarding school program for students in year 9 or 10). One teacher drowned and seven students survived but with mental disabilities, after capsizing in a dragon boat and suffering hypothermia. This led to a tightening of requirements for outdoor leaders and instructors who have to complete written instruction before taking groups on the water (such as when, where, group size and route plan). This is a new practice in Denmark.

The different ways of treating safety legislation in Canada and Denmark seep down to university level and the Outdoor Education contexts; rules we as educators act upon thus reflect different cultures and traditions. A simplistic way to understand the different national traditions could be that there is a main focus on objective issues (that is, The University of Alberta, Canada) while Denmark and the Nordic countries (that is, NEXS) focus more on the person(s) responsibility and behaviour in Outdoor Education activities. Canada and other English speaking countries follow a tradition where the individual can sue other persons or institutions for almost every thinkable matter (see waiver), while with the 'bonus pater' principle in Denmark, and the Nordic countries, it could be argued that a social welfare program is the underlying concept.

CONTRASTS: THE CANADIAN AND DANISH LANDSCAPE

Looking down on the Danish landscape from 10,000 metres, I see scattered and relatively small forests appear between fields, cities, towns, villages, roads, and farmhouses and consequently, it is obvious that the natural world has been altered and 'settled'. Danes have easy access to the coastlines and beaches which can be reached by car from all parts of Denmark within half an hour and the close contact to the sea, fjords, sounds, and beaches has a great impact on the Danish population's use of outdoor activities and where Outdoor Education takes place. Forest and beaches are the most frequently used nature areas for recreation as well as Outdoor Education purposes (Jensen, 1998, 1999). The Danish Ministry of Environment (2004) prioritizes our forests, many marine habitats, and bird

protection areas including new national parks, smaller biotopes, and semi-cultural green areas (The Danish Nature Agency, 2013). These areas have become increasingly important for wildlife, recreation, and Outdoor Educational activities.

If you travel by air, it takes less than half an hour to travel the 450 km from Copenhagen in the east to the most western part of Denmark. The longest distance from north to south is about 368 km. In other words, we are talking about a tiny country (43,000 km^2) which is mainly composed of scattered islands, inlets, straits, and the surrounding sea. When leaving Jutland, which is connected to the top of Germany, a 300 km long coastline appears and separates the land from the North Sea.

In Denmark more than 80percent of the total land area is privately owned, and there is a limited access to private natural areas. Furthermore, the legislation and protection of private property in Denmark is a limitation in the right of public access to the landscape and different from the open access in Canada and the Nordic countries which is called 'allemandsretten' in Scandinavia (Sandell & Fredmann, 2010). Over time the Danish landscape has been heavily used for agrarian production. Forests accounted for only about 2percent of the land at the beginning of the nineteenth century, but today, the forested area has grown to about 14percent of the total land area (Jensen & Koch, 2004).

It is discouraging to realize that less than 1percent of the Danish landscape can be defined as wilderness and how much impact 5.6 million people can have on the landscape (a population density of 128 inhabitants per km^2) as contrasted to Canada with 9,976,140 km² (3.2 inhabitants per km²).[ii] Based on the fact that wilderness areas hardly exist in Denmark, there is reason to believe that nature experience, outdoor activity patterns, and agents of socialisation to outdoor activities probably differ between students in Canada and Danish students. Regardless, a cultural analysis and a comparative study between New Zealand and Danish physical education students showed significant differences in demographic profiles, agent of socialisation on participation in outdoor activities, and preferences for spending time in natural areas (Mygind & Boyes, 2001). This finding underlines that both landscape and culture seem to have a significant impact on our students, before they meet our Outdoor Education programs.

In contrast to the Danish landscape, space, time, and magnitude hold another dimension when you approach Canada. Once passing Greenland and Baffin Island, as I flew to Canada, it took another two hours (at 800 km/hour) to travel across the tundra of Canada's Nunavut and Northwest Territories. For hours there were no signs of civilization apart from a few industrial installations. To me, it was breath taking and unbelievable to see the endless number of lakes and to know that within three days I would sit in a canoe Outdoor Education on the Mara River about 420 km north east of Yellowknife in a vast treeless plain and in an Arctic region where the subsoil is permanently frozen. From a social point of view, a combination of expectations, challenges, and excitement arose with the prospect of outdoor living, teaching, and discussions over three weeks with 13 more or less 'unknown' colleagues from seven different countries. I wondered what would surprise me and what kind of different and contrasting experiences and knowledge would result

from a wilderness expedition in a Canadian nature context. The wilderness expedition could best be described as an exotic experience, because everything was new to me – Canada, the landscape, the tundra, and the native fauna and flora, Inuit culture and our research group. As a 'pre-understanding' I had personal and work-related experiences of trip planning, risk and safety aspects, group processes all year round from trips in Iceland, Norway, Sweden, New Zealand, and Wales.

PLACE: THE TUNDRA, RIVER, AND ANIMALS

To get a first impression of the magnitude and grandeur of Canada, I decided to drive for one-and-a-half days, 1600 kilometres, by car from Camrose south of Edmonton to Yellowknife on the north shore of Great Slave Lake. This distance is comparable to the distance between Copenhagen and Rome in Italy. For many kilometres we drove through boreal forest on the only road to the Northwest Territories surrounded by an endless forest of spruce and pine trees. I saw animals new to me in their natural habitat and not in a zoo, and every time something appeared Morten was told to stop the car. Black Bears, Sandhill Cranes, and Bisons were just some of the different animals and birds you won't experience in Denmark. Even more surprising was the experience of wildlife close to the city of Yellowknife; from the campground in Yellowknife I went for a run with bear spray in one hand and a bottle of water in the other and encountered a wolf only 300 meter from the campsite. Frightened by the sight of two Danish 'Vikings' and one Norwegian, the wolf disappeared immediately and left us with a feeling of surprise and excitement. Here we had the first experience with the fantastic Canadian wildlife and were reminded that caution and care are needed to a much higher degree as compared to wildlife encounters in Denmark were there are no dangerous animals. The tiny tick is considered to be Denmark's 'most dangerous animal'.

What a feeling when the de Havilland Canada Twin Otter, a Canadian icon with a strong historic background, left us at the headwaters of the Mara River, where the ice still covered parts of the lake. Only the barren land with its silence and vast wilderness surrounded us in all directions, and civilization is more than 420 km away. This was a new and very special feeling, but changed gradually while getting more and more familiar with the group and paddling the Mara and Burnside Rivers. From Nose Lake, where we took the first paddle strokes, we gradually adapted to the environment and the changes between running water, rapids, and calm water including lakes, the variations in currents, the eddies, the head and tailwinds, the rain, thunderstorm, and sun, the lining of the canoe where damage by gear and the risk to capsize was high, portaging of gear and canoe, fishing trout, and watching birds and other animals. Day after day the sense of knowing this specific river increased from low water levels and stony parts upstream to an increasing amount of water and stronger currents in the end of the wilderness expedition. The experience gradually crept under the skin, was stored in tired muscles, sounds, and smells; all senses were precipitated and layered in my body and mind at a conscious as well as unconscious level.

TIME AND CONNECTION TO PLACE

The time spent on the river is crucial to the feeling of connection to place. How much time is needed to be and feel connected to a place? Fourteen days on the Mara and Burnside Rivers and the surrounding landscape definitely gave me a feeling of strong connection to the arctic and maybe it is an obvious observation, but never the less it brings a relevant aspect of importance to be discussed when planning our rather short Outdoor Education trips in Denmark. Do my students get a feeling of connectedness to nature and culture on our trips? Further illustration for these reflections are highlighted in a recent book by Brian Wattchow and Mike Brown (2011) in which:

> … the final chapter proposes four signposts: being present in and with place, the power of place-based stories and narratives, apprenticing ourselves to outdoor places and the representation of place experiences. (pp. 180-199)

For several reasons it has never been an issue to travel long distances to wilderness settings with Danish students in Sweden or Norway, except for a weekly winter course due to lack of snow/ mountains in Denmark. Wilderness expeditions are costly to the department and students and from an environmental-climate-CO2-emission point of view, debatable. So far the policy has been to teach students about their local, natural areas because this is the place where most students are supposed to teach outdoor activities in pre-school institutions, folk schools, high schools, or lower-secondary-level boarding school for 14-17-year-olds. In addition, Outdoor Education trips of longer duration are expensive and have never been a deeply rooted tradition in Denmark.

Maybe because of the lack of wilderness areas, keywords such as risk and expedition have never been prominent issues in a Danish Outdoor Education context. Rather Danish Outdoor Education is more rooted and influenced by the Nordic *friluftsliv* tradition. On the other hand, the word adventure has been more frequently used in Danish Outdoor Education institutions over the last decade, including new trends taking inspiration from English speaking countries (Andkjær, 2009). For decades, Outdoor Education in my department has focused on pedagogy, the supervisor role (vejlederrollen), safety, group processes, social relations, and learning about culture and nature.[iii]

CONTRASTING ELEMENTS

Many new, surprising, and sometimes contrasting experiences could be emphasized from the present wilderness experience that created a special contact, energy, or relation between nature and the team members. Here are some nature and culture examples:
– Drinking the water directly from the river
– The excellent trout fishing
– The amazingly abundance of arctic flowers in this harsh landscape

- The daily bird watching activities of which most were new to me, such as Golden Eagles, Long Tailed Jaegers, Sandhill Cranes, Semi-palmated Plovers, Peregrine Falcons, and Gyrfalcons
- The struggles with hordes of mosquitOutdoor Educations
- The physical challenges portaging canOutdoor Educations and gear 5 km over land around Burnside Falls
- Three days in camp because of strong headwinds which provided the possibility for many rich discussions about how we work with our students and research potential of research projects
- The very interesting and instructive teaching sessions given each day, the gradually and still strong bonds and familiarity that developed between the group members, living with a tenting partner for 14 days, changing paddle partners and challenges on the river
- The everyday 'morning story' told by a team member reflecting on life and experiences from the river
- Inuit settlements along the river and Bathurst Inlet and reflections about how these people were able to survive.

Highlights were many and changing between moods, atmosphere and relationships, but I would like to emphasize one day on the adventure, because it was unique to me and even now a very difficult situation to describe. On the third day we camped just beside an esker that crossed the river at a narrow point. An esker is a glacial landform which is a long, narrow, winding ridge composed of stratified sand and gravel deposited by a glacial melt water stream. Eskers can vary in size from hardly noticeable to 100s of kilometres long. One of the largest eskers in Canada is the Thelon Esker in the Northwest Territories and Nunavut (almost 800 km long). In contrast, many eskers are a few kilometres in length, approximately 100 m wide and up to 50 m high. The gravel and sand are excellent homesteads for rodents such as the Arctic Ground Squirrel. Where there are squirrels you will often find Golden Eagles, Grizzly Bears, Arctic Foxes, Short-Tailed Weasels, Wolverines, and Wolves. At the same time eskers are more windy places in the relatively flat landscape, which give Caribou and Musk Ox freedom from mosquitoes, which can be a horrific nuisance.

We were very lucky to observe a Grizzly Bear about 100 metres from our camp one evening and a Wolf swimming in the river. Next morning, suddenly thousands of Caribous approached our camp and when we climbed to the top of the esker, we saw a fantastic and breathtaking view. A group of 14 Musk Ox just 100 metres below, in front of us and a landscape dotted with 1000s of migrating Caribous on their way from the calving grounds. For hours we observed this fantastic view with amazing numbers of Caribous crossing the river and browsing on tundra vegetation. Sitting in the centre of such nature holds an indescribable feeling wielded through all my senses into my body and mind. To me this was a once in a lifetime experience, but so vividly printed in my mind that I can recall views from my brain's archives every time I speak of this fantastic experience. We were in the right spot at the right time.

A FINAL REFLECTION

This Canadian expedition was to me at the same time both *friluftsliv* and 'adventure'. Without going into a detailed discussion on the concepts, Sandell & Ohman (2010) suggest six potentials of encounters with nature (*friluftsliv*) based on analysis of Scandinavian outdoor and environmental history: 1) an experienced-based meaning of nature; 2) a rational ethical perspective; 3) perspective on sustainable development; 4) human ecology in practice; 5) sensing the quality and simple life; and 6) democracy, identity, and dwelling. Retrospectively, all six perspectives were unfolded and discussed during the 14 days paddling on the Mara and Burnside Rivers. To me, a key element of *friluftsliv* is time – time to experience and time to adapt all the sensory impressions gradually. The quiet moments we enjoyed at the campsites and calm parts of the river; the social connections to your paddling partner and the group during late evening talks in the campsite; a strong focus and feeling of security, in Danish *tryghed*, are important elements in the concept of *friluftsliv*.

The concept of adventure can be perceived as an element of *friluftsliv* or in a more simplistic way as an independent concept with a strong focus on physical and mental demands or challenges (action, risk, challenge, effectiveness, functionalism, personal development) (Andkjær, 2009). In Denmark, and maybe in general, it raises questions about how we as outdoor educators create goals for our students, set timeframes, and structure a trip (or expedition). It is a great challenge to find the balance between the fascinating aspect of 'being active' in a nature setting (performance, thrill, adrenaline kick, etc.) and as advocated by Wattchow and Brown (2011), a place-responsive pedagogy where educators and students reflect on both nature and cultural (historical, social, geographical) experience and knowledge.

From a Danish perspective the Canadian Wilderness Educational Expedition housed in an exemplary manner all of the above mentioned aspects but also framed international perspectives, practices, and reflections and clearly demonstrated that there is an alternative or supplement to traditional academic conferences.

ACKNOWLEDGEMENT

NOTES

[i]   MECI Forms for Participants http://www.augustana.ualberta.ca/programs/lab/admin/ and a waiver with the title 'Assumption of Risk and Indemnity Agreement'.
[ii] See http://da.wikipedia.org/wiki/Canada#Demografi
[iii] See syllabus online at: http://www.sl.life.ku.dk/Efteruddannelse/Friluftsvejlederuddannelsen.aspx.

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Erik Mygind
University of Copenhagen
Denmark

GREGORY LOWAN-TRUDEAU

4. PIPE DREAMS

A Tale of Two Cities

If our hope is to foster deep and meaningful connections to landscapes and true respect for each other, then our primary vocation is to encourage critically informed thinking and reflexive consideration of contemporary issues, grounded in experience.

***

Snow crunches beneath my feet as I reach the top of the ridge. A puff of warm breath temporarily melts the ice in my beard and obscures my vision. I pause and appreciate the frigid calm of this winter morning. I inhale and hold my breath. My vision soon clears and I gain a stunning view of the curious panorama before me. Beyond a small duck pond, the new lego-inspired children's hospital looms in the foreground, obscuring the suburbs, foothills, and Bow River valley that eventually give way to the Mistakis,[i] the western horizon line of the Rocky Mountains used by the Blackfoot for cartography and navigation.

This snowy field was once a prairie grassland, crisscrossed by dirt pathways and pockmarked with gopher holes that served as the playground of my youth. My friends and I would ride out here on BMX bikes, build jumps and forts, dig pits, and battle with rival groups for the right to prime territories. I remember coming home at the end of a day of hard play, coated in dust with a painfully dry throat, dying of thirst, but profoundly content.

As we grew older and became more focused on our studies, organized sports, and mountain adventures, we rarely visited 'the field'. However, it eventually became my running place. Three or four times a week, sometimes more depending on the season, I would jog the five minutes from home and circumnavigate the field, pushing myself over the same dirt trails that once bore our bike tracks, past copses of aspen and willow, pausing occasionally to take in the view.

One day, midway through a run, I came to a small ridge above a slight depression in the land, a natural rollercoaster that often made my stomach jump. As I began my descent, I was surprised by a dozen russet fox pups out for a brief foray from their den. I remember their plaintive peeps and cries and a feeling of awe at being surrounded by creatures I had only ever glimpsed at a distance. Fortunately for all concerned, this encounter did not

lead to a conflict with the mother, but it did remind me of the animate complexity of this landscape, increasingly threatened by development on all sides despite municipal, provincial, and university assurances to the contrary.

As an urban Aboriginal person, Métis specifically, this place also began to hold cultural meaning for me. As I paused more frequently to pay attention and respect to the other-than-human inhabitants of the field: deer, fox, hawk, coyote, I also reflected on their significance in the lives and beliefs of my ancestors. Coupled with exposure to cultural teachings and practices, my understanding of this field and its importance in my life were gradually transformed.

So, it was with mixed feelings that I recently returned to find the field replaced by a carefully manicured landscape complete with asphalt paths, roadways, buildings, and an innovative storm water filtration pond. In the end, the developers won and a deal was struck despite years of protest and negotiation with local residents. As a new father, I am grateful to have a world-class pediatric facility five minutes from home, but I still can't help but lament the loss of wildness in this field, a rare refuge within an increasingly sprawling metropolis; I wonder what became of that fox family and the deer who sheltered and fed in the willows nearby? I see hawks circling on occasion, but the others are gone. However, this place is still special for me and I am grateful to be back after an especially challenging year.

I take a deep breath, exhale, and give thanks for clean air, clean water, and good health. I ask the same for everyone else: humans, four leggeds, winged ones, and swimmers. I pray for strength, patience, peace, and a sense of humour.

INTRODUCTION

This is a tale of two cities. Both lie within sight of the Canadian Rocky Mountains, one to the West, the other to the East. Similar to many Canadian municipalities, both intimately rely on natural resource development for their tax base and livelihood. Both were also built at the confluence of two rivers, displacing and obscuring, but never completely eradicating Indigenous communities. As Donald (2004) suggests, in a manner similar to the artistic effect of pentimento wherein an old painting is still visible beneath another, the Indigenous histories and geographies of these landscapes persist to varying degrees.

In this chapter I reflect on my experiences in these two connected, but distinctly different communities.

HOME ON THE RANGE

Calgary, Alberta is my hometown. I grew up here and recently returned after several years spent living and working in smaller centres in northern Ontario and

British Columbia. Calgary is a city of just over a million and is known internationally as an intellectual and financial centre of oil and gas development; a labyrinth of petroleum companies and related firms providing a wide range of services are headquartered here. Despite contemporary romanticism to the contrary, Calgary was not founded by ranchers, cowboys, or pioneers; in fact, it was first established as a military post by the Northwest Mounted Police, now known as the RCMP (Royal Canadian Mounted Police), as part of their final efforts to secure our southern border against American whisky traders and military insurgents (Touchie, 2008; Turner, 2012). As such, oil and gas or, 'black gold', as some call it, didn't precipitate the establishment of this city, but it has fuelled explosive growth since the early twentieth century.

Like most Calgarians, I have many acquaintances, friends, and family in the oil and gas industry. In fact, my grandmother's family, destitute Métis farmers, was raised out of poverty by the discovery of oil on their meagre farmland just north of the city. This turn of events did not bring great riches, but it did allow them to move to the city and attain post-secondary education, dramatically altering the trajectory of our family for generations to come. Many of my friends and acquaintances with Calgary roots have similar personal and family stories, past and present.

Despite such intimate links to resource development, Calgary is, somewhat ironically, consistently rated as one of the cleanest and most liveable cities in the world (Malone, 2011). In general, Calgarians enjoy a very high standard of living complete with clean air, water, municipal buildings and transit powered by renewable energy sources, and an intricate network of bicycle pathways connecting the Bow and Elbow Rivers with the rest of the city, toponymic reminders (Carter, 2005; Kingston, 2009) that we are in Blackfoot territory (Armstrong, Evenden, & Nelles, 2009; Touchie, 2008). In fact, Calgary has the highest number per capita of the top one percent of income earners in Canada (CBC, 2013).

However, as I learned through direct experience while living in a distinctly different setting, there is a socio-ecological cost, albeit not locally apparent, to this high standard of living. While Calgary is an intellectual and financial centre, the majority of oil and gas development, processing, and the associated ecological impacts occur at a comfortable distance from the city, in remote, rural and international locales, often with lower socioeconomic status and in many cases, high Indigenous populations (Brody, 1998; Nikiforuk, 2008). Unfortunately, these are common trends for resource development of all kinds (oil and gas, forestry, mining) across Canada and around the world (Haluza-Delay, 2013).

NOT IN MY BACKYARD

A recent controversy further highlights the 'not in my backyard' mentality of many Calgarians. A small petroleum firm, operating within legal guidelines, proposed to drill an oil well within sight of an affluent suburban community on the northwest fringe of the city (Varcoe, 2013). Exploration was initially approved, however, due

to massive outcry and mobilization by the community association, the project was ultimately halted.

I fully support this, and any, community's right to challenge such developments; had this been my neighbourhood, I would most certainly have been involved in the resistance. However, given that, it is safe to assume, many of the residents of this community are associated with the oil and gas industry, the irony of this situation is palpable. Their bluff was called in this instance; they know that oil and gas extraction is potentially harmful and they don't want to expose themselves or their families to such hazards. However, despite such awareness, documented cases of habitat destruction, increased cancer rates, and irreversible contamination of drinking water in rural, remote, and Indigenous territories subject to intensive oil and gas development continue to fall on deaf ears in the corporate offices of Calgary and other urban centres (Brody, 1998; Nikiforuk, 2008).

Having recently returned to this, my birthplace, I can't help but reflect on such contradictions and, my own participation in this hypocritical society. As an environmentally minded Indigenous academic at a government funded public research institution, I have to face the fact that, most likely, a large portion of my salary comes directly from taxes derived from the oil and gas industry. However, thanks to academic freedom and critical minds within the university and the city, I do feel supported in my work, albeit amidst undeniable tension on both cultural and ecological levels. Such tensions and contradictions also extend to my experiences with the Land in the city and the surrounding area.

CHALLENGING THE WEEKEND WARRIOR WITHIN

Growing up here in Calgary, one ritual that my family shared with many other city dwellers was to routinely assuage our urban angst by spending time in the mountains or at our modest cabin in central Alberta. Raised in a family of Métis outdoor and environmental educators, I grew up hiking, skiing, canoeing, fishing, and berry picking on the foothills and eastern slopes of the Canadian Rockies. My parents instilled a deep reverence for the Land in me at a young age from both a recreational and cultural perspective; my love for climbing and descending high mountain peaks on foot or by ski, or navigating rapids in an open canoe is inextricably connected to memories of culturally linked sustenance activities such as catching my first fish or picking Saskatoon berries with my grandmother.

As an adult I have continued to spend much of my time playing, working and living on the Land; I've worked as an outdoor and environmental educator in various settings across Canada and around the world, often in contexts based on Indigenous ecological knowledge and philosophy. I have worked for extended periods out of base camps in rural and remote settings; however, at other times I have been based in the city, taking students out of town for day trips to the mountains while also dabbling in the 'weekend warrior' culture.

The volume of traffic clogging the highway back and forth to the Rockies on Saturdays and Sundays consistently amazes me. People in Calgary seem possessed with a determination to 'get out' to the mountains on a regular basis, hiking, skiing,

paddling or just shopping in Banff for the day before zooming back to town. I try to separate myself from these masses, but find it increasingly difficult to deny that I am often just as guilty as my urban compatriots.

I find this deeply unsettling: How can I consider myself an environmentally-conscious outdoor educator when the courses that I teach require me and my students to travel by vehicle, burning fossil fuels for an hour and a half each way out to the mountains in order to enjoy Nature? Also, why are we going out to the mountains? Is it to commune with Nature or are we simply neo-colonial thrill seekers searching for mountains to conquer, trails to claim and rivers to check off of our lists?

Sometimes I rationalize that the experiences my students gain during their time out on the Land with me, Elders, and other knowledge holders will motivate them to become sociocritical environmental advocates, dedicating themselves to preserve the Nature that I love so much and campaigning for increased environmental health in our cities. Is this the case though? A review of contemporary literature in outdoor and environmental education reveals that short-term experiences in natural environments do little to alter adults' attitudes, especially since most participants are already positively predisposed towards the natural world prior to enrolling in courses. However, there is evidence to suggest that children who are regularly exposed to outdoor environments will develop empathetic attitudes towards the natural world (Corcoran, 1999; Palmer, Suggate, Robottom, & Hart, 1999; Sivek, 2002).

As such, during my time as a Land-based Indigenous educator I have increasingly questioned the common goal of outdoor education to use Nature as a vehicle for adventure, challenge, personal and group development (Andrews, 1999; Brookes, 2004; Lowan(-Trudeau), 2009; in press). I believe that this escapist mentality (MacGregor, 2002) is further evidence of Western society's notions of nature-as-resource, in this case, replacing resource extraction with recreational pursuits.

Such an approach contradicts Indigenous beliefs of nature as home, rather than somewhere to seek solace or resources to support a disconnected urban lifestyle (Cajete, 1994; Simpson, 2002; Snow, 2005). Reflective of such place-based symbiotic connections formed over thousands of years, Nakoda Elder and Chief, John Snow, from just west of Calgary, reminds us that, "These mountains are our sacred places" (p. 19).

In consideration of this kind of wisdom and my own associated experiences, I have increasingly cultivated local connections and spent less time adventuring far away from home. Rather than setting off for an adventure in the mountains every Saturday morning, I might take my son skiing, paddling, fishing, berry picking, or spend time in the garden closer to home. I have also altered my educational praxis to focus more on local activities and initiatives (Lowan-Trudeau, in press).

However, last year I found myself living in a setting where I often had no choice but to escape the city on a regular basis due to pollution-related health issues. This experience deeply affected me on all levels: physically, emotionally, spiritually, and intellectually (Cavanagh, 2005).

THE SMELL OF MONEY

Last year I lived in Prince George, a resource-based city in northern British Columbia. During this time, I had a wonderful experience as a faculty member at a small post-secondary institution with a strong focus on Indigenous and environmental studies. Unfortunately, a higher than normal sensitivity to Prince George's air pollution that results from a combination of geography and a high concentration of resource-based industry resulted in me developing respiratory difficulties to the point that I decided to relocate at the end of the year.

Strategically located in central northern British Columbia, Prince George is well known across Canada as a hub of resource development and processing. Prominent industries include pulp, paper, and lumber processing, oil and gas refinement, and a brewery (BC Air Quality, 2009). Unfortunately, a majority of the associated processing plants are located near the centre of the city at the meeting of two river valleys, the Fraser and the Nechako, and surrounded on all sides by rising foothills that eventually transition into mountain ranges. All of this combines to create a 'bowl' effect that, when combined with regular cloud inversions, facilitates a perfect storm to trap air pollution in the city and surrounding area at levels exceeding provincial health standards (BC Air Quality, 2009; BC Lung Association, 2012). While some local residents refer to this as the 'smell of money', understandably recognizing their intimate dependence on these industries, such levels of air pollution do result in higher than normal rates of respiratory illness and associated mortality (Elliot & Copes, 2007, 2011).

The confluence of the Fraser and Nechako rivers also provided the inspiration for the name of the region's Indigenous inhabitants, the Lheidli T'enneh, literally, "people of the two rivers' (Krehbiel, 2004). The Lheidli T'enneh, a salmon people, were displaced from their original village strategically located at the confluence of the Fraser and the Nechako by early colonists, and resettled on less than ideal reserve lands on the northern and western fringes of the city. Like most Indigenous groups in British Columbia, no treaties were ever signed and as such, under international law, this land remains contested, unceded territory (Krehbiel, 2004). While the Lheidli T'enneh are a small group approximately 300 members (Krehbiel, 2004), Prince George and the surrounding region has an Aboriginal population of approximately 20 percent, much higher than the average of four to five percent in other parts of the province (Northern Health, 2012). This strong Indigenous presence has a profound influence on the cultural landscape of the Prince George region. As such, I was fortunate during my relatively short stay there to connect with and learn from many Elders, youth, and other community members through educational and community events.

A BREATH OF FRESH AIR

In the past, I took for granted my ability and privilege to head out, at almost any time, onto the Land for personal, recreational, familial, community, or educational purposes, sometimes combining several or all of these motivations at once. Having

faced environmental issues that not only affected by physical health, but also impinged on my spiritual and emotional wellbeing as well as my ability to function as a Land-based educator, I no longer take such privileges for granted.

During our time in Prince George, in an ironic and hypocritical twist of fate considering my advocacy for locally-focused living and praxis, as often as logistically possible, my family and I would escape the city for the day, weekend, or week to gain a temporary reprieve. Sometimes this meant driving half an hour outside of town to spend the day at a nearby lake or cross-country ski area. At other times we would go further afield, venturing deeper into the mountains that surround the city in all directions. Such adventures exposed and emphasized for me the profound beauty of the more rural and remote areas of central and northern British Columbia.

However, at times, I also had the privilege to spend time on the Land with Elders and youth close to the city. As part of community outreach efforts, our institution routinely hosted land-based events in forested areas on campus along the western fringe of the city. I learned so much about the local landscape and culture during these short events and was constantly reminded of the centrality of Elders and other knowledge holders in the preservation and continuance of our cultures (Simpson, 2002; Lowan(-Trudeau), 2009).

Another dynamic that I have noticed while living in Prince George and other northern and remote regions is that, while there are certainly less recreational weekend warriors in these communities, more people, Indigenous and non-Indigenous alike regularly spend time on the Land engaging in what I would associate with more Indigenous activities such as hunting, fishing, and berry picking. As such, people in these communities often have a much keener understanding of and connection to the surrounding landscape when compared with urbanites, even those who might consider themselves environmentalists (Berry, 2009; Lowan(-Trudeau), 2011).

This experience further highlighted for me the division that exists here in Canada and in other nations around the world between those who profit the most at little personal, community, and environmental cost from resource development and those who often toil the hardest in abject social and environmental conditions, but gain the least. Calgary is not the only large Canadian city guilty of such imbalances; it would be unfair not to mention Vancouver as a centre of finance for forestry, mining, and oil and gas or Toronto's profits from mining and forestry in northern Ontario. The list could go on nationally and internationally in contemporary and historical terms. For example, London, England is often recognized as a contemporary financial centre of oil and gas development, among other things, but most Canadians will also note its centrality in the early founding of our nation as the headquarters of fur-trade ventures such as the Hudson's Bay Company (Raffan, 2008).

While retreat, escape, and weekend warrior-ship became a regular routine, at times I couldn't resist becoming involved in local events and issues, actively speaking out in the hope of preserving the beautiful landscape of northern BC and

promoting a cleaner future for the citizens of Prince George and the surrounding region.

PIPE DREAMS

Shrouded in smog and forest fire smoke, Indigenous and non-Indigenous citizens side by side, we marched slowly through central Prince George beating drums and waving flags, united in opposition to the proposed Northern Gateway pipeline. This project, financed by Enbridge, a Calgary based firm, would transport heavy bitumen-laden oil over a thousand kilometres from Alberta's oil sands across the Rocky and Coast Mountain ranges, a thousand salmon-bearing waterways, and extensive tracts of unceded Indigenous territory, to a terminal at Kitimat, a small coastal village, where it would be transferred to oil tankers bound for the winding and treacherous waters of Douglas Channel, Hecate Strait, and the Inside Passage before finally entering the Pacific Ocean proper (Boulton, 2013; Gunton & Broadbent, 2013; Harding, 2013).

I had only been in Prince George for a few weeks, but was strongly compelled to lend my voice to this cause. Having witnessed and experienced the beauty and fragility of northern British Columbia, the socio-ecological stress already present in Prince George and other resource based communities along the proposed pipeline route, and the statistical certainty of an eventual spill (Gunton & Broadbent, 2013), I did not hesitate to express my opposition to this project.

To be fair, there are most certainly mixed opinions in northern British Columbia regarding Northern Gateway. However, widespread opposition to the project across British Columbia, Canada, and even internationally has been overwhelming (Harding, 2013). Despite a recent recommendation by a federal joint review panel to move the project ahead under extensive restrictions (Gateway Review Panel, 2013), at the time of writing, the federal government has still not provided final approval; this is a political powder keg dubbed by some as a once in a lifetime nation-building opportunity and others as an inevitable socio-ecological disaster waiting to happen (Harding, 2013).

From my perspective, this situation is representative of the tensions and disconnects discussed above; a southern resource firm wielding financial and political influence in the interest of its shareholders, northern residents and ecosystems be damned. I don't mean to say that all southern city dwellers are rich, heartless, non-Indigenous people, nor do I wish to cast the image of all rural, remote, and Indigenous peoples in Canada or elsewhere as helpless pawns living close to the Land while struggling in deplorable social and environmental conditions, scratching a living from the local territory. Such a perspective would only play into the 'danger of a single story' (Adichie, 2009) and perpetuate untrue and incomplete stereotypes.

In fact, there are increasing examples of multilaterally beneficial natural resource and renewable energy projects across Canada in northern and Indigenous territories. For example, community managed forest, land management (Christensen, Krogman & Parlee, 2010) and solar energy (Ozog, 2012) initiatives

developed through the collaboration of industry, government, academia, and Indigenous communities.

However, reflecting on the contrast of my experiences over the past two years, both positive and negative, and time spent in other urban, rural, and remote areas in Canada and elsewhere has raised these issues in a distinctly visceral way for me. How then, to incorporate such thoughts and experiences into my praxis as a land-based educator?

TO THE REAL WORK

As outdoor and environmental educators, Indigenous and non-Indigenous alike, our job is not to foist our opinions upon students (Jickling, 2003). Nor are we are called only to facilitate exhilarating experiences in Nature. If our hope is to foster deep and meaningful connections to landscapes and true respect for each other, then our primary vocation is to encourage critically informed thinking and reflexive consideration of contemporary issues, grounded in experience.

In our personal and professional lives, as citizens and educators who purportedly care deeply for and feel connected to particular landscapes, it also behooves us to act accordingly through, 'walking the talk'. Some may choose to lead through example by participating in advocacy and activism related to socio-ecological inequities, or perhaps community and land use planning initiatives. Others may take less visible, but equally powerful and important steps to consider the practical implications of their socio-ecological values in their personal lives.

As such, I will endeavour to move forward in a spirit of "appreciative resistance' (Niblett, 2008, p. 4), humbly sharing my experiences and observations, recognizing my own complicity and contradictions, and using these insights to facilitate critical analysis of such dynamics as well as to build respectful relationships with those whom I might not always agree. I will apply such principles in my personal and professional life, promoting and facilitating local cultural and ecological consciousness, ever mindful that all land, urban, rural, and remote is sacred.

To the real work, to 'What is to be done.' (Snyder, 1974)

NOTE

[i]   Binnema (2001).

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Gregory Lowan-Trudeau
University of Calgary

MIKE BROWN & SHARYN HEATON

5. KO AHAU TE AWA KO TE AWA KO AHAU – I AM THE RIVER, AND THE RIVER IS ME

Who we are, or who we might become, is inseparable from who we are with, where we are, and what we are doing.

INTRODUCTION

The ideas presented in this chapter have arisen through dialogue between an outdoor educator (Mike) and a colleague whose specialist area is teaching and learning embedded within a Māori worldview (Sharyn). As educators in Aotearoa New Zealand (where both English and Māori are official languages) we strive to honour the principles laid out in the nation's founding document (Te Tiriti o Waitangi/The Treaty of Waitangi) that binds the Crown with the indigenous people of this land. One of the principles of Te Tiriti/The Treaty is the protection of traditional rights; this includes educational practices. We are therefore conscious of providing learning opportunities for our students that are culturally responsive and inclusive. In our discussions we have sought to think about how experiential education is conceptualised and how this might intersect with Māori conceptions of teaching and learning (ako). The process of writing this chapter embraced the principle of ako; we have taught and learnt from each other. Our hope is that this chapter will stimulate you to think more deeply about your understanding of experiential learning in the outdoors and how you might be responsive to students from a variety of cultural backgrounds. To aid readers we have provided a glossary of Māori words and phrases at the end of the chapter.

The chapter provides a brief overview of experiential learning in outdoor education,[i] an outline of significant critiques of both the experiential learning cycle and the principles of constructivism that underpin how experiential learning is practiced. We then detail how a Māori perspective[ii]/Te Ao Māori (culture, practices, beliefs, etc.) provides a different way of understanding the role of experience in learning that draws on a more 'holistic' cosmology than is often evident in many western Outdoor Education programs. A Māori perspective is presented to show how learning and knowing is intrinsically tied to place and community. We draw on Te Ao Māori to illustrate how learning can be enriched for participants when educators are prepared to incorporate different conceptions of learning and experience into their outdoor programmes. Our hope is that the perspectives presented here will encourage you to be responsive to the communities in which you work by understanding the cultural heritage of

experiential learning and therefore being willing to integrate other ways of experiencing, knowing and learning.

EXPERIENTIAL LEARNING IN OUTDOOR EDUCATION

Brown (2009) has argued that a common approach to implementing experiential learning in Outdoor Education has been the provision of an activity, followed by some form of reflection, in which the learner endeavoured to make sense of their experience(s). He suggested that outdoor educators' emphasis on personal development outcomes has lead to the use of experiential learning strategies (do-review-reapply) that are largely based on an understanding that learning occurs via cognitive processing of experiences. The participant in an outdoor programme is positioned as an autonomous learner who is capable of internalising experiences and applying the new knowledge in other 'non-outdoor' contexts (Holman, Pavlica, & Thorpe, 1997; Kemmis, 1985). Learning is considered to be an individual pursuit rather than a social activity. Outdoor activities, for example rock-climbing or canoeing, are resources to be 'mined' for their meaning. Through reflection or processing direct experiences (the 'doing') are filtered and dissected to reveal their true meaning. The notion that experience can be 'processed' for meaning reflects the following assumptions: that learning happens through cognitive reflection; that experience can be treated as a discrete event; and that a learner can be separated from his or her direct experience to process it and generate knowledge (Fenwick, 2001).

Mehan (1996) suggested that the emphasis on personal autonomy and meaning making reflects contemporary western societies core value of individualism. Brookes (2000), however, cautions us that an undue emphasis on the individual drains discourses "of the capacity to deal with the social and cultural dimensions of experience" (p. 2). The propensity to regard the social and cultural dimensions of experiences as external distortions reinforces the notion that true meaning is found through reflection which filters out 'extraneous' details (Brookes, 2000). The individualising of experience also impoverishes our understanding of the situated nature of learning (Seaman, 2008). In an earlier paper Seaman (2007) highlighted how highly structured physical and social conditions of many Outdoor Education experiences facilitate the achievement of particular learning outcomes. Thus the situation in which learning occurs (the make up of the group, the goal, the physical space, cultural assumptions) is a constituent element of what is learnt (Lave & Wenger, 1991; Brown, Collins, & Duguid, 1989). The situated nature of learning is something that we will explore in more detail later, our attention will now turn to a very brief discussion of the ideological foundations underpinning experiential learning.

EXPERIENTIAL LEARNING AS A MANIFESTATION OF
PARTICULAR WORLD VIEW(S)

Progressivism

Both Bowers (2005) and Egan (2002) have drawn attention to problematic aspects
of constructivist approaches to learning that underpin experiential practices.
Bowers' critiques are based on constructivism's links to social Darwinism; an
anthropocentric focus which has led to the current ecological crises; the
undermining of the cultural commons; the acceleration of individualism; and acting
as a Trojan Horse for western imperialism.

   Bowers (2005) and Egan (2002) argue that the proponents of constructivist
theory assume that change or progressive development is the dominant feature of
contemporary life. Thus an educator's role is to prepare learners to cope with
constant change by promoting skills such as critical reflection, experimental
inquiry, and autonomous thinking to encourage individual meaning making.
Implicit in constructivism's adherence to an 'evolutionary interpretive framework'
(Bowers, 2005, p. 19) is the belief that 'advanced' cultures employ experimental
inquiry and critical reflection in contrast to 'primitive' cultures that rely on
traditions. Bowers (2005) argues that constructivist agendas function as a powerful
form of colonisation. This can occur when individual meaning making is seen as
the 'natural' approach to learning thus diminishing the role of traditional ways of
knowing including the intergenerational transmission of knowledge practiced in
many cultures. He suggests that constructivist pedagogies, based on the assumption
that students learn more effectively when they construct their own knowledge, can
potentially restrict students' learning to what they can gain from their own direct
experience. Bowers emphasises the necessity of acknowledging multiple ways to
learn and know; critical reflection, experimental inquiry, dialogue, student
experiences and interest, hands-on problem solving, direct transmission, and
embodied ways of knowing are all valid and can enrich our conceptions of
learning.

*Positioning of Rational Reflection over Embodied Experiences: Abstracting
Meaning from Experience*

The belief in the ability of a learner to construct personal meaning from experience
through a largely rational and conscious process is contested. The focus on
processing/reflection has been criticised for being too simplistic, reductionist and
linear (Bell, 1993; Fenwick, 2003; Fox, 2008; Holman et al., 1997; Roberts, 2008;
Sawada, 1991). Notions of rationality, control and mastery inherent in the
processing/reflecting metaphors have been criticized for being rooted in
eurocentric, and masculinist perspectives of knowledge (Fenwick, 2001).
Michelson (1996) has argued that experiential learning reinforces the connection
between the abstract reflection and the larger discourse of progress. She argues that
through reflection "we partake of the dream of reason, the Western tale of progress

through rationality" (Michelson, 1996, p. 439). She also suggests that the distinction between experience, and:

> reflection as a highly cognitive processing stage in which the learning actually takes place … valorizes emotional detachment, physical distance and rationality, thereby imposing an epistemological hierarchy that is deeply complicitous with power differentials of gender, class and race. (p. 438)

Kemmis (1985) has suggested that because reflection is something that occurs inside the head we tend to think of it as an internal psychological process. However he warns that to view reflection in this light ignores the embodied experiences that give reflection its very character and significance. If we are not careful experiential learning may perpetuate the Cartesian mind (cognitive reflection) – body (experience) dualism that it sought to overcome.

Belief in Universalised or Decontextualized Learning

Another problematic binary alluded to above is the tendency to ignore or erase the relevance of context to what is learnt. This decontextualisation is evident in the importance placed on facilitating generalisable concepts or principles that can be transferred across different contexts, for example, Outdoor Education settings, home, work, or school). The belief in decontextualised knowing and acting is based on the assumption that an autonomous learner is largely independent of social and spatial relationships (Holman et al., 1997). The specifics of the context are deemed to be of little or no relevance and can be 'stripped away' to reveal a 'context-free' universal principle. Jarvis (1987) makes this point when he states, "learning is not just a psychological process that happens in splendid isolation from the world in which the learner lives, but is ultimately related to the world and affected by it" (p. 11). Research into learning provides evidence that this separation of what is learned from how it is learned and used is no longer tenable (Hutchins, 1993; Lave, 1988).

What is learned is situated in place(s), directed to a purpose or goal, with a particular group of people who bring differing knowledge and attributes. Learning is contextualised according to the demands of the task and the resources available in the situation in which people find themselves. What is emphasised, what is discussed or omitted, the tools that are utilised (physical, cognitive, linguistic, etc.) and the knowledge that is valued are functions of the culture and social power relationships which are deeply saturated with meaning (Vince, 1998).

These brief critiques are presented to indicate that experiential education is not 'value free' nor is it necessarily a universal remedy for shortcomings in existing educational practices. Experiential learning, as frequently employed in Outdoor Education programs can be highly appealing due to the use of novel activities. However as educators in a particular location, in a particular community, at a particular point in time we are interested in how we might best understand the learning/experience dynamic in a way that is responsive to our learners. In our discussions we have shared perspectives that disrupt simplistic experiential

approaches yet also provide opportunities to enrich learning experiences in the outdoors. We turn now to discussing how Te Ao Māori might encourage a rethinking of the do-review-reapply approach to experiential learning.

EDUCATING IN AOTEAROA NEW ZEALAND

As educators we are interested in how Te Ao Māori can be incorporated into practice. Local wisdom and ways of knowing through outdoor learning experiences are firmly located within people and place and are communicated through the Māori language that manifests in aspects of Te Ao Māori. The intergenerational transmission of Māori ways of knowing were often shared through story and are implicit within Māori traditions. Sharyn drew upon these traditions when she shared the following story during one of our discussions.

> To express my view of experiential learning in outdoor education I would like to share an experience from a school outdoor education trip many years ago. The highlight of our class tramp was the moment of 'awe,' on reaching the Tararua summit as we peered through the clouds to the land transverse below, our ūkaipō. The five tedious hours of walking through mud, in rain were forgotten as memories of place and people flooded in. Generations gone by were remembered, and the expression, 'kua hoki mai nei ki te ūkaipō' – we had returned in a spiritual, physical and emotional sense as 'people to the land' – came to mind. The outdoor or adventure activity had invoked a sense of belonging that tied us to place, returning as to our tūrangawaewae.

Connection to land and place are central constructs in the Māori world. For example whenua is the word used to describe both land and placenta. It is customary in Māori tradition to bury the placenta (whenua) and a child's umbilical cord (pito) in a place of local significance to the family (whānau). Thus people (tangata) are linked individually and collectively through human actions and interactions with the land (whenua) as one. As tangata whenua in Aotearoa New Zealand, the person is the earth the earth is the person (Royal, 2002). Bodies exist *in* place; at the same time they *are* places (Longhurst 2004, p. 337).

Māori understand that places are not simply locations, rather they are sites of lived experiences and as such "they are important sources of individual and communal identity, and are often centres of human existence to which people have deep emotional and psychological ties" (Relph, 1976, p. 141). For Māori separating learning from place(s) does not make sense nor do attempts to abstract knowledge purely via cognitive reflection resonate particularly strongly. In exploring the contributions that local wisdoms can make to experiential learning in outdoor education it is important to be inclusive of perspectives of tangata whenua (people of the land).

The role of place, as a source of identity and its' contribution to outdoor and experiential learning literature is not widely acknowledged (Brown, 2008). Wattchow (2005) suggests we need to move beyond a simplistic descriptor that outdoor education is about learning relationships in, about or for the environment/

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nature. He suggested, "An Outdoor Education in experiencing relationships in place is better, as it signals the fundamental importance of experiencing and the crucial contribution of place in identity formation and sustenance" (Wattchow, 2005, p. 14). For many indigenous cultures the significance goes beyond the experience *in* place, but rather views human beings as progeny of the land (Cajete, 2000; Royal, 2008). For example in Māori culture Hine-ahu-mai-i-te-kura (women originating from the earth) is said to be the progenitor of the first female human being.

Cajete (2000) notes how language reflects how people organise and perceive the world; words, phrases, metaphors and stories act as signposts to the way people think about the world and themselves. Encoded within the Māori language are Māori ways of knowing and being in the world, "Ko te reo Māori te kākahu o te whakaaro, te huarahi i te au tūroa" – the Māori language cloaks Māori thought and provides a vehicle to the wider world (Henare, 1984, as cited in Ministry of Education, 2008). A good example of the interrelationship of the learner, their learning and their natural environment is evident in the Māori translation of the term outdoor education[iii] as 'ngā akoranga o te taiao' or 'akoranga tū-ā-nuku (Ministry Of Education, 2000). 'Ngā akoranga o te taiao' literally translates to 'lessons of the environment.' In a similar way 'akoranga tū-ā-nuku' implies that the learner will be involved with lessons stimulated by Papa-tūā-nuku (the Earth Mother). The word 'akoranga tū-ā-nuku' could also be understood as 'ako' (to learn, to teach), 'ranga' (to weave, to raise up, to set in motion) 'tua' (beyond the world of sense perception) (Marsden, 1988) and 'nuku' (to move, shift, to extend). Embedded within these definitions of outdoor education is an 'indivisible' connection between people, the earth, and teaching and learning (ako). These definitions highlight the symbiotic interrelationships and thinking processes that can enrich the fields of experiential learning and outdoor education.

Māori definitions of outdoor education, within Māori-medium curriculum, such as *Hauora i roto i te marautanga o Aotearoa* (Ministry of Education, 2000) identify a connection between natural environments, adventure/outdoor activities and spirituality. The English translation of the text defines the field as:

Outdoor/Environmental Education

The environment (taiao) is a good context for instigating adventure activities and outdoor education; students are encouraged to be thoughtful and considerate towards Mother Earth. The students participate in investigating the spiritual relationship of human beings to the Earth and to her rejuvenating attributes that sustain humanity …. (Ministry of Education, 2000, p. 15; translated by Sharyn)

The definition provided of 'ngā akoranga o te taiao' anchors outdoor education in a spiritual (wairua) realm relating to land and belonging. Various writers (Coyle, 2002; Durie, 1985) support, a spiritual dimension as being a critical component in wellbeing and quality of life. Wairua is reflected in the spiritual significance made of the relationships between the human being to aspects of the environment such as

the mountains, lakes, rivers and land (Royal, 2001). This synergy is evident in the proverb, 'Ko ahau te awa ko te awa ko ahau', I am the river and the river is me.

In our discussions we talked about the Cartesian bifurcation of mind and body that privileges mental detachment. The process of reflection and privileging of abstract rationality fails to connect with many Māori learners who do not consider this division possible. According to Marsden (1992): "Abstract rational thought and empirical methods cannot grasp the concrete act of existing which is fragmentary, paradoxical and incomplete. The only way lies through a passionate, inward subjective approach" (p. 136).

In western ways of thinking we 'do' cognitive processing in our heads. It is our heads that are the central processing unit, if we suffer from mental illness it is an issue with 'our head' and we may take medications to rectify our problem. In curriculum documents 'mental and emotional wellbeing' is termed hinengaro: mental and emotional wellbeing (Ministry of Education, 1999, 2007). But traditionally hinengaro did not mean mental processing or the 'things' (cognitions) that go on in our head. Hinengaro can refer to the spleen and as such the existing curriculum definitions fail to encapsulate the material and immaterial qualities of thought, feelings and emotions that make us who we are. Salmond (1985) claims that knowledge, thoughts and emotions were stored in the belly (puku) and the hinengaro (the spleen). Thoughts and feelings manifest in the ngākau (entrails). For example the hinengaro (spleen), is the seat of all emotions and is where the physical manifests in the emotional and the emotional manifests in the physical (Metge, 2010). The deep-seated dualisms of mind/body, material/immaterial and soul/mind that separate and privilege one over the other are not present in traditional Māori ways of being.

To re-connect with Māori learners it is important to consider that a Māori world-view "is a thing of the heart not the head … the route to Māoritanga through abstract interpretation is a dead end. The way can only lie through a passionate, subjective approach" (Marsden, 1992, p. 117). As Sharyn stated in one of our discussions:

> I suggest that any attempts to understand a Māori world-view involves an inner journey that seeks an inner clarity and a 'wisdom of practice' that speaks of more than purely cognitive reflective endeavours. As Charles Royal (2004) noted, it is only when culture is truly felt in the heart, that one can truly know that culture.

DISCUSSION

Sharyn's recollection of a formative outdoor experience indicates the 'felt' and embodied knowledge that is not restricted to indigenous peoples. There is an extensive body of literature that recognises the power and influence of bodily ways of knowing which both disrupt and potentially enrich existing conceptions of experiential learning (see Barbour, 2011). We have illustrated several key points here to encourage you to think about experiential learning practices. By providing

examples from Te Ao Māori we have suggested that more attention be placed on the connection between people and places and the intimate connection between learning, identity and the land. In addition we have indicated the value of considering that being or knowing is not necessarily a cognitive or 'thinking' act – rather it can equally be rooted in feelings, emotions. Wisdom arises not in the head but in ways of being in the world that respond to people and places. As educators we must be responsive to 'other ways' of knowing that differ from the dominant paradigm in which we may have been educated. Becoming a good educator requires what Royal (2004) calls an interior journey that one takes in order to find some kind of grounding or returning to one's centre (pito) when considering wellbeing. It requires more than knowledge as an accumulation of facts, of thoughts in one's head. Wisdom as a thing of the heart, has "… its own thought processes and is the integration and the use of knowledge at the centre of one's being" (Marsden & Henare, 1992, p. 7). American mythologist Joseph Campbell (1997) explains that wisdom does not arise from concepts, ideas and the intellect alone, but instead wisdom arises when ideas and concepts of the intellect are integrated with life experiences. The concept of embodiment of experiential learning is an ancient concept. Indigenous peoples ways of knowing, have maintained that spirit, mind and body are not separated in experience, that learning is more focused on being than doing, and experiential knowledge is produced within the collective, not the individual mind (Castellano, 2000).

CONCLUDING THOUGHTS

An appreciation of the socio-cultural and situated nature of learning differs from traditional cognitive theory which divides the learner from the world of experience (Lave, 1996). The 'placement' of learning in relationships extends the current psychological focus in Outdoor Education learning theory (Quay, 2002) and challenges existing practices.

A socio-cultural and situated approach to outdoor learning that is culturally and place responsive is in step with broader educational reform and innovative practices (Bishop & Berryman, 2006; Bishop & Glynn, 1999; Lave, 1996; Lave & Wenger, 1991; Rogoff, 2003; Wenger, 1998). The recognition of the 'holistic' nature of learning, including people, place, activity, culture and language, is vital if we are to connect with a diverse range of learners from different cultural backgrounds. As we have demonstrated above, who we are, or who we might become is inseparable from who we are with, where we are, and what we are doing (Brookes, 2003; Brown, 2008).

Continuing reference to direct experience followed by reflection, is as Seaman (2007) reminds us, "an extremely limited way to understand the physical, social and individual process of learning in adventure education" (p. 16). By heeding Fenwick's (2001) call to continually challenge the phenomenon of experiential learning the position advocated here seeks to expand and advance understandings of learning in Outdoor Education which are firmly based in the social and cultural world of participants (Quay, 2003). By drawing on our context, Aotearoa New

Zealand, we have discussed how a Te Ao Māori perspective can inform educators and provide opportunities to extend practice beyond a do-review-reapply cycle. Recognising local wisdom, in regards to the indivisible connection between personal and collective identity and place(s), and different ways of knowing (embodied, felt knowledge) frees educators from prescriptive approaches to teaching and learning and empowers learners to take ownership for their learning. Skilfully designed and thoughtfully implemented experiential Outdoor Education programs that provide space for experience, dialogue and indigenous ways of knowing/being provide opportunities to enrich students learning and possibilities for being human.

NOTES

[i] As Irwin, Straker and Hill (2012) point out, the term outdoor education is a contested concept reflecting diverse views about learning outcomes and pedagogical approaches. In this paper we draw upon the New Zealand Health and Physical Education Curriculum (Ministry of Education, 1999) definition; "Outdoor education provides students with opportunities to develop personal and social skills to become active, safe, and skilled in the outdoors, and to protect and care for the environment" (p. 46).

[ii] Traditionally 'Māori' people within a geographical location grouped themselves according to whānau, (extended family/ to be born) hapū (sub-tribe/ to be pregnant) and iwi (tribe/ bones) identities rather than as a homogenous national identity (Durie, 1998). Therefore the notion that there is indeed one 'Māori' perspective is an on-going site of social and political struggle. There is no one Māori world-view and it is more about determining the rights and privileges of the people of the land.

[iii] Traditionally there was no Māori term for outdoor education; learning in the outdoors was not seen as a distinct discipline or subject area. Modern curriculum imperatives have driven the development of the term, ngā akoranga tū-ā-nuku in the Māori language. The word, 'taiao' did not delineate between an indoor or outdoor environment.

GLOSSARY

Aotearoa New Zealand	Aotearoa is the Māori term for New Zealand. As Māori is an official language it is increasingly common that both Māori and English terms are used.
awe	In the Māori language 'awe' literally translates as strength, power, influence, a feather plume which often was worn by a person of high rank. 'Awe' is also a word that is used to denote the soul. In the text 'awe' is used to mean an overwhelming feeling of reverence.
hapū	sub-tribe, clan, to be pregnant
hinengaro	spleen, mind, thought, consciousness, awareness
iwi	tribe, sub-tribe, bones, strength
Māori	indigenous person/people of Aotearoa New Zealand.
Māoritanga	Māori culture, practices, beliefs and values
ngākau	entrails, set of affections, heart, mind
taiao	natural environment, Earth, world, environment

Te Ao Māori	a Māori perspective of the world that includes culture, beliefs, values etc.
tangata	person, man, human being
tangata whenua	people of the land, local people, indigenous people of the land – people born of the whenua
tūrangawaewae	domicile, place where one has rights of residence and belonging through kinship
ūkaipō	The literal translation of ūkaipō is to be fed at the breast at night. Ūkaipō is our identity, our place of belonging, our upbringing, our mothers, and a place that provides sustenance.
wairua	spirit, soul, quintessence – spirit of a person which exists beyond death. To some, the wairua resides in the heart or mind of someone while others believe it is part of the whole person and is not located at any particular part of the body.
wai	water, liquid, stream, creek, river
whenua	land, ground, placenta, afterbirth

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Mike Brown
The University of Waikato
New Zealand

Sharyn Heaton
The University of Waikato
New Zealand

BARBARA HUMBERSTONE

6. EMBODIMENT, NATURE AND WELLBEING

More Than the Senses?

WELLBEING AND OUTDOOR SPACES

On the way back from the nature trail, something had happened to change the group. They were more alert, more interested in what was around them; they were closer to each other. They collected "treasures", special stones rounded by the waves with minerals glistening, periwinkles, razor shells and drift wood. They wanted to show them, wanted us to share them and answer questions.

What had produced the change? It was the need for play, for spontaneity, for adventure. A chance to feel the natural environment through their bodies, to release the tensions of the disciplined nature study they had experienced in the morning. To run, skip, jump and feel the freedom of a wild area, a new and uncertain environment. The niggles and quarrels of the morning evaporated. The children had enjoyed a common experience, they had come together; there was a sense of achievement. (Cooper, 1998, p. 10)

Spending time in nature and in natural outdoor environments, according to much recent positivistic research identified below, has noteworthy health and wellbeing benefits. These significant benefits, claimed to be afforded from being in forests and other green spaces, are the impacts/affects these nature environments have on individual and community physical, mental, emotional, and spiritual wellbeing.

Bird's (2007) report for the Royal Society for the Protection of Birds (RSPB) UK presents self-reported positive effects on mental health from contact with nature and green space. O'Brien, Williams, and Stewart (2010) and O'Brien et al. (2011) substantial work on forests and human engagements in Europe provides strong evidence for recuperative benefits of green space for diverse groups of people, providing space for forms of social contact. Further according to Maller et al. (2008), meta-analysis of research into the effects of green space or 'green nature', such as parks, can reduce crime, foster psychological wellbeing, reduce stress, boost immunity, enhance productivity, and promote healing.

Similarly, "The knowledge base shows that exposure to natural spaces – everything from parks and open countryside to gardens and other greenspace – is good for health" (Sustainable Development Commission, 2008, p. 3). A substantial literature survey on health, outdoors and children's research highlights the links between children's use of outdoors spaces and health outcomes, concluding green space in children's learning environments can provide significant developmental

benefits (Muñoz, 2009). Much psychological literature also identifies engagement with green spaces as on occasions beneficial for mental wellbeing. Some evidence suggests that people with stronger biophilic tendencies exhibit greater psychological wellbeing and hold more positive conservation ethics than those without (Hinds & Sparks, 2008, p. 181). For some time, the outdoors has been drawn upon to provide therapeutic contexts for healing diverse mental health issues. Recently, a number of adventure/ outdoor therapy research studies provide case studies of therapeutic outdoor work (see Richards, Carpenter, & Harper, 2011). Furthermore, there is some psychological research suggesting water areas such as rivers, ponds or seas or what has been called 'blue space' can "reduce stress and have a positive effect on well-being" (see Smedley, 2013)**.**

In 2012 the Office for National Statistics (ONS, 2012) introduced a series of measures to assess levels of wellbeing amongst the adult population living in the UK. Drawing on questions used in this assessment, a national survey on people and the natural environment in UK (NECR, 2013) looked at wellbeing and peoples' engagement with the natural environment. This came up with further indications of correlations between being in nature and subjective wellbeing; that is we feel better if we spend time out of doors!

> The well-being analysis has offered a fascinating insight into the potential relationship between engagement with the natural environment and subjective well-being. While it is not possible to prove cause and effect, this report suggests a link between engagement with the outdoors and improved subjective well-being – either directly through visiting, or indirectly through pro-environmental behaviours or other forms of engagement (Natural England Commissioned Report NECR129, 2013, p. 24)

Subjective wellbeing is linked to happiness in many national and international surveys. A major survey attempting to compare different nation's wellbeing and to 'objectively determine the happiest countries in the world' undertaken by the Organisation for Economic Co-operation and Development (OECD, 2011) utilised a 'Better Life Index'. The Index was based on 11 measures of 'quality of life' including housing, income, the environment, life satisfaction and so forth. Denmark was found to come out on top in the life-satisfaction score. Danish people rated themselves as the happiest of the developed countries consistently for a number of years in several studies. Sauter, Stockdale, and McIntyre (2011) took the measure life satisfaction as a substitution for 'happiness' and compared 'life satisfaction' scores to other measurements to find the economic and socio-political 'realities' that had the highest and lowest correlation to happiness. Denmark surprisingly has a high tax percentage of gross national product, placing Denmark at the lower end of developed countries for disposable income. But Denmark is considered to have one of the most 'leisure-friendly' policies with Danes claiming an average of 16 hours per week leisure time. Danes pay more taxes, have significantly less difference in income between its earners, have more leisure time and for the last 10 years rate themselves as the most happy amongst developed countries. Denmark, together with other Scandinavian countries (which also rated

themselves high on life satisfaction in the survey), has a very strong outdoor leisure culture, known as 'friluftsliv' (Gurholt, 2008). Outdoor classes exist in preschool and main school and babies and children spend time out of doors even in the very cold, snowy conditions.

All these reviews and research meta-studies identify an inter-relationship between human health; physical, mental, emotional, and spiritual wellbeing, happiness and being in the natural environments. But these studies tell us very little about what it feels like to be in nature or its affects on ones' psyche. Narratives and tales of being in nature tell of an extraordinary richness to peoples' engagements with places, landscapes and seascapes. Much of this richness is expressed through the affective. There is a powerful emotional experience, processed through our senses that engage us with our surroundings.

Furthermore, research studies that uncover something of the affective around schooling and outdoor pedagogies such as interpretative ethnographic studies highlight processes and practices that are alternative or complementary to traditional sporting 'body pedagogics' (Mellor & Shilling, 2010). Outdoor alternative pedagogies whether practised in school grounds or in the countryside provide for 'ways of learning to be in the body'. It is arguably the values underpinning the teaching approaches and the ways that these are made available and accessible to pupils that are significant not only in rural sites, but also within 'outdoor' school classrooms (see Humberstone & Stan, 2011; Humberstone & Stan, 2012a). These embodied learnings in nature, whether they are perceived as high or low risk, are ambiguous and fluid and may challenge dominant 'sporting' narratives of body/mind separation and potentially afford pedagogic processes or 'techniques of the body' fostering a form of shared 'kinetic empathy' and wellbeing. However, such forms of research can also raise questions and concerns around particular teaching approaches as in Humberstone and Stan (2012b), where over-concern for children's welfare evinced inaccurate information about creatures living in a centre's pond, and Stan and Humberstone (2011), which highlighted the ways in which body image for young children can be an issue even in the outdoor context.

TURN TO THE AFFECTIVE – INTERDISCIPLINARY APPROACHES

Wellbeing, happiness and social benefits of being in nature identified through surveys elicit people's opinions of what it means and does to them when they are in green (and blue) nature spaces. However, what is it about being in these spaces that creates this sense of wellbeing and health? How can we better understand the ways in which we, communities, society and nature can mutually flourish?

People may construct a sense of themselves and their environment through single and collective understandings of self and senses of place. Through embodied, sentient practices (such as walking, standing, climbing, surfing and so forth), by way of the senses, people engage with diverse natural spaces and places engendering non-cognitive affective feelings and emotions. In Western societies discussion and research around the senses has tended to be dominated by five

senses related to the aural, visual, olfactory, haptic and taste. Thrift (2004), nevertheless, draws attention to this Euro-American dominance observing that different cultures hold different understandings of what constitutes the senses and which are considered the most significant. He argues that, "for example, the interoceptive and proprioceptive sensations get comparatively short shrift as formal categories of the senses in Euro-American societies, even though their importance can hardly be denied" (p. 602). These sensations are particularly important in much nature-based physical activity, particularly those associated with water (Humberstone, 2011a, 2011b).

Affect is a complex term whose influence touches us all. The affective may be understood as a multifariousness of bodily systems which may facilitate embodied living beings' meaningful engagement with their environments, each other and non-human worlds. A high degree of this functioning may be at a subconscious and/or beyond consciousness/thought and language. As Evers (2006, p. 232) remarks in relation to his research into embodied surfing masculinities, "We feel our body and then we experience emotion. Affects are what we feel at the bodily level. Both emotion and affects rely on one another to organize and register our experience with the world". This recent affective turn rejects the rationalist/modernist philosophical and scientific world views which emerged from the dualistic 'enlightenment' understandings of separation of rational mind and body. It draws upon alternative perspectives derived from Spinoza (a lens grinder and philosopher living in the mid seventieth century), and later the works of Deleuze, much feminist thought and others that understand 'selves' as complex corporeal 'animals'.

Drawing upon works of Spinoza, the practicing neurophysiologist Damasio (2003), emphasises the significance of the affective and emotions and interconnectedness of body and mind:

> Feelings of pain or pleasure or some quality in between are the bed-rock of our mind. We often fail to notice this simple reality .... But there they are, feelings of myriad emotions and related states, the continuous musical line of our minds. The unstoppable humming of the universal melodies that only dies down when we go to sleep, a humming that turns into all-out singing when we are occupied by joy, or a mournful requiem when sorrow takes over. (Damasio, 2003, p. 3)

Such interconnections sensed in recent physiological findings are recognised and acknowledged by social analysts and much current philosophical thought. The notion that body, mind and environment are inexorably interrelated through bodily processes, sensoria, and the social become more and more visible. As Thrift (2008a, p. 252) points out, "[a]ffect is a challenge to what we regard as the social because it involves thinking about waves of influence which depend on biology to an extent that is rarely recognised or theorised in the social sciences".

Likewise, Simonsen (2005) drawing on Lefebvre (1991) argues that the mind "travels the whole body on caravans of hormones and enzymes, busily making of the compound wonders we catalogue as touch, taste, smell, hearing, vision" (p. 2).

The body is the "practico-sensory realm in which space is perceived through smells, tastes, touch and hearing as well as through sight. It produces a space which is both biomorphic and anthropological" (Simonsen, 2005, p. 4). In turn the body is not set apart from, or at odds with space/environment, but a dwelt inter-emergent production (Jones, 2009, p. 296).

Like all living organisms, human beings are part of larger interconnected ecosystems, the body being its own ecosystem inhabited by diverse bacteria. Experiencing and exploring the outdoors in part is about getting in touch with place, moment by moment (see Fox's narrative in Fox & Humberstone, 2014, pp. 7, 10), through our senses, affecting us physically, mentally and spiritually through various practico-sensory systems. Our senses affect our emotions and co-construct our perceptions of wellbeing. The body is central, a semi-permeable living organism which is at the nexus of understanding, experiencing outdoors and acting on these experiences.

SOCIOLOGY OF THE BODY, EMBODIMENT AND MOVEMENT

The body as significant research phenomena is rehabilitated, after a period of un-interest, in the social sciences; for example, sociology (Shilling, 1994, 2005), feminist studies (Grosz & Probyn, 1995), and later, in sociology of physical culture and sport (Denison & Markula, 2003; Sparkes, 2002, 2004, 2009, 2010), philosophy (Shusterman, 2008) and tourism studies (Swain, 2004; Fox, Humberstone, & Dubnewick, 2014). Interest in the body in social analyses of movement grew through focus on embodiment in physical culture. Studies in corporeality and embodiment in sport and physical culture drawing from ethnographic methodology and from diverse scholarship including phenomenology of perception (Merleau-Ponty, 2002), sensoria scholarship (Stoller, 1989) and the anthropology of the senses (Pink, 2009) are now pretty much mainstream (see for example Allen-Collinson, 2011; Allen-Collinson & Hockey, 2011; Atkinson, 2010; Downey, 2005; Evers, 2004, 2006, 2009; Hockey, 2006; Hockey & Allen-Collinson, 2007; Humberstone & Cutler-Riddick, 2014). Sparkes and Smith (2012, p. 170) foresaw this "shift towards more sensuous forms of scholarship in sport and physical culture".

Much of this research, which explores sensory lived experiences by which the body learns to be in the world, draws upon auto-ethnographic practice. Most of this research, however, in physical culture and sport has concentrated on the body in isolation without acknowledging the body as part of broader ecosystems. This is partly due to the fact that Western life-style after industrialisation has largely been separated from the natural environment and analyses have tended to present dualistic understanding of culture–nature (Humberstone, 1998). Recently, Pink (2009), from a sociology of the senses perspective, importantly proposes, "an emplacement ethnography that attends to the question of experience by accounting for the relationships between bodies, minds and materiality and sensoriality of the environment" (p. 25). Her concern is with the social/ cultural in every-day modern

society only touching briefly on the natural environment through attention to the senses through gardening.

Cultural geographer Rodaway (1994, p. 4, italics in original) sought "to offer a more integrated view of the role of the senses in geographical *understanding the senses both as a relationship to the world and the senses as themselves a kind of structuring of space and defining place*". More recently Thrift's significant works emphasise the fluidity of space through attention to the affective and senses. Thrifts (2008a) 'ecologies of place' and Ingold's (2000) 'dwelling' approaches stress the significance and richness of human-beings interaction with place (non-human and human). Importantly, such 'geographies' approaches claim not to dismiss or ignore material effects such as the economy, rationality (management) language and reflexive thought, but argue that the affective turn provides for expressions of the richness of experiencing previously what was invisible through exploring embodied process and practices. Fincham, McGuinness, and Murray (2010) maintain that' our relationship to each other, space, time and place are mediated by *our movement* through the material and social world' (Fincham et al., 2010, p. 1, my emphasis). Thrift (2000), Cresswell (2006), Urry (2007), and Fincham et al. (2010) pay particular attention to the ways in which physical motion influences the ways in which human-beings perceive and understand their worlds. Thus movement through social and material worlds affects human relations, space, time and place. For these analysts, this 'in-dwelling' has mostly inhabited urban and 'familiar' contexts.

Recently, studies have looked to integrating affective embodied movement approaches and 'ecologies of place' approaches in exploring experiencing the outdoors, physical activity in nature and nature-based sport cultures. These studies emerged from a variety of 'disciplines': Evers (2004, 2006, 2009) study of surfing bodies and masculinity draws upon feminist epistemology and typifies the significance and complexity of understanding affective embodiment and the social. Like all these 'ecologies of place' movement studies, he adopts an auto-ethnographic narrative. Humberstone's (2011a) narrative of windsurfing and ageing embodiment draws upon sociology of sport and feminist epistemology. Merchant's (2011) narrative of scuba diving and Anderson's (2012, 2014a, in press) studies in kayak surfing both draw from cultural geographies and 'ecologies of place'. This embodied approach has promoted an upsurge in studies focusing on being in nature, both landscapes and seascapes. The latter 'ecologies of the sea' have recently generated a number of interdisciplinary books focusing on the sea (see Brown & Humberstone, 2015; Anderson & Peters, 2014).

Through taking seriously physical movement or practice in natural environments, we begin to conceptualise a fluidity of embodied experience which is situated in time, place and space and which constitute 'ecologies of place'.

An example of a turn to the senses in practice through alternative pedagogies is presented in this narrative from Sweden where the pedagogues use simulation through play to stimulate the senses in a city context.

In this play the gentle wind was made by fanning a piece of paper close to the listener's cheek. The odours were deepened with a tiny branch of pine and a

small amount of soil. The sounds of the lapping waves were made by rippling water in a small cup. The wild onion in the story was a clip of chive (*Allium schoenoprasum*). The play was played in two acts and for the second act, actors and audience changed roles. The manuscript of the play is written in italics below and the parts where actors are meant to strengthen are underlined in the text.

Summer play

First act

It's a nice, sunny summer day. The warm, <u>gentle wind blows</u> against my face as I step into the forest. While walking along the path I hear the <u>sound of dry branches</u> breaking under my feet. I also notice the tender <u>scent of the coniferous trees</u>. Branches of <u>leafy trees wipe quickly but softly my cheek</u> when I move ahead the small path. I stand still for a moment and listen to the <u>cuckoo singing</u> somewhere little further. I reach down and <u>touch the soft moss</u>. It feels like silky fur in my fingers when I stroke it. The path winds its way towards the coast of the sea and I continue my walk. Beside the path I notice a familiar plant growing. I pick up a slim, green leave from the plant and I <u>sniff it and I taste it</u> – nice flavor of wild onion! Cheerfully I continued my walk towards the sea shore.

Second act

The path has not been used for a while. Leaves and branches cover mostly the track. In some parts the soil is left uncovered. I bend down and take <u>a handful of soil</u>. The <u>smell is fresh</u> even though the soil is very dry. The <u>wind feels</u> to be stronger on the sea shore. I sit down on a rock close to the waterside and listen to the <u>lap of the waves</u>. I put my <u>hand in the water</u>. A small <u>stone sticks by chance to my hand</u> and I turn it in my hands. I drop the stone back to the water. A small <u>bird is singing</u> in the bushes nearby. The song is full of happiness and makes me smile. I take a deep breath twice and my mind is full of joy and sunshine. (Venäläinen & Kuusinen, 2014, p. 30)

KINETIC EMPATHY AND ECOLOGIES OF PLACE: MORE THAN THE SENSES?

This 'affective turn' in the social sciences opens up for teachers, researchers and policy-makers different 'imaginings', ways of seeing/being and researching our worlds enabling a sense of what and how it is to engage corporeally with each other and the non-human worlds. For Hemmings (2005), a turn to the affective goes beyond understanding and experiencing, beyond the senses, and can take us into the realm of transformation:

Advocates of affect offer it up as a way of deepening our vision of the terrain we are studying, of allowing for and prioritizing its 'texture', in Eve Sedgwick's words (2003, p. 17). This texture refers to our qualitative experience of the social world, [and] to embodied experience that has the

capacity to transform as well as exceed social subjection. (Hemmings, 2005, p. 549)

Many thinkers would take this a step further into political transformations of the ways in which we live in the world and relate to the natural environment (for example Thrift, 2008a).

As mentioned earlier, life-satisfaction, subjective happiness and wellbeing identified through various surveys, particularly the 'Better Life Index' evidence that being and feeling happy and having positive wellbeing is not only related to one's immersion and physical practice in a flourishing natural environment but also being part of fairer social systems. Spratt, Simms, Neitzert, and Ryan-Collins' (2010) commentary on a 'new materialism' envisioning social, economic and environmental justice echoes something of Thrift's thinkings/imaginings. This 'Great Transition' which they envision is about a shift from the crisis world we currently variously inhabit into different worlds based on economies that value social and environmental 'good' rather than what is termed social and environmental 'bads', the latter having little or no social benefits only monitory value. As he states:

The new sense of materialism challenges a whole series of traditional divisions between organic–inorganic; science–art, space and time – … in its hunger to redefine how the world is/could/should be. (Thrift, 2008b, p. 123)

Thrift draws attention to the significance of the interconnections between our sense of being in the world and wider social, economic, political and environmental concerns which hinge upon seeing and acting within an interconnected, non-dualistic understanding of the world. He speaks to the affective and the complex. How we might re-envision and experience our-selves and contexts differently 'better' is about ecologies of place, our be-ing in the world. Further in considering why we might take seriously the senses and beyond, it is evident that the Neo-liberal project and commercial interests successfully draw upon the affective in selling products. Advertising and other forms of capitalistic propaganda speak to the affective, drawing upon pre-consciousness systems to sell stuff. Once corporations get at the emotions, the mind frequently picks this up and action occurs, often we buy (into) it. Thrift and others argue(s) that this appropriation of the affective might be put to better more transformative use as "one of the best hopes for changing our engagement with the political by simply acknowledging *that there is more there*" (Thrift 2008a, p. 189).

The turn to the affective in physical culture and the connection with ecologies of place suggest an acknowledgement of the significance of movement in nature and the possibilities for seeing and acting within the world differently. Thorpe and Rinehart (2010) and Humberstone (2011b) argue that the interconnectedness of senses, embodiment and social action through nature-based 'practices' become reality through a variety of social and environmental actions. Thorpe and Rinehart, (2010, p. 1277) surmise regarding nature-based physical activity, "Could the unique movements of alternative sports prompt some participants to experience 'kinetic empathy' – a 'kinesthetic awareness'". Kinetic empathy is a speculative

concept proposed by Thrift (2008a, p. 237) to be "both the means by which the body experiences itself kinaesthetically and also the means by which it apprehends other bodies".

I emphasise (Humberstone, 2011b, p. 507), whilst not suggesting a simple causal link between movement in nature and 'social and environmental justice', for "the significance of embodiment and senses in and through physical practices in nature" to be taken seriously by researchers as, "there is potential in exploring how the body comes to 'know' through such practices and how these embodied experiences give expression at the personal, social and 'political' levels".

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Barbara Humberstone
Buckinghamshire New University
UK

GREGORY HEATH

7. RE-IMAGINING THE OUTDOOR EXPERIENCE

A Philosophical View

… every experience both takes up something from those which have gone before
and modifies in some way the quality of those which come after.
John Dewey*, Experience and Education*

INTRODUCTION

Outdoor education has had at is core the elements of connecting being with nature;
to develop and enliven our human capacities to understand and more fully
experience the outdoors, the natural world, and to live sustainably in harmony with
the environment. Learning to experience the outdoors has been at the core of the
curriculum and intrinsic to the aims of education as personal enrichment and also
to the instrumental aims of producing graduates who know how to interpret and
care for the environment. A guiding principle behind the recent evolution of
outdoor and environmental education has been the notion of *deep ecology*. Deep
ecology is associated with the great Norwegian philosopher Arne Naess. Naess
proposed that as a deep principle human consciousness was at one with the
environment in which we live (Naess, 1989). To be completely human in moral,
spiritual, emotional and cognitive dimensions requires an at-oneness with the
fullness of the environment and not a standing apart from it and especially not
adopting a dominant position with regard to it. A cornerstone of the deep ecology
movement is that non-human entities including all living things, species and
environments, such as wetlands or deserts have intrinsic value. This implies that
they have intrinsic moral worth and to harm them without a valid moral cause is to
do something wrong. Some such as William Godfrey-Smith (1980) have gone so
far as to say environments and species have rights that should be protected by law.
In this vein Naess was critical of more conventional instrumental theories of ethics
that related right and wrong to human needs and interests as he claimed these
would always prioritise human interests above those of other animals, plants and
environments. Essential to deep ecology is the view that subject of experience is at-
one with nature and standing in a subject–object relationship.

Naess' views have since been taken up, elaborated, discussed and defended at
length by many authors including Godfrey-Smith (1980), Mathews (1993),
Brennan (2010) and many others. These views and their elaborations have formed
the bedrock for outdoor education theory granting to it a legitimate core as a
discrete curriculum category.

However, despite the enduring quality of this work in establishing the field there have been significant changes, both in the socio-technical world and in philosophical theory that change the relationship of humans to the natural world. It is these changes that I wish to pursue here.

PHILOSOPHICAL DEVELOPMENTS

Developments in philosophical theory have altered the way 'self' and personal identity and thus the experience of the outdoors, are understood in very complex and to date indeterminate ways. As a consequence the aims and rationale for outdoor and environmental education stand in need of re-evaluation. This revaluation will show that outdoor education is as important as ever but needs re-conceptualisation in relation to the broader curriculum. Conjointly with this philosophical shift, technology has changed the way we perceive and conceive of not only 'outdoor' but also indeed 'indoor' and 'virtual' place and space.

Considered from the historical perspective of educational philosophy, the conception of outdoor education in the curriculum stems from perception of the outdoors in the high romantic period, although it could be claimed that there are ancient sources going back to Greece and beyond where we see the symbols representing the spiritual union of humans with the natural world in ancient Egyptian mythology. Returning to more recent times the source of outdoor education is a legacy the counter-enlightenment period incorporating the views of writers such as Rousseau and Goethe, to be followed by William Wordsworth and Edmund Burke in England and GWF Hegel in Prussia that the Sublime had the power to inform and inspire the human soul to the highest spiritual perfection. Nature became a source of ideas and sensibility, not only inspiring heightened sensory perception but also revealing the *nature* within the depths of the soul, thus becoming integral to the sense of identity and the understanding of human nature. The *zeitgeist* of this new attitude was captured by the work of the Romantic German painter David Caspar Friedrich typified by his iconic painting *Wanderer Above the Sea of Fog* where nature becomes a deep source of inspiration leading to a transcendence of mundane human affairs. Some authors such as Richard Wolin *The Seduction of Unreason* (2004) have pointed out the very strong links between the counter-enlightenment and post-modernism with both sharing a deep suspicion of rationalism and what are called 'normalising narratives'.

In more recent times the ideas underlying outdoor education spring from diverse sources but most significant is the notion of the 'authenticity of being' deriving from Heidegger. Here lies the foundation of the view that the natural world is a source of true being in the world and as a source of ontological import and moral integrity. Heidegger uses the Greek term *alētheia* to approximate to 'unconcealment' as a way of being open to the truth revealed by the immediate phenomena of experience (Heidegger, 1977, p. 132) This involves amongst other factors a loss of the distorting lens of the ego through which the world is viewed. The desired state is one of harmonisation of being with nature. As Heidegger further states in *The Question Concerning Technology* (1977, p. 305) any

mediation between the phenomena and the mind introduces a level of distortion or concealment of the truth. Technology itself he sees a significant achievement of the rationalism of science, but he states, it is its' own reality, not a representation of an underlying reality. To extend Heidegger's view, an image of say scenery on a screen is, for this interpretation, in reality an image on a screen and is not given its reality, or 'authenticity' by what it is an image of. The reality experienced is of the technology itself, not of the underlying scene. Heidegger was, when writing, familiar only with the telephone, radio and very early television and not the electronic technologies so commonplace today. I believe that there is need to revise his view and to see recent technology, or at least the more abstract form of that technology, as integral to experience of a more nuanced and mediated world beyond the immediate presence of phenomena.

There are resonances between the thought of Naess and Heidegger and although Naess was not a close follower of Heidegger, he was in his later philosophy part of that European milieu of thought and he wrote about Heidegger specifically. He says, "I say that in spontaneous experiences [of nature] we have direct access to what is real." This, he suggests, relates closely to Heidegger's "self-luminosity of things" (Naess, 1997 p. 3) in open experience which, he claims, is a way to conceptually facilitate the replacement of anthropocentrism with the ecocentrism germane to *deep ecology.*

Part of the experience of nature and the outdoors has been linked in the philosophical literature to this direct validation of being by the loss of self in the direct experience of nature; being in touch with the 'self-luminosity' of experience, akin in some respects to a form of meditation. This view has formed the basis of much theorising about the value of outdoor education such as that found in the ethno-ecology of Aldo Leopold's *A Sand County Almanac* (1949) and it remains a valid strand for its rationale. But the world has changed since Aldo Leopold and his close ethno-ecological studies or since the early days of Naess laying the theoretical grounds of *Deep Ecology.* Their purist views, clearly of intrinsic worth and continuing validity, do need to be revised in the post-modern, technologically mediated environment.

The contemporary world has become *disenchanted*, to use the term coined by Max Weber (1930, p. 221) in the very early 20th century. Weber was of course referring to the demise of religious belief in the west. Weber could not have envisioned how radically disenchanted the world would become in the post-modern era, he also could not have been expected to foresee, but might have anticipated, reactive movements to *re-enchant* the world in a spiritual and non-religious sense. The deep ecology, along with alternative lifestyle movements, has been seen by some such as Landy and Saler (2009) as part of this re-enchantment. This is a very interesting development and might say something about the deeper spirituality of human nature. Re-enchantment broadly so described, is a movement that clearly has the potential for further elaboration, especially in environmental ethics. It might well indicate a strong future rationale for the importance of outdoor education, but to date has proven minor compared to other more rationalistic and instrumental justifications.

A COMMUNICATIVE CONSCIOUSNESS

A change in social consciousness and values along with communications technology and the effects of globalisation has changed the experience of the outdoors and the understanding of the place of outdoor education. The experience of the outdoors and the importance of outdoor education is no less relevant to the achievement of a richly fulfilling life than it has ever been, but the conceptualisation and contextualisation of how this is understood is now, as a consequence of the shifts in consciousness and the pervasive insinuation of technology, radically different.

To make a sweeping and likely unwarranted generalisation, it can be claimed that there are now very few wild places and no remote places left on the planet. With the population of the earth rising from 1.4 billion to 7.4 billion in the last one hundred years and the rapidly increasing affluence of so many, the pressure on land and the resources of the planet has become extreme. All, or very nearly all, of the earth is now deemed required for residential space, resource and food production. Satellites, 'Google Earth' Global Position System (GPS) technology, webcams and easy rapid travel mean that every part of the planet is now available to view, visit and potentially inhabit. When one considers that even more powerful tracking and surveillance technology is available to government agencies and the military, the idea of 'remote' becomes an historical concept. The understanding of what constitutes 'outdoor' in the experience of the outdoors has also changed in a way that is challenging to conceptualise and describe. Similarly all experience whether 'indoor' or 'outdoor' as it were has become mediated and contextualised by changes in technology and concomitant changes in social, political personal values.

EXPERIENCE AND THE AIMS OF OUTDOOR EDUCATION

The traditional aims of outdoor education dating back to Kurt Hahn's *Ten Principles for Adventure Schools* (1957) have been variously set out over time in relation to pedagogical programs and, as with many other educational aims in this field, with little coherence or consistency (see Oikonomou, 2012). This, in part, is because such aims are always politically contested. There are those who would emphasise instrumental values such as physical fitness, resilience and survival capabilities against those who would emphasise the achievement ecological sensibilities, a sense of the sacredness of nature and a personal sense of wellbeing. I would list the aims as follows in an attempt to be inclusive:
– a heightened awareness of one's environment and surroundings,
– a deeper understanding of the ecology and connectedness of all living things and their environments,
– an enhanced aesthetic appreciation of nature, living organisms and landscape,
– self-knowledge and a sense of self-mastery,
– an enhanced capacity for teamwork and cooperation,
– an enhanced ethical awareness and capacity for responsible action,

– mastery of a range of skills for experiencing and surviving in the outdoors including first aid and safety management.

To these now are added the practical skills in the use of technologies related to the outdoors including GPS, responsible use of social media and use of advanced emergency equipment. Many of these aims can only be achieved via the type of experiential learning that has been highly developed in outdoor education, as pointed out by John Dewey (1938) nearly a century ago. The experiential learning involved in outdoor education, however, is different to more traditional vocational education as it is related more to the enrichment and deepening of personal perception and inspiration. At the core is the notion of nature as a source inspiration; as a locus of core truth and beauty. To be inspirational in this sense nature must not be just a mode of reality but also a central ideational principle.

The idea of the outdoors has always been very much an *idea*; an idea arising out of the enlightenment and the Romantic movement that has also taken on a phenomenological existence. That is not to say it is an illusion or merely a construction, far from it, but it is a way of conceptualising and enframing human experience in the same way that 'society' is an idea. To illustrate the point it is clear that attitudes to the 'outdoors' and the idea of 'outdoors' if indeed such a notion existed prior to the romantic age were very different. Nature or what we might conceive as the outdoors was seen as hostile, threatening and a place to be feared, tamed or conquered; the refuge of bandits, wild animals and in some cases non-human malevolent beings such as trolls or werewolves; a place of incivility. Towns and cities embodied the order, discipline and civility of the human spirit at the time and were regarded as sites of rational order and a source of moral inspiration. One is reminded of Immanuel Kant in his letters to Joseph Green singing the praises of his hometown of Königsberg in contrast to the 'uncivilised' world surrounding it (Kuehn, 2001, p. 155). The idea that deeper meaning and a deeper sense of being could be found in nature captured the human imagination as reaction to the rationalism of the enlightenment and the dehumanising elements of the industrial revolution. For Kant Nature was aligned with the 'noumenal' world. This came to be known in 20th century as the 'counter–enlightenment', most notably associated with Rousseau's concept of the 'noble savage' and the high romantic movement.

It was this spirit that flourished in early 20th century captured most comprehensively by John Dewey who took outdoor education to be a central form of experiential education. This has recently been discussed in excellent detail by John Quay and Jayson Seaman in *John Dewey and Education Outdoors* (2013). Dewey was strongly influenced by philosophical pragmatism which in this case led him to see learning, including theoretical learning as a form of reflection on practice. In the first instance this related to vocational learning where practical mastery of complex tasks and processes could only be learned by doing. In this vein outdoor education, or 'nature study' as it was then often called, was clearly a unique form of learning and one that could not be replicated in the classroom. Dewey regarded outdoor education as pedagogically equivalent to other subject areas and saw the knowledge skills and capability required as integral to a fully

comprehensive education. In this and many other respects he was ahead of his time. However, the process and contextualisation of education have taken a quantum leap in last two decades and Dewey's thinking needs to be applied in the new context.

What are the implications for the outdoor experience and outdoor education of technological, social and philosophical change? Do technological mediation and changing values inhibit or enhance the quality and uniqueness of outdoor education? Well the answer is that it can do both, depending on the approach to curriculum and pedagogy.

The mediated environment and the networked society permeate human existence in developed societies to such an extent nowadays that we have almost taken it for granted; it has become almost 'nature like'. It has slid behind the veil of the familiar to such an extent that it has come to form a basis of sense of identity and reality. This is certainly true for those whom Marc Prensky (2001) christened 'digital natives', those born after about 2000 who have never known an 'unwired' world. They take much for granted in this marvellous digital age. So much so that it is no exaggeration to say that personal identity is literally networked into the web of social media. Any outdoor education teacher who has stood by with an open bag for deposit of mobile phones prior to an excursion and has seen the reluctance resentment, and at times sense of panic, registered by the young participants is well aware of this condition. The critical thing for this discussion is that the way such networked individuals locate themselves in time and space is qualitatively different to the way this would have been done prior to the ubiquity of digital communications.

There are some deeper metaphysical issues here to be explored but for the sake of this chapter some of these can be simplified without compromising the argument. The best approach is to take a before and after approach. Prior to the digital age it is likely that the relationship of the person to their surroundings would have been fairly described as 'Cartesian'; that is a subjective, individual and discrete consciousness to an objective world, in this case a natural environment. The process of experience under this modality of consciousness is familiar would be conceived as one of harmonising the 'inner' to the 'outer'.

Post the digital revolution this is rapidly changing. This is harder to describe as the concepts are still under development and to an extent still in flux and subject to contest. The subject of experience is now linked to others in a radically new way, in a web of shared subjectivity or 'inter-subjectivity'. This is a phenomenon in process at present and as such is subject to ebb and flow of competing perspectives. The consequences of this shift for society have been described by Zygmunt Bauman in a number of his recent writings as 'liquid modernity'(Bauman, 2007). This process is typical of the dynamic of paradigm shift, with many factions in society fighting to oppose the transformation, whilst the young just ignore them and get on with it. But over time the old paradigm will give way to the new which will become the 'new normal'. Evidence of this new way of conceiving subjectivity can be seen in the way the younger generation, the digital natives, place such priority on communication using mobile electronic devices. Every

experience, indeed every thought and attitude, has to be shared instantly, with a view to authentication and validation, on social media. It is important to realise that to this group the devices and the technology that runs them is nearly invisible. They expect it to work and do what they demand to the extent that it is barely thought of as media at all. The process is of course part of the youthful urge to communicate but from a philosophical point of view there would seem to be something more significant going on. The immediacy of sharing for this group is essential to the validating of the experience, giving it reality and authenticity. This function was always present in the act of speech, sharing ideas and communication and remains so, but the technology has added new dimensions in that the reflexive self-validation process that do change its essential character in the following aspects:

– the proximity of the speaker and hearer has been altered; instant communication can achieved literally a world away (although it is often in the adjacent seat in the classroom). Thus the traditional measures of space and time no longer apply,
– the media of the communication can include pictures, still and moving images, animations, speech and other sounds and of course links to any other content,
– the audience is potentially vast numbering anything from one to millions,
– feedback (rather than a response) is now endemic to the communicative process.

There are of course losses as well as gains in this process, which are only partially compensated. Most notably of course, that loss of immediacy of the speaker-hearer relationship, so important to Saussure's (1983) account of meaning making. Also largely lost is the rich texture of interpersonal communication that conveys affective as well as literal content. These are important and I would not wish to downplay their significance, but with the boundaries of communication being otherwise massively expanded they must be put into relative perspective.

CONCLUSIONS

What are the implications for the experience of the outdoors?

The concept of 'outdoors' and as a consequence its meaning for outdoor education has irrevocably changed. The outdoors is no longer so much a physical place, remote, located in *Nature* where a pointillistic Cartesian ego stands in a subject-object relationship, perhaps seeking to be immersed in the at-oneness with nature. The 'outdoors' has become a modality or process experience which is now interconnected with all other experience. An experience on the top of Mt Bogong or even down the Kelly Hill Caves is instantly sharable and linkable to any remotely related event. It can be observed that the first thing climbers do on summiting Mt Everest is to send a 'Tweet' to friends and relatives; "hi mum I am here nice view" (https://twitter.com/MtEverest). Others, anxious parents or teachers, can track the adventurers' whereabouts in real time and even enjoy the real-time Webcast. GPS technology means that anyone in the outdoors, just like anyone anywhere is never 'lost' with position data down to less than a metre instantly available. Add to this automated weather warnings, hazard warnings and 'best route' advice and trekking can become as much a virtual as an actual

experience. The sense of remoteness has therefore been permanently and irrevocably destroyed. The 'old' experience of the outdoors can now only be captured through artifice such as switching off electronic devices or deliberately choosing to use the increasingly hard to find paper maps.

Experiencing the outdoors becomes much more than the experience of what is immediately before the senses. The experience is essentially interconnected, firstly with others and secondly with a rich mine of data about the field of experience. An outdoor education teacher could reasonably expect students to access the history, geomorphology and biodiversity of any particular site *in situ*. Thus, outdoor education becomes more closely integrated with mainstream education. It is important to point out that this does not make outdoor education redundant, quite the contrary, in some respects it becomes more important than ever as reasserting reflexive values promoted by Dewey that make outdoor education essential to comprehensive education and personal fulfilment. But the way outdoor education is conceptualised, thematised and delivered will inexorably change in concert with the reshaping of the outdoor experience. The alignment of social, philosophical and technological change will bring about a major reassessment of outdoor education curriculum and delivery.

The deepest determinative factor is the shift in the way the self and subjectivity is implicitly experienced and understood by the emerging generation. The 'self' for them is a 'networked' and communicative self that will have a different view of alignment of indoor, virtual and outdoor environments with a continuity across all three. The authenticity of experience characterised as 'the self-luminosity of things' given in direct unmediated experience of phenomena will transform to an authenticity given by inter-subjectivity and communicability of experience.

Skills for specific environments will still be important, but integrated with supportive technologies. Environmental knowledge will also continue to be important but now incorporating strong elements of sustainability. Paramount here will be an understanding of how communicative human interests and the interests of deep ecology can be adjusted and harmonised using technologies to both experience an protect wilderness areas, species diversity and ecosystems.

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Gregory Heath
La Trobe University
Australia

CHRIS TOWNSEND AND RUTH LAWRENCE

8. ENCOURAGING PADDLING PARTICIPATION THROUGH CANOE TRAIL DEVELOPMENT IN THE BARMAH MILLEWA FLOODPLAIN FOREST, AUSTRALIA

Paddling "is a new mode of travelling … by which new people and things are met with, while healthy exercise is enjoyed and an interest ever varied with excitement keeps fully alert the energies of the mind". (John MacGregor 1866, p. 1)

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Throughout the day, visitors arrive at the Barmah Lakes campsite on the River Murray, most in four-wheel drive vehicles laden with camping equipment. This one scene is typical: The parents and two pre-teen kids emerge from their heavily laden land-cruiser and without delay launch into what appears to be a familiar ritual of setting up camp in a spot they appear to know well. Out comes the large canvas family tent, a trestle-table which becomes the base of a makeshift kitchen, lilos and pump up mattresses. It's an efficient frenzy of home-making until the two kids' bikes are snatched free from the bike rack, and suddenly they are off to rediscover well-worn circuits that weave between the ancient red-gums. When all the preliminary work is done, Dad plucks an icy beer from the esky, gulps thirstily and sets about untying luggage straps and unloading the sunflower-yellow plastic sit-on-top kayak from the roof rack of the land-cruiser. He carefully lowers it to rest under their red-gum and places the paddles and life vests against the gnarled trunk. There is something ceremonial in the way he deliberates, inviting an observer to imagine that the craft will be central to his family's experience of one of the most visually stunning and ecologically important wetlands in south-eastern Australia that stretches to the north of their campsite. The expanse of red-gum fringed lakes, reed bed inlets, networks of channels and creeks, and the full flow of the River Murray await them. But as the days pass, the kayak lies mostly dormant, its yellow plastic sheen barely wet except for the occasional uncertain forays just a few metres out from the banks adjacent to the campsite. Is the vessel seen as a water craft or a glorified lilo? What would it take to tempt the family to venture beyond the familiar camp site locale and explore the treasures of this iconic natural and cultural waterscape. For now at least, their kayak is like so many others

enthusiastically purchased in Australia in recent years – little more than a four wheel drive accessory – an optimistic purchase to feed an idealized approach to recreation.

INTRODUCTION

This cameo highlights the disparity between the equipment and the user, between the location and the visitor experience, and begs the question: is the provision of a formalized canoe trail at Barmah needed? To date, the canoe trail concept has not been fully explored for Australia, nor the potential role that canoe trails may play in enhancing user wellbeing whilst maintaining environmental sustainability. This paper introduces the concept of paddling along lengthy trails, explores the issues relating to paddle trails in the international literature, and addresses questions pertinent to the development of a new canoe trail on the Murray River in south-eastern Australia. For the latter, we ask the question: what factors need consideration in the development of a canoe trail in the Barmah Forest of south-eastern Australia that will enhance the wellbeing of both user and environment?

THE HISTORY OF PADDLE TRAIL DEVELOPMENT

Recreation in waterways by canoe has its origins mainly in Canada and America, where appropriation of indigenous canoeing practices were central to exploration and domination of these countries by European settlers (Poling, 2000). A defining geographical feature of much of North America is the plethora of expansive lakes and river systems along which indigenous populations were established, and which facilitated extensive trading networks. The increasing demand for fur products in Europe in the late 18th Century and early 19th Century saw Voyageurs – French canoe paddlers – transporting furs by plying their way along Canadian and North American waterways. The voyagers became national folk heroes, and their legendary status is sustained to this day through folklore and song (Jennings, Hodgins, & Small, 1999; McPhee, 1975). From the mid-20th Century, the life of the Voyageur was re-imagined as a form of wilderness recreation in North America by the likes of Sigurd Olsen and his 'new voyageurs'. This was followed later by Bill Mason whose naturalistic philosophical approach to wilderness travel influenced modern day canoe exploration (Jennings, Hodgins, & Small, 1999; Mason, 1988).

Canoe recreation was not solely restricted to North America. Inspired by indigenous and Voyageur canoe travel, the enigmatic nineteenth century Scottish adventurer, travel writer and philanthropist, John Macgregor, captured the British public's imagination as he embarked on ambitious well-publicised canoe journeys through Europe, the Baltic states and along the Nile River in the 1860s (McGregor, 2000; Poling, 2000). He went on to found one of the first canoe clubs in the world, the English Royal Canoe Club, whose annual regattas have turned canoeing into a British national pastime.

The inclusion of canoeing in the 1936 Olympic Games popularised competitive canoeing around the world. It was only a matter of time before canoe recreation, driven by its association with exploration and adventure, spread to Australia. Based on the North American traditions, and helped along by the global growth of youth camping organisations such as Scouts and Outward Bound, canoe recreation has become increasingly commonplace in Australia.

Notably, Australian Indigenous canoe traditions have not played a direct role in the development of this now very popular activity in Australia. The appropriation and evolution of canoeing and other forms of powered boat recreation from the North Americas by-passed the rich cultural traditions of water travel by Australia's indigenous population. When Australian Paul Sinclair (2001) explored the modern day Murray River, he described the river as a profoundly Aboriginal place. Throughout the Murray Darling Basin, numerous scar trees are testament to the centrality of the bark canoe to the culture of indigenous populations, but despite an anthropological fascination for the art of bark canoe making (Paton & Cope, 2012) there seems little impetus for river based recreation derived from these ancient traditions.

There has been a significant growth in participation in recreational paddling activities in Australia in recent years: estimated national participation rates in paddling activities have increased by almost 500 percent over the last two decades (Australian Bureau of Statistics, 2012). This rate of growth is associated with both an increase in private ownership of canoes and kayaks in Australia and the promotion of paddle recreation through mainstream boating and lifestyle television shows. Rotomoulded Sit-On-Top kayaks are now the most commonly available and affordable craft on the market, and are now available in Australian major chain supermarkets (Australian Canoeing, 2012).

Canoeists, or 'paddlers' to use a more encompassing term, may have a diverse source of motivation and purposes for participation in recreational paddling activities in Australia. Paddlers today engage in competitive racing events, athletic and fitness pursuits, kayak fishing, touring and adventure journeying, environmental appreciation, bird watching, and/or relaxation. Canoe touring or flat water paddling has both a lower initial skill requirement than many other forms of paddling and enables transportation of camping equipment, which means this mode of travel is often used by guided educational and tourist groups in Australia. The basic requirements for paddling activities include: the need to transport craft to and from suitable launch and egress points; at least some basic paddling skill set ordinarily derived from instruction; access to paddling equipment and protective clothing; an understanding of safety related environmental knowledge, such as the effects of winds on bodies of open water and fluctuating river levels; and some ability in navigation and way-finding.

An interesting trend in paddling participation is demonstrated in Figure 8.1. Organized paddling activities (paddling club participation) has doubled during the 2000s but the greatest growth area has been in non-organised paddling. Traditionally, participation in paddling activities necessitated membership of a paddling club or recreational organisation that had access to a fleet of craft, held

the knowledge of appropriate paddle trails for different skill levels, and which organised group events to explore waterways. However, emerging recreational paddlers are increasingly likely to own their own craft and seek out their own experiences. Rapid advances in communication technology have increased the capacity for paddle enthusiasts to self-publish paddle routes and/or guides based on their own paddling experiences. For example, 'Australian Canoeing' and associated state paddling organisations publish web-based information on established paddling routes, identify where trail guides and maps may be purchased from tourist outlets, and provide opportunities for individuals to upload their experiences of paddling activities. The spawning of paddling experiences mediated through digital technologies may better cater for self-reliant, skilled enthusiasts, but the authors suggest that formal paddle trails provide adequate infrastructure to assist less experienced paddlers, such as the family in the cameo introduction to this chapter, to participate more meaningfully in waterway exploration and recreation.
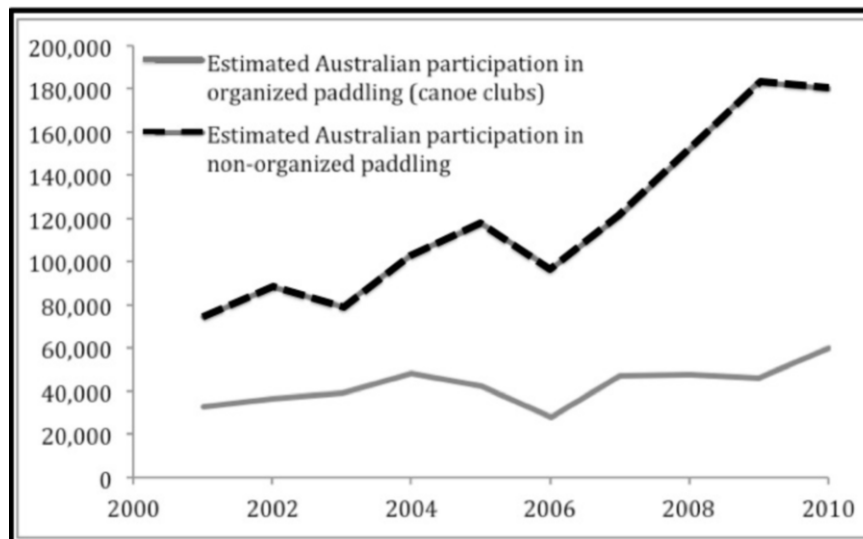
Figure 8.1. Australian participation rates in canoeing and kayaking, 2001-2010. Source: Adapted from Australian Sports Commission (2011).

As our focus is paddle recreation along trails, some clarity around terminology is warranted. We use the term 'paddling' to refer to recreational activities using canoes, kayaks, sit-on-tops (known as SOTs) and stand-up paddle-boards (SUPs). Canoes are open-topped water transport craft developed by North American indigenous peoples, and typically propelled with a single blade paddle. Kayaks originated with the Inuit hunters of the Arctic, and have an enclosed deck with a

cockpit for the paddler and are propelled with a double bladed paddle. Developed in the late 1980s, sit-on-tops are a hybrid of the canoe and kayak and made possible by advances in manufacturing technology that prevent the vessel from being submergible, i.e. it is a flotation device in its own right. The kayak may be seen as a sit-in vessel and the hybrid as a sit-on-top vessel. Stand-up paddle boards originated from the surfing industry in Hawaii and are becoming increasingly popular in flat water environments. Sit-on-tops have limited capacity to carry gear for an extended journey, and stand-up paddle-boards have no capacity for equipment cartage. There are often unspoken tensions between users of the various craft and their choice of craft materials. For example, purists may favour organic materials such as timber or hand-crafted fiberglass hulls but consider plastic craft to be the domain of the masses.

Moore and Ross (1998, p. 68) defined trails as "any linear corridor, on land or water, that provides access for recreation". The Victorian Trails Strategy (Victorian Trails Co-ordinating Committee, 2004, p. 6) defined a trail "as a defined path, route or track which often traverses natural areas and is used by people for non-motorised recreation such as walking, cycling, mountain biking and horse riding" and we would include paddling to that list. Terrestrial trails are usually distinguishable from the surrounding landscape by having visible surfaces and a series of signs and/or markers (South Australian Trails Coordinating Committee, n. d.). Trails may come in a large variety of shapes and forms and may be called 'bushwalking tracks', 'backcountry trails', 'rail trails' 'bike trails', 'water trails' or (in the United States) 'recreational greenways' and 'greenway trails' (Moore & Ross, 1998).

Paddle trails may be located in fluvial, lacustrine, estuarine and marine environments and are typically classified by paddlers as either 'inland waters' (rivers and lakes), 'enclosed waters' (bays and estuaries) or 'coastal waters' (Transport Safety Victoria, 2012). A distinguishing feature of paddle trails is that they mostly, though not exclusively, occur in 'flat waters', which broadly equates to Grade 1 of the international grading system for canoeing. The Australian Canoeing (2014) Safety Guidelines define Grade 1 river waters as: "easy: slow to medium flowing water with very small, regular waves or riffles; relatively few obstacles, with an easy path to follow; suitable for novices" (p. 16). Flat bodies of water such as lakes, bays and estuaries are not classified within the grading system, although attention is drawn to variables that affect their state, such as wind, fetch and tides (Australian Canoeing, 2013).

Other terms that broadly equate to 'paddle trails' include 'canoe trails', 'water trails' and the United States terms 'blueways' and 'blue trails' (complementing 'greenways' and 'green trails'). In Australia, we consider a paddle trail to include the majority of the following features:
– published documents or a web presence identifying and promoting the trail;
– established routes with associated infrastructure for launch sites, egress sites and campsites for overnight trips;
– advisory and interpretive trail signage;

- identification of general points of interest (natural and/or human heritage) that may be encountered along the trail;
- safety information outlining generic risks of paddling activities;
- information on environmental factors that may affect users of the trail, such as tides and flow rates; and
- nearby hire facilities, where craft can be hired for self-guided experiences.

Paddle trails can be found around the world, ranging from short paddling circuits completed in an hour or so, to extensive networks of trails covering thousands of kilometers such as are common in Canada. In Australia, notable paddle trails are located on the white water rivers of Tasmania, the Glenelg River in Victoria, several rivers in eastern New South Wales (N.S.W.) and southern Queensland, along coastal South Australia and in the Peel Estuary in Western Australia. We define a 'formal trail' as one in which money has been expended to provide infrastructure such as launch/egress structures, camping platforms and/or signage. Many 'informal' trails satisfy only the first of the identifiers listed above, and possibly the sixth. Paddle trails now form a spectrum from those that include each of the seven identifiers listed to those that only satisfy one.

The benefits of both paddling and trail recreation have been identified by many authors. The pioneering paddle trail adventurer John MacGregor (1866, p. 1) eloquently articulated the benefits of paddle journeys as a "mode of travelling … by which new people and things are met with, while healthy exercise was enjoyed and an interest ever varied with excitement keeps fully alert the energies of the mind". Likewise, the Victorian Trails Co-ordinating Committee (2004, p. 6) identified trail recreation as benefitting individual wellbeing, community social health, natural and cultural heritage protection, and local economies. "Trails help to connect people and places and develop and grow community pride" (South Australian Trails Coordinating Committee, no date). Paddle trails can reduce environmental damage by steering participants away from delicate habitats, and encourage stewardship by linking people with their environment and heritage (Cassidy, 2013, Waterways Ireland, National Trails Office, & Irish Sports Council, 2013, p. 7).

ISSUES AROUND PADDLE TRAIL DEVELOPMENT

We now turn our attention to the following four key issues around paddle trail development as identified in the international and Australian literature: the establishment of paddle trails passing through multiple land jurisdictions; variable flow and tidal regimes affecting paddle trails; ownership/custodianship of paddle trails; and encounter impacts.

As rivers and waterways often dissect different land tenures and land management units, the development of a paddle trail requires both an understanding of the land status through which the trail passes, and often, negotiation skills to overcome obstacles relating to differing legislations and/or expectations. Informal literature and trail implementation training materials from the United States are peppered with advice to work through land tenure issues as

part of the process. Blank and Simonson (1982), Johnson (2002) and Trask (2007) provide examples of how river corridors that traverse multiple land tenures, land management jurisdictions and political boundaries have led to complexities of paddle trail implementation. The issue of legislative provisions relating to camping along recreational trails that traverse multiple land jurisdictions was also encountered in the proposed 190- kilometre Clarence River Canoe Trail in N.S.W., where nineteen relevant pieces of legislation or state government policy relating to land and water management required attention (Parkin, 2011).

In their review of the effects of streamflow on recreation quality, Brown, Taylor and Shelby (1991) found that the quality of United States paddler experiences was dependent on flow levels. Significant rain in the catchment, water storage releases upstream, the opening and closing of irrigation channels, and tidal flows in coastal waterways can all affect water conditions on a paddle trail. For any given river, Brown et al. (1991, p. 987) found that:

> flows below a certain level were unusable. Above that minimum, recreation quality rises with flow, levels off at some intermediate range, and then drops as flow continues to rise. Flows above some point, for most rivers, are unsafe and simply unusable.

It is interesting to note that the number of paddlers in the United States is greater than the entire population of Australia (Cordell, 2012) and can exert considerable pressure on managers to keep river levels within optimum paddling levels. In Australia, water releases or storage for irrigation needs, hydroelectricity generation, flood mitigation or environmental purposes are prioritized according to state and federal government policy, with recreational needs only considered within those constraints (Murray Darling Basin Authority, 2014). The social benefits of access to river recreation, including access to paddle trails, are incidental in Australia, whereas they can be driven by the economic value of the recreational outcomes they provide in North America (Brown et al., 1991; Duffield, Neher, & Brown, 1992).

Paddle trails are often proposed and/or established and/or maintained in partnership with groups such as local shires, state park authorities, government departments, and/or friends/enthusiast groups (e.g. Clarence River: Parkin, 2011). The success of trail establishment appears to be dependent on the involvement and support of at least three groups broadly described as friends/enthusiast group, government agencies and a peak body relating to the activity (e.g. Canoeing Australia). We are not aware of any international examples of paddle trail development that have been totally privately funded, highlighting the need for government involvement in infrastructure establishment and liability insurance certainty. Once established, the long-term sustainability of trails also appears to be dependent on support from multiple stakeholders.

Encounter norms refer to recreationists' tolerance to encounters with other recreationists and the subsequent impacts on their experience (Donnelly, Vaske, Whittaker, & Shelby, 2000). This may include paddler's tolerances to other paddlers, paddler's tolerances to other water users, and other river user's tolerances

of paddlers. In the United States of America, Lewis, Lime, and Anderson (1996) found that paddlers accepted encountering four or five other paddle parties on lakes and rivers, whilst Grieser and Dalton (2006) found that group size was the most important factor in relation to perceived crowding amongst recreational paddlers, but that positive social encounters with other paddlers included the sense of belonging to the larger social group of a paddling community. Paddler experiences can be adversely impacted by the presence of motorised craft (Cassidy, 2013). In contrast, powered craft users enjoyed the presence of paddle craft but were indifferent toward meeting or seeing other powered craft (Adelman, Heberlein, and Bonnicksen, 1982). Not all river users have a tolerance for paddlers. Gilchrist and Ravenscroft (2011) argued that the long established United Kingdom angling community overstated their claims to exclusive use of waterways while simultaneously delegitimising claims of paddlers seeking access along these waterways.

The inclusion of overnight camping facilities embedded within paddle trail journeys may decrease conflict around encounter norms. A comparison of the estimated rates of trail use of several high-usage Victorian trails demonstrated the increased appeal afforded by inclusion of multi-day opportunities (Victorian Trails Co-ordinating Committee, 2004). The ratio of day to overnight visitors on the Glenelg River in Western Victoria was 1:9 due to the provision of canoe-only camping facilities and hire operators offering transportation options.

THE DESIGN OF THE BARMAH CANOE TRAIL

An opportunity recently arose to develop a canoe trail in an iconic section of Australia's most important river, in the Barmah-Millewa floodplain forest on the Murray River in south-eastern Australia. The governing authorities of the site – Parks Victoria and the N.S.W. National Parks and Wildlife Service (N.P.W.S.) – invited advice "to establish an interpretive water-based recreation opportunity for the community to experience and enjoy in this unique and inspiring environment" (Parks Victoria, 2012). This section describes the process undertaken in addressing multiple issues associated with canoe trail development in the Barmah-Millewa floodplain forest (Townsend, 2013).

The Murray River has had a long association with river transportation. The indigenous people that traditionally occupied the area used canoes extensively for transport and food acquisition purposes (Bonhomme, 1990). Following the arrival of Europeans to the region, the river became a major transport thoroughfare as paddle steamers plied their way up and down the river carrying people and produce. Today, the river is used for a myriad of water activities, including bank-side camping, swimming, jet skiing, speed boating (with associated skiing and wake boarding), sail boating, row boating, fishing, paddling, house boats, paddle steamers and naturalist/scientist inquiry (Victorian Environment Assessment Council, 2008). In addition to transportation, the Murray River is used to supply water to urban and irrigation areas across south-eastern Australia, and 27 major

reservoirs, locks, weirs and barrages have been constructed along its length to facilitate this (Murray Darling Basin Authority, 2014).

The Barmah-Millewa floodplain forest is an unusual section of the Murray River that was formed when uplift occurred along the western side of the Cadell Fault, temporarily damming the river and creating a number of lakes until new, smaller river channels found their way around the extremities of the uplift zone (Rutherfurd, 1990). Now occupied by the largest River Red Gum (*Eucalyptus camaldulensis*) forest in the world, both the forest and its understorey are flood dependent, which led to its listing on the Ramsar Treaty as containing wetlands of global significance (Department of Sustainability and Environment, 2003). The Barmah-Millewa floodplain forest has seen a long history of forest utilisation (Fahey, 1986), but most of the site has been reserved in the national park estate since June 2010. It is one of six icon sites established to improve the health of the Murray River under The Living Murray program (Murray Darling Basin Authority, 2012). The proposed canoe trail, hereafter called the 'Barmah Canoe Trail', is located within the Barmah Millewa floodplain forest, as depicted in Figure 8.2 and Table 8.1 and features eight route variants (Townsend, 2013). Table 8.2 summarises resources recommended for use in conjunction with the Barmah Canoe Trail.

Who are the expected visitors to the Barmah Canoe Trail? National parks agencies cater for the following five broad visitor types to the Barmah Millewa floodplain forest (adapted from Zanon, 2005): true travellers – those seeking a wilderness experience and requiring overnight camping; wanderers such as retirees affectionately known as Grey Nomads; family groups that may be day or overnight visitors; paddling enthusiasts that visit the trail specifically to explore waterways; and organised parties such as outdoor education groups, Scouts, etc. Of these five visitor types, family groups comprise the largest numbers (Dyack, Rolfe, Harvey, O'Connell, & Abel, 2007), thus highlighting both the relevance of the introductory cameo and the need to provide trail guidance and infrastructure.

What paddle craft are visitors likely to use? Answer: sit-on-tops, kayaks and canoes are expected. For visitors who don't own their own craft, the trail could be accessed by canoes hired locally (e.g. www.barmahcanoehire.com). It is assumed visitors would organize their own accommodation off-river, but on-river camping facilities were considered important to the canoe trail design. The proposal (see Table 8.1 and Figure 8.2) provides paddle traverses that: range from those suitable for novices (e.g. Route 5) to experienced paddlers (e.g. Route 3); range from short one-hour trips (e.g. Route 5) to overnight trips (e.g. Route 1); encounter a variety of environmental features such as river and lake sites (e.g. Routes 2 and 3); and encounter and highlight cultural features along the trail.
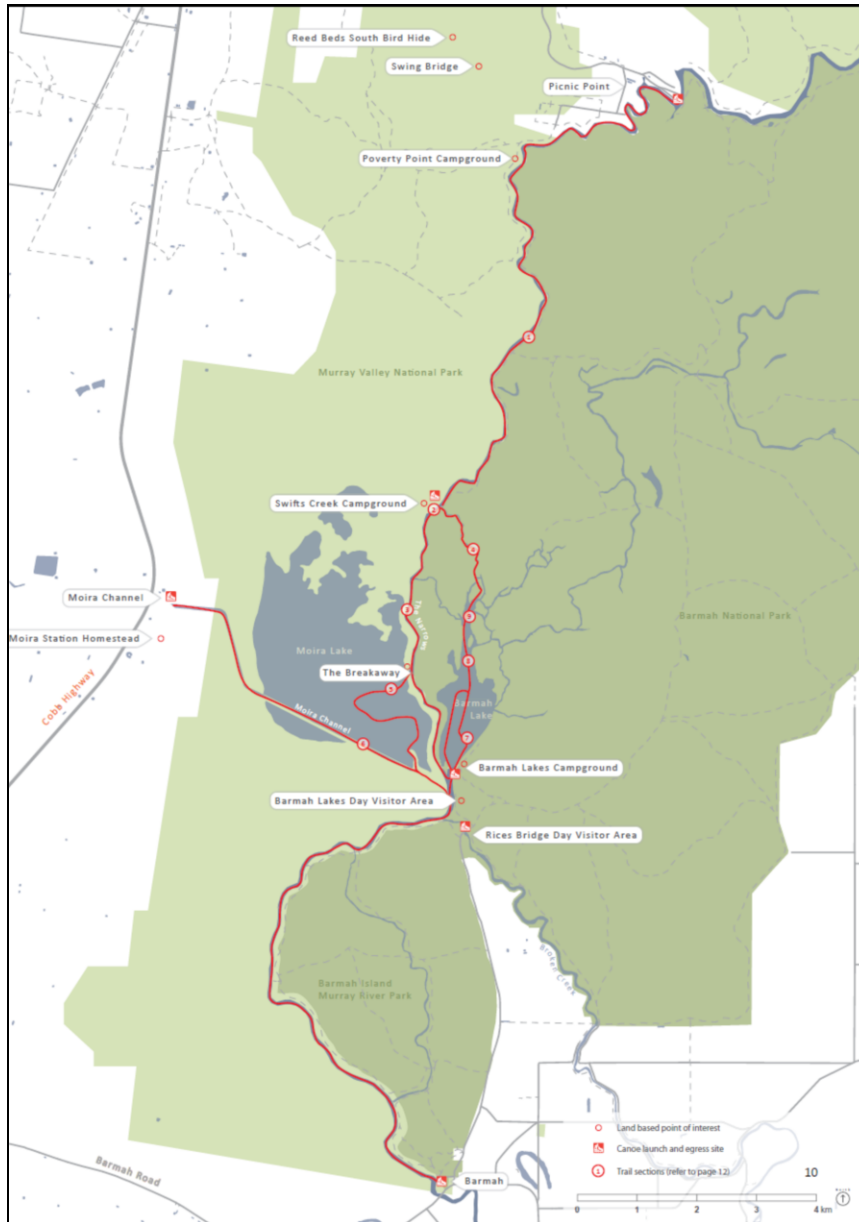
Figure 8.2. The proposed Barmah Canoe Trail. Source: Townsend (2013).

Table 8.1. Summary of the eight variants for the Barmah Canoe Trail (adapted from Townsend, 2013).

Route	Trail Section	Figure 8.2	Distance (km)	Paddle Time (hrs)
1	Picnic Point to Barmah Lakes Camp Ground	1 and 3	18	4
2	Picnic Point to Barmah Lakes Camp Ground via Cutting Creek and Barmah Lake	1, 4, 9, 8 and 7	19	4
3	Picnic Point to Barmah Lakes Campground via the Breakaway, Eastern Moira Lake and Moira channel	1, 3, 5 and 6	19	4
4	Barmah Lakes Campground to Barmah township		11	2.5
5	Lower Barmah Lake Loop	7	1-2	1
6	Upper Barmah Lake Loop	7 and 8	6.5	2
7	Barmah Lake Cutting Creek Loop	7, 8, 9, 4 and 3	11	4
8	Barmah Lake, Cutting Creek, the Breakaway, eastern Moira Lake and Moira Channel	7, 8, 9, 4, 3 and 5	12	5

Table 8.2. Summary of resources recommended for use with the Barmah Canoe Trail.

Resource	Author	Source
Safety guidelines for paddlers	Australian Canoeing Safety Code	www.canoe.org.au
Suitability of timing of any proposed trip regarding weather and bushfire information	Australian Bureau of Meteorology, Victorian Country Fire Authority, N.S.W. Rural Fire Service	www.bom.gov.au; www.cfa.vic.gov.au and www.rfs.nsw.gov.au
Location of major features and hazards along the river	Wright (2013)	Murray River Charts
Current river level data	Murray Darling Basin Authority	www.mdba.gov.au/river-data/live-river-data
Alerts for unsafe levels of algal blooms	New South Wales Department of Primary Industries	www.water.nsw.gov.au/Water-management/Water-quality/Algal-information/Algal-information/default.aspx
Timing of major events such as the Murray Marathon, Mathoura classic, etc.	Murray River Guardian (or equivalent)	parkweb.vic.gov.au/explore/parks/barmah-national-park

What land tenure issues exist in the study area? Seven major land tenure stakeholders were identified as important for the proposed canoe trail. Parks Victoria and the N.S.W. N.P.W.S. are key players, each funding 50 percent of the concept plan and signalling cross-border cooperation essential for the project. The N.S.W. National Parks and Wildlife Act (1974) and the Victorian National Parks Act (1975) both support the dual aims of conserving the natural and cultural estate as well as providing opportunities for appropriate recreational use and appreciation of the parks. Infrastructure in the form of launch and egress sites, chickees (sleeping platforms), toilets and signage are needed to satisfy those two aims, and the Parks agencies have already built two public boat ramps between Picnic Point and Barmah township: at Swifts Creek camp ground (N.S.W. N.P.W.S.) and Rices Bridge (Parks Victoria). Thirdly, the Picnic Point Management Committee at the northern end of the study area overseas several recreational facilities adjacent to commercial and private accommodation venues, including a public boat ramp owned by the local Mathoura Council. This is a multi-use boat ramp that could be enhanced to facilitate paddler launch and egress activities. Fourthly, the town of Barmah to the south is comprised of privately owned lands, but a boat ramp is on public land contained within a heritage listed site operated by Heritage Victoria (2014). Between them, these four stake holders have provided a good distribution of boat ramps in the study area. Fifthly, since 2010, a Traditional Owner Land Management Agreement has operated between the Yorta Yorta Nation Aboriginal Corporation and the Barmah National Park (Yorta Yorta National Aboriginal Corporation, 2010). Amongst other things, the resultant Yorta Yorta Board "allows traditional owners to comment on or consent to certain activities on public land" (Traditional Owner Settlement Act, 2010). In acknowledgement of the long association of indigenous canoe use along the Murray River, input from the Yorta Yorta people in the development of the Barmah Canoe Trail was sought, and in-principle support has been provided. Sixthly, by managing water flows in the study area, the Murray Darling Basin Authority is a critical player in the proposed canoe trail, and the implications of their management strategy will be discussed forthwith. Lastly, the Moira Private Irrigation District located on the western side of the study area, which services 94 irrigation farms and 56 stock and domestic clients (Murray Shire Council, n.d.), transfers water from the Murray River to the irrigated properties by pumping water over the Cadell Fault. As the Moira Channel intersects the Murray River opposite the Barmah Lakes Day Visitor area (see Figure 8.2), the eastern section of the channel has been incorporated into Routes 3 and 8.

How will the issue of encounter norms be approached in the study area? Of the many water users identified by the Victorian Environment Assessment Council (2008) listed earlier, site selection has meant canoe trail users are only likely to encounter campers, fishermen, occasional other paddlers, and water skiers near Picnic Point and Barmah township. Conflict is unlikely to arise between paddlers and fishers as both are using the river waters for recreation, but the provision of a paddler-only section along Cutting Creek (see stretch 4 in Figure 8.2 where snags must be cut to accommodate paddlers but not boats) aims to minimise potential

conflict. Around the settlement nodes of Picnic Point and Barmah, paddlers may not appreciate water skiing and associated activities, but the greatest conflict is likely to occur between vehicle-based-campers and paddlers camping overnight in the same vicinity. The provision of paddler-only camping sites (with toilets) such as chickees (camping platforms) would eliminate this conflict. We recommend that chickees be provided in Barmah and Moira Lakes for use in Routes 2, 3, 5, 6, 7 and 8.

How will safety, navigational and environmental information relevant to the Barmah Canoe Trail be communicated? We identified the main issues here to be: the presence of snags and their potential rearrangement after high flow events, murky waters that disguise both snags and associated currents, wind fetch distances, artificially fluctuating water levels, potentially unsafe algal levels in the water, the presence of powered craft and associated hazards such as swash, and the need for safe input/egress sites.

Many drownings in the Murray River are unofficially attributed to snags and associated currents (Peden & Queiroga, 2014). They have long been recognised as a hazard to all riverine craft (Kenderdine, 1994), and form as a natural consequence of large trees (e.g. River Red Gums) falling into a slow-moving and low-gradient watercourse such as the Murray River. Although a well-known hazard, research on the impacts of snags on recreational and navigational activities appears to be absent. Since 1975, large snags have been mapped by Maureen Wright in "River Murray Charts", which is updated every few years, but the lag time between a given high flow/flood event and the release of an updated version provides a challenge for safety and navigation in flood-altered environmental conditions. Additionally, there are many more unmapped, submerged snags that prove hazardous for all Murray River water users, as they produce – at best - specific local hydraulic conditions that can be problematic to navigate and – at worst – a death trap. Babich (2014) believes that the presence of snags in an otherwise flat water environment elevates the Australian Canoeing (2013) Safety Guidelines rankings from Grade 1 to Grade 2 waters.

The lack of water clarity and wind fetch further compounds the issue of snags and associated currents. The Murray River carries large volumes of suspended materials in its waters (Shafron, Croome and Rolls, 1990), which equates to no visibility in the water column. Long and straight river stretches that coincide with prevailing wind directions may lead to problems associated with wind fetch. These are all perennial issues that are addressed in Canoeing Australia's guidelines for safety in rivers and lakes.

As the water level and volume in both the river channel and lakes is controlled by the Murray Darling Basin Authority for food production and urban supply purposes, they are not negotiable by recreational users. An inverted flow regime has resulted from the use of the river for irrigation water transfers in summer and autumn, and the upstream capture and storage of naturally high winter and spring flows for the following irrigation season. The current flow regime is advantageous to paddlers, who are predominantly attracted to the river during the summer and autumn months when the minimum requirements for recreational flows are

ordinarily exceeded by irrigation flows. The Murray Darling Basin Authority publishes both current flow volumes and predicted volumes for the upcoming week on its website, which is then communicated on the N.S.W. N.P.W.S. and Parks Victoria websites. Consequently, the timing of planned trips to the study area can be coordinated with these operations, and we advise this information be accessed by canoe trail users prior to visitation (Table 8.2).

Navigating through the Barmah-Millewa floodplain forest during both low flow conditions and flood conditions can be problematic, for different reasons. In low flow conditions, only the Murray River channel is navigable, as snags in the distributaries render them impassable and the lakes become totally dry. Flows greater than 15000 megalitres are required to flood the Barmah and Moira Lakes simultaneously. Algal blooms may occur in the river during low flows in warm and hot conditions, and toxins produced by some cyanobacteria (blue-green algal varieties) can be damaging to humans. River algal alerts are provided by the New South Wales Department of Primary Industries website (Table 8.2), which should be consulted prior to visiting the area.

In high flow and flood conditions, the Murray River channel is overtopped and water spreads out across the floodplain, effectively eliminating landmarks including the river channel itself on occasions. As a result, road access to the river is reduced and the potential for paddlers to lose their bearings amid the flooded River Red Gum forest is high. The speed of flows during high flows and flood events can increase the Australian Canoeing Safety Guidelines ratings above Grade 1. These conditions are not suitable for novice paddlers but can hold high appeal for experienced paddlers, where a high level of discretion is needed by paddlers attempting such feats.

This brings us to the need for safe input and egress sites along the Barmah Canoe Trail. There are already several boat ramps in the study area (see Figure 8.2) and the longest distance between ramps is about 13 kilometres. Ramps provide good river access when the water level is high but are otherwise not ideal due to their steep gradients and the concrete construction materials which may damage paddle craft. The banks of the Murray River through the Barmah-Millewa floodplain forest are predominantly steep-sided and muddy, which limit the ease of terrestrial access, especially in emergencies or when paddling breaks are required. There is only one small sandy beach in the study area – at Barmah township. However, the bank profile of the Barmah Lakes approximate beach conditions even if muddy, and normally allow for both vehicular access and multiple points of river entry/departure (Wright, 2013). Townsend (2013) suggested two further boat launch/egress sites be provided in the form of pontoons to accommodate users of the four canoe trail variants that visit the Swifts Creek campground and the Breakaway (see Figure 8.2).

How will interpretative information on the Barmah Canoe Trail be communicated? Babich (2014) has made some very useful suggestions on appropriate interpretation and signage for the Barmah Canoe Trail. In highlighting both the "absolutely superb" wildlife and rich cultural heritage of the area, Babich identified key landmarks along the route that would serve as foci points for

interpretation. These include the formation of Moira Lake associated with the Cadell Fault movement, the abundant bird and animal life around Barmah Lake, indigenous scar trees, use of reeds by Aborigines, nineteenth century survey blaze trees such as the 258-mile-tree marker dating from 1876, mile markers indicating river distance measurement, Barmah Punt used for past river crossings, ringbarked trees associated with past logging, regulators managing water supply to the forest, River Red Gum forests needing fluctuating water levels for survival, Moira Channel removing water for irrigation, European Carp (*Cyprinus carpio*) in Moira Lake and how they are being managed, etc. As traditional signage may be regularly inundated, Babich (2014) suggested innovative platforms for information dissemination that combined on-site signage with mobile phone technology. The key factor is that this information be accessible by paddlers on the river.

For the proposed Barmah Canoe Trail to become a reality, existing facilities will be utilized and some new features added. Current facilities including boat ramps and riverside campsites are provided by the Mathoura Council, N.S.W. N.P.W.S., Parks Victoria and Heritage Victoria. It is proposed that existing launch/egress sites be supplemented by two additional pontoons, on-river or on-lake camping facilities including toilets, and navigational/interpretive signage. In addition, snag manipulation along Cutting Creek is needed for canoe-only passage. N.S.W. N.P.W.S. and Parks Victoria have made commitments to this effect. Our suggestion is that ongoing maintenance of the trail be jointly managed by the two Parks authorities and enthusiastic users ('Friends of the Barmah Canoe Trail' group or equivalent).

CONCLUSION

Important factors that need resolution for the successful development of a canoe trail have been identified as negotiating compliance with multiple land jurisdictions; having suitable river and tidal regimes; identification of appropriate personnel to build and maintain the trail; dealing with other river users (encounter impacts); and communicating appropriate safety, navigation, environmental and interpretative messages. For the Barmah Canoe Trail on the Murray River in south-eastern Australia, we have sought to provide an opportunity for personal wellbeing by optimizing recreational opportunities for both experienced river users and the emerging populace of novices, while at the same time ensuring the environment is not compromised. We hope that when the trail is completed, visitors such as the family featured in the introductory cameo will move beyond the vicinity of their campground with confidence and explore the expanse of red-gum fringed lakes, reed bed inlets, networks of channels and creeks, and the full flow of the River Murray.

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Chris Townsend
La Trobe University
Australia

Ruth Lawrence
La Trobe University
Australia

PAUL BEEDIE

9. ADVENTURE IN LEISURE

An Exploration of Indoor and Outdoor Climbing Communities

Great things are done when men and mountains meet. This is not done by jostling in the street. (William Blake, *Gnomic Verses*, circa 1783)

INTRODUCTION

There is a growing set of arguments in leisure research which promote the idea that leisure activities previously connected to an ethos of mutual support and *communitas* – the connection of equality, community and togetherness – are being undermined by a shift towards individualisation, consumption and privatisation (Arai & Pedlar, 2003; Bauman, 2001; Sharpe, 2005). Outdoor adventure activities have a long history of *communitas* which, it is suggested, is an outcome of a shared engagement with risk (Carnicelli-Filho, 2013; Kiewa, 2002). A catalogue of literature connects outdoor adventure activities to risk taking / risk management, often mechanistically in ways commensurate with frameworks of external control that emphasise 'the right people, in the right place, at the right time with the right equipment'. Less prominent is discussion of adventure as a social construct in the context of the 'new' ethos of individualism which embraces personal dynamics of how people understand themselves, relate to each other and the places that adventures happen. Sharing adventure(s) – that is confronting uncertainty and generating challenge by physical activity – continues to effect social relationships because experiencing a risk activity engenders an emotional engagement (Carnicelli-Filho, 2013; Sharpe, 2005). The sense of 'community' thus generated is complex, multi-layered and shaped by time: community is a social phenomenon which is fluid and in constant need of social maintenance. In outdoor activities it is dependent on degrees of immersion in the adventure environment. This chapter will explore such communities with a focus on climbing and it will show that climbing communities range from complete lifestyle immersion (e.g. the seasonally drifting American climbers) to the more temporary groups typical of adventure tourism and indoor climbing.

WHAT IS COMMUNITY?

This widely used term has ambivalent meanings. In broad terms it denotes attachment to a group with whom a person has some shared interests and a sense of common endeavour. In this respect community is seen as a positive social form

through which a person can access support networks and build a stock of social capital (Arai & Pedlar, 2003). Community can also have negative connotations as when a group becomes inward looking and exclusive of certain people – history has many examples ranging from racial apartheid to the rules about membership of a golf club. Bauman (2001, p. 3) suggests that the word community "… evokes everything we miss and that we lack to be secure, confident and trusting". This overarching position is, however, a generalised response to processes of globalisation and accelerated lifestyles over which a person has little control; we become insecure as the structural anchors of quotidian life are constantly undermined. However, leisure offers escape possibilities, often via shared experiences that offer potential communal structures. One of the more impactful ways of experiencing alternative social perspectives is when the leisure choice involves activity, takes place in an unfamiliar environment and necessitates an emotional engagement such as that which happens with risk pursuits. Sharpe (2005) explores this domain in her work with groups who undertake white-water rafting trips. She explains (Sharpe, 2005, p. 256) that: "… *communitas* emerges when people step out of their structural roles and obligations, and into a sphere that is decidedly 'anti-structural'. In this anti-structural sphere, people are 'betwixt and between the categories of ordinary life' and the rules of everyday life can be altered, inverted and made topsy-turvey".

WHAT IS COMMUNITY TODAY?

Community has been compromised by the conditions of high modernity. It has also been exacerbated by the social and economic thrust of the late twentieth century. This is evident when the market drive to individualisation (e.g. home ownership) combines with technological innovation that has facilitated different ways of being gregarious (e.g. social networking sites). Today there is greater accessibility to multiple identities which suggest we exist not in a community but in communities. Social theorists promote ideas of 'high modernity' (e.g. Giddens, 1990) or postmodernity (e.g. Bauman, 2001) which, despite some disagreement about whether we have crossed a tipping point in terms of social organisation, promote similar explanatory characteristics of the social world today. These include an accelerated pace of life, global flows of money, people, images and ideas all kept in motion by a sophisticated series of technologies that have effectively 'shrunk' the planet and blurred cultural boundaries. In this complex of social, economic and cultural mixing the idea of 'community' is being swirled around, shaping and borrowing and being defined and manipulated in all sorts of ways. Community today can mean different things to different people; in the UK it has been absorbed into the present coalition government's vision of a Big Society and therefore has a political dimension (e.g. the communities of sport envisaged as part of the London 2012 Olympic and Paralympic legacy). But it also offers a sense of belonging for ordinary people in everyday experiences (e.g. reading clubs). Community remains an aspirational state or place continually idealised, realised, diminished and re-constructed. We are all today part of numerous communities each of which

contribute to a sense of who we are and what we do as we navigate the increasingly fragmented and fluid conditions of life in the twenty-first century. Arai and Pedlar (2003) suggest communitarianism is beset by three interrelated crises which are: self identity, alienation resulting from a loss of trust, intimacy and social relationships and a political crisis in decision making as power moves to a global level. In this context of insecurity it is the empirical groundedness of a shared adventure activity that has the potential to offer 'solutions' to these crises and thereby, at least in some temporary capacity, support *communitas* development.

WHAT ARE ADVENTURE COMMUNITIES?

Adventure is defined as uncertainty of outcome (Beedie, 2013). In many respects getting through our lives is an ongoing adventure as we confront and deal with issues such as finding a job, being productive and forging a sense of identity. Identity, like community, is a negotiated term and is just as difficult to define. Identity is a social phenomenon that requires us to promote a sense of who we are and gain recognition from others: identity is a way of making sense of the world that incorporates values and norms absorbed through processes of socialisation. It is this ongoing requirement to present in social settings that can lead to uncertainty – we have to gauge social reciprocation to feel comfortable about who we are. The complexity of everyday life means that we assume multiple identities and, given that identity is a learned social process, the uncertainty increases in line with the possibilities. The accelerated world and technical innovation across a range of media have contributed to the promotion of multiple significant others and role models. The result is that we can assume and / or discard numerous different identities which, in turn, locate us in different potential communities.

Many of the communities we are part of are determined for us such as the neighbourhood in which we live or the school we attend. But others are chosen and adopted and the more specific meaning of adventure – that is to engage with activities, usually outdoors and often in wild places that encompass risk – connects to activity communities that are founded in outdoor recreation. Such communities are shaped by a number of social determinants (where people live, who they know, risk taking propensity, access to time and money and many others). Communities do exist in adventure activities – sailing, hiking, canoeing, caving, orienteering, mountain biking and many more. Like other communities today, when boundaries are fluid a process of fragmentation is discernible within any one umbrella activity. Cycling (Aldred, 2013) is an example of a growth activity that has dedicated communities around club based competition both on roads and indoors at velodromes; but it also has groups which exist for recreational touring, perhaps of the increasingly well mapped and sign-posted coast to coast routes for example. Crucially, Aldred's (2013) work shows that the label 'cyclist' exists in a dynamic relationship with other social identities and is both contested and performative: both cyclists and motorists (who effectively share the same space as people on bikes) seek to shape such identities. The strength of this empirically informed discussion about cycling is what it illuminates about the way identity and hence

community is negotiated; the same dynamic applies to other activity settings and now the focus will turn more specifically to climbing.

CLIMBING, RISK AND LEISURE

Leisure has always been defined as the antithesis of work and as the opportunity to exercise a freedom of choice. However, the simplistic work-leisure binary has long since been diminished by postmodern theory that emphasises greyness in what was previously black and white, fluidity and the permeability of social boundaries (Rojek, 1995). Bauman (2000, p. 169) goes as far to suggest that "all communities are postulated; projects rather than realities, something that comes after, not before the individual choice". Adventure communities would appear to be susceptible to this line of reasoning because adventure, that is bursts of activity and excitement, becomes a rarity for the majority in a civilised, risk managed society in which, for many of us, inactivity, habit and routine is the dominant norm. Adventure activities offer escape opportunities from a perceived mediocrity of quotidian life and thus have considerable potential to generate an emotional engagement. Sharpe (2005) in her analysis of the rafting company Wilderness Adventure promotes several important ideas about community today. These include community is an experience rather than a place specific anchor and the idea that communities today are less about instrumental bonds based on what people can do and more about shared interest and emotion. She goes on to say (Sharpe, 2005, p. 278) "For leisure, the most obvious implication of this movement towards community as a chosen pursuit is that leisure takes on a central role as a domain to make and experience community".

The particular adventure activity group which will provide the focus for this chapter is climbing. Climbing is the act of ascending a feature, usually rock but increasingly artificially constructs. The act is physical, requires balance and degrees of agility, stamina and muscular power. Climbing is directly associated with risk. At one level risk is about challenge – the capacity of a person to ascend a particular 'route' – and in this respect a climb is an adventure in that the outcome must be uncertain if the route has not been attempted before. At another level the risk is social in that by undertaking a climb a person is effectively becoming a climber. Climbing is therefore interesting in terms of community because, although in most conventional forms of the activity a rope is used and therefore a climbing partner needs to share the rope (Meier, 1976), climbing is essentially an individual activity. Nevertheless, despite climbing being subjected to processes of fragmentation so that it is possible to identify climbing sub-groups around the more specialised aspects of the activity (e.g. 'boulderers', sport climbers, indoor competition climbers, deep water soloists, mountaineers, gorge-scramblers – see Lito Tejada-Flores' famous essay (1978) Games Climbers Play), climbing communities exist and both reflect and contribute to the social conditions of our times.

The ways that climbing communities reflect contemporary social conditions include: fragmentation into sub-groups; overt concerns with competition for some;

elements of commercial and business involvement; fluid and permeable social boundaries so that climbers might belong to several different groups; technical developments in transport and communication (e.g. on-line climbing guidebooks) and connections to fashion and thus identity display. In this latter respect belonging to a climbing community is far from fixed and might be thought of as a continuum of communities shaped and influenced by all of the social conditions outlined above. To the left of the continuum is the ephemeral climber who takes part occasionally, has some clothing but generally hires or borrows the more technical equipment – probably climbs most often at indoor urban climbing centres. Socially conformist and playful in approach, climbing is seen as a fun social recreation that has health benefits because it requires activity. To the right of the continuum are the existential climbers. These typically eschew social conventions and immerse themselves in climbing as a lifestyle choice. Climbing is completely defining of who they are and the challenge of climbing longer and harder is the essence of their world view. In between on the continuum there are graduations of communities defined by how serious they are about the activity and how much time and other resources they have to allocate to climbing. Of particular note, and the position of these groups does move around, is the emergence of adventure tourism.

Climbing is an adventure based activity which is a leisure choice. Stebbins (2005) would argue that it is a serious leisure choice because climbing is integrated with risk, and to engage in risk oriented pursuits demands levels of commitment, skill and aspirations of knowledge and experience consistent with deep immersion: climbing is more than a shallow occasional fun activity. However, in the context of our modern world the relationship between climbing and risk makes no sense unless the risk is managed in ways that allow a person to avoid physical and mental distress and even death. The history of climbing has been shaped by this inevitable tension and this, in turn, has led to ever increasing risk management applications. These are most evident in developments of climbing technologies; for example hawser-laid ropes and steel karabiners are now redundant as lighter and stronger kernmantle ropes and alloy karabiners combined with sophisticated slings, nuts on wire, camming devices and, in some locations, pre-placed bolts are in everyday use to protect climbers from and if falling. But there are other commensurate developments in risk management including more detailed descriptions of climbs, professional bodies such as the Association of Mountaineering Instructors (in the UK) to guide and advise and, crucially, better training facilities for climbing. The most common form here is the indoor climbing wall.

One of the consequences of a combination of better technologies and risk management has been to create climbing places with minimal risk. There are two reasons why these artificial climbing places have taken off across the developed world; first, their independence from the natural outcrops of rock needed for rock climbing in its pure form means they can be (theoretically) located anywhere and second, commercial and business interests have spotted an opportunity which has been fully exploited. Quite simply, climbing has become commodified and climbing centres have emerged in most towns and cities in the developed world,

because that is where the 'market' exists. Never before has climbing been so prominent and easily accessible as an active leisure choice, but, because such options are available in addition to and alongside existing choices this has complicated identity issues in climbing in ways that have impacts for the commensurate communities.

This very brief and selective commentary thus makes the point that, in order to understand climbing communities we have to consider the social, economic and cultural context in which such groups have developed and exist today. It is possible to typologise (with the inevitable generalisations) climbers today by using participation at climbing walls as a starting point. This is an appropriate methodology because for the majority of people, particularly the younger, if they are interested in climbing then their first experience is highly likely to be at an indoor climbing centre. At a stroke all the potential limitations of climbing in natural settings – wind, rain, cold, dark, isolation from help and support, travel time and access to specialist equipment – are eliminated. Climbing fits the twenty-first century template of a safe risk activity, individualised, competitive and available, like gym membership, for those slots of time when we are at leisure rather than work as a 'walk-in' pay and play environment: we are individuals at play at the same time as being part of a climbing 'community' because, for the time we are doing the activity everyone around is too.

Climbing walls are a recent development when compared to the history of climbing. Each new development in the field of climbing (e.g. bolts, competitions and now artificial walls) tends to fragment the field in ways that multiply identity possibilities. A typology which represents this diversity would establish four 'types' of climbers by the intersection of two axes: a vertical axis as a continuum from real rock to fully artificial as the climbing medium and a horizontal axis recognising a range from climbers whose 'tradition' is built on the outdoor experience and who have absorbed the core ethos of the sport as set out through its history (probably older climbers) and 'consumers' who pay for an indoor experience (probably younger climbers). Figure 9.1 represents this model diagrammatically. This continuum approach recognises that some people will move around on the scale as, for example, indoor climbing through the winter might be seen as a way of keeping fit and agile in anticipation of a summer of rock climbing. The climbing fraternity in general has resisted any organised climbing competitions on real rock (so these take place exclusively on artificial surfaces) and the risk reduction provided by bolt placements on rock except for certain rock types (limestone in the UK) and certain crags following consultation with local climbers. This, for traditionalists, preserves the uncertainty of outcome which is the raison d'etre of *adventure* climbing. *Sport* climbing by comparison has in-situ bolts for the lead climber to clip and therefore becomes more of a gymnastic challenge as the consequences of harm from a fall are significantly reduced.
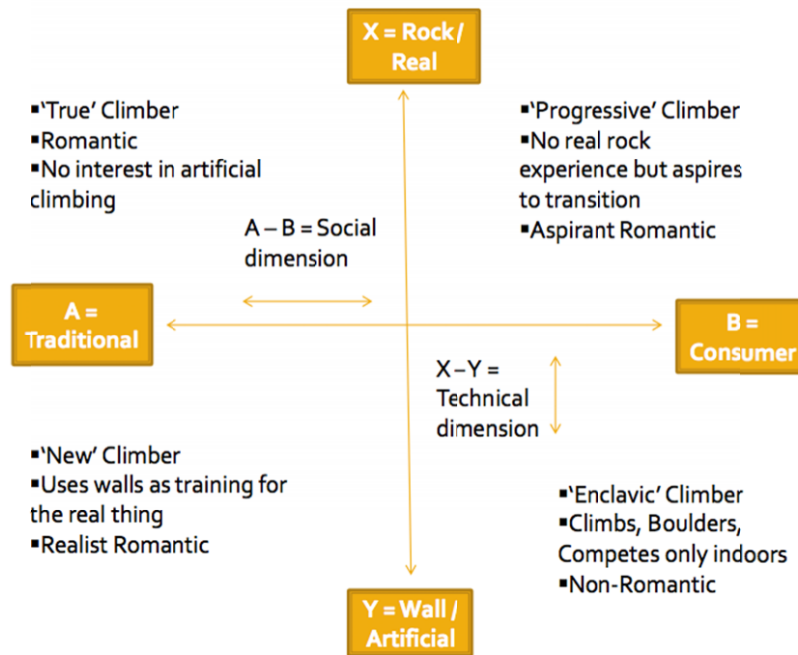
Figure 9.1. A typology of climbers.

Most indoor climbing centres have walls which provide for lead climbing and top-roping but all roped manoeuvres are protected by bolts. In general terms the older or 'traditional' climbers tend to prefer rock to walls and adventure to sport climbing whilst today's younger climbers have grown up with walls and therefore embrace the artificiality more easily. Following this logic it becomes possible to 'categorise' climbers into four groups. These are: (1) the 'true' climber (who only climbs on rock); (2) the 'new' climber (who mixes wall and rock climbing); (3) the 'progressive' climber (who has no rock experiences but aspires to these), and (4) the 'enclavic' climber (who only climbs indoors). By understanding that 'climbers' do not exist as a homogenous group, it becomes easier to see how climbing creates communities across a number of social fields rather than one. Those who climb only at indoor climbing centres are broadly located to the left hand end of the climbing continuum.

CLIMBING COMMUNITIES

Climbers, then, can be understood in relation to the places where climbing occurs (e.g. indoors/outdoors) and the way(s) in which they engage in the activity (e. g.

adventure or *sport* climbing). Just as in the past, climbers remain bonded by the physical and emotional experiences of this risk based activity. However, the complexity and pace of contemporary times has fragmented this bond into sub-sets – all of them climbers but with degrees of commitment to the activity and thus the defining social frameworks of community.

It is suggested (Kiewa, 2002) that the attractions of climbing as a leisure activity are connected to the risk integral to the activity; climbing offers a space where a person can achieve some control. This control is all the more powerful because climbing is an activity whereby loss of control can lead to 'total chaos'. Kiewa suggests (2002, p. 147) that climbers have to embrace the opposite of rational action and embrace uncertainty in order to benefit from the leisure identity connected to 'climber'. The problem is that the escape to irrational 'edgework' is itself subjected to degrees of rationalisation: in climbing this happens with the development of climbing technologies such as shock absorbing ropes, choices about climbing with in-situ bolt protection, a proliferation of guidebooks and training regimes (which have emerged with the growth of climbing walls). Kiewa's research amongst climbers in south-east Australia concludes (2002, p. 159):

> Climbing has been depicted as a form of escape from the malaise affecting the modern world: a high level of predictability and consumerist orientation that creates an unprecedented standard of living and security at the cost of personal freedom and spontaneity. However, to retain the characteristic of resistance to this safe, comfortable and seductive society, climbers must continue to choose methods of climbing that oppose this society.

She goes on to suggest and evidence a schism between climbers that are committed to risk and uncertainty and those that aren't, or at least do not subscribe to those levels of commitment. The 'real' climbers use symbolic behaviours (predominantly in the ethical domain of climbing *style* – a subtle mix of how and where you climb) in an attempt to sustain boundaries and distinguish themselves as a climbing community.

Jillian Rickly-Boyd (2012) follows a similar methodology although her fieldwork follows the 'highly mobile sport community' of climbers in America. Her particular concerns are the pursuit of 'existential authenticity' among climbers who reside at the right hand end of the climbers continuum and the way that seasonality and place intersect to establish the geography of this climbing community. This disparate group are united in community through their lifestyle choice which involves sleeping in vans in a state of mobility, and living a frugal existence exclusive of life's luxuries as they pursue an intense climbing schedule. Existential authenticity is: "an activity based approach [and] is most useful for addressing the feelings, sensations, relationships and sense of self that comes from the performance of tourism" (Rickly-Boyd, 2012, p. 86).

Rickly-Boyd (2012, p. 88) argues that choosing climbing is thus a search for existential authenticity. This encompasses two elements of social endeavour the intra-personal and the inter-personal dimensions. In the former the leisure choice emphasises 'bodily feelings' (the concerns for recreation and relaxation) and 'self

making'. This is about being spontaneous and breaking out from norms in ways that facilitate the release of true feelings in the pursuit of the authentic self. The second element is inter-personal authenticity which can be subdivided into family ties and *communitas*: here the existentially authentic leisure experience is about collectively performing and experiencing the journey. Whilst her analysis is wide ranging, it is the commentary surrounding *communitas* which is the most relevant to the discussion here. Drawing on a line of previous theorising she suggests *communitas* is "… spontaneously generated, temporary communities in which individuals, stripped of socio-economic attributes, are treated as equals, joined by common belief and purpose" (Rickley-Boyd, 2012, p. 98). It is the temporal dimension in this use of the term that differentiates her work from that of Sharpe (2005). However, because the existential climbers Rickley-Boyd is studying are part of the bigger social field of 'climbers' it is difficult to eliminate the hierarchic components operating as these climbers are clearly distinguishing themselves from other climbing communities which – moving leftwards on the continuum – have degrees of commitment to the activity. This analysis is supported by evidence which clearly illuminates the distinction that these existential climbers feel from other climbers; for example they locate themselves as cutting edge explorers in the long history of climbing; also, although many of them do climb the hardest routes they de-emphasise competition and articulate a rhetoric of reverence for the act of climbing. Rickly-Boyd (2012, p. 101) concludes:

> Authenticity is performative; it is not simply achieved, authenticity calls for an ongoing life of significant actions. For lifestyle climbers, existential authenticity ultimately comes from fleeting moments and self evaluation surrounded by individuals with similar intentions … The goal is not to climb a route for the sake of climbing it, in order to check it off a list, but it is the way that one approaches the rock, and thereby travel and the lifestyle, that is important.

Having explained the communities located to the right (existential) and the left (ephemeral) of the climbing continuum this final section of discussion will examine the floating and transient communities occupying the centre ground. If the lifestyle climbers, who have made a conscious decision to reject conventional social norms, can still have their sense of community shaped by social, cultural and economic forces, then this remains even more so when examining those people occupying the middle range of the continuum. Of particular note is the propensity for climbing to succumb to the development of risk management, however as climbing has become less objectively risky (with the indoor climbing wall being the most obvious example) it is the commercial possibilities that have developed because the climbing community in its broadest sense has been considerably expanded beyond the relatively small group of pioneers who developed climbing by making first ascents.

A synthesis of adventure and tourism has developed in the last twenty years, and continues to grow (Beedie, 2013). Taken literally, adventure tourism is an oxymoron setting, as it does, uncertainty of outcome with the commodification of

the tourist package. However, adventure tourist climbing holidays do offer the potential of *communitas* as a group of people are brought together for a holistic, shared experiential experience that is extraordinary. Climbing packages can range from a series of lessons about how to climb on a climbing wall through an outdoor climbing experience (typically on an outcrop rather than a big mountain crag) to an ascent of a Himalayan mountain. The time scale of these different investments is important because this relates to the extent of the distance a person can achieve from the habits and social norms of everyday life and the commensurate emotional engagement generated by this circumstance.

The climbing wall based activity is short lived, a distraction rather than an immersion. The Himalayan expedition example however creates a spatial and temporal disconnection from routine, because this is likely to go on continuously for several weeks at least, and thus has the potential to create a communal bonding that, whilst not permanent in the original sense of community, provides the social machinery for short term bonding. These temporary communities can be explained through the concept of 'sociations'. Sociations are life defining communities – the concept was originally developed by Kevin Hetherington and extended by John Urry (Beedie, 2013) and the original archetype was new-age travellers. The immersion in such communities was complete, and, although not necessarily for life, it was common to be part of the community for many years. When the concept is applied to adventure tourism (as 'ad-sociations') it is clear there are elements of *communitas* however ad-sociations are clearly temporary arrangements which can provide great anticipation, pleasure in the actual experience and reflective moments thereafter but which don't take over a person's life completely (Beedie, 2013).

Ad-sociations clearly operate across the scale of the climbing continuum and in ways that are free floating rather than fixed. However, it is probable that the intra and inter bonding that is experienced is strengthened by greater geographical distance from a person's normal life places and greater extraordinariness in the activity which is undertaken. Thus, the Himalayan climbing experience is more likely to create the ad-sociation (or temporary community) than the climbing wall experience because it is both further from the constraints of everyday life and closer to the real, hands-on experience of the climbing tradition. Moreover, the deeper the emotional impact of the experience the stronger the feeling of a bonded community will be sustained: it is very common for adventure activity companies to set their programs up to create progression for a person (e.g. wall to rock to mountain) who might then find the same companions on subsequent trips; equally, such temporary communities are commonly sustained via social networking sites. In this respect the commercial expediency of the adventure tourism industry is sustaining and nurturing adventure communities for the twenty-first century.

CONCLUSIONS

Community is a fluid demographic arrangement commensurate with the social conditions of present times: when 'life' moves forward, for example through advances in communications technologies, intellectual thought, commercial

possibilities and educational systems, people feel de-stabilised by the changes and tend to think backwards in time (through the inevitable rose-tinted glasses) to days when 'life' was simpler and less stressful. Political policies often draw heavily on such a nostalgic position that expects communities of self support to return once the shackles of centralised (government) control are released. Such strategic ambitions lack an understanding of context. The past may shape the present – people are gregarious – but the future can never completely replicate such an ideal because the conditions of social life are not fixed. People are resourceful and adaptable: what emerges then are multiple and mobile occupations of the climbing continuum as evidenced by the examples developed in this chapter. Climbing is an activity with considerable potential for enhancing wellbeing because it operates as a microcosm of the bigger social world in which people create and sustain and move into and out of multiple communities as circumstances demand.

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Paul Beedie
University of Bedfordshire
UK

MARCUS MORSE

10. PAYING ATTENTION TO PERCEPTUAL EXPERIENCE WITHIN NATURE

> I am persuaded that the ability to formulate an adequate and efficacious conception of value is contingent on a prior, prereflective *perception* of value. (Kohak, 1992, p. 173, italics in original)

INTRODUCTION

> Above the Churn on the Franklin River, I try to unravel the experiences that have unfolded. Standing on this rock, I ask myself the question, how can I feel so connected to a place and at the same time be so terrified? What is it at this point, seven days into the river journey that makes me feel things so deeply and see things clearly? Is it the feeling of being vulnerable in such remoteness, the history and stories, lack of technology, the slowing down, or the sense of community amongst friends on the river? Or is it the whole experience that can't be broken into pieces? (Alison)

The literature focussing on participant experiences of nature in outdoor and environmental education is extensive. Although this literature provides a conceptualisation of what an experience might be it is necessarily incomplete. Experience itself is not easily defined. Indeed, as Hans-Georg Gadamer (1975) writes, 'however paradoxical it may seem, the concept of experience seems to be one of the most obscure we have' (p. 310). In interpreting an experience it can be tempting to pay attention to the objects and events that are observed or cognitively considered in the surrounding environment and which appear to be self-evident. Yet this approach may only tell a part of the story, overlooking elements of pre-reflective and perceptual experience that are easily taken for granted. As Marjorie O'Laughlin (2006) suggests, 'the intercourse of a living being with its environment includes cognition, but is by no means exhausted by it' (p. 84).

In this chapter I focus on perceptual experience and in so doing outline an understanding of what an experience might be that highlights and values the role of aesthetic and embodied experience. The discussion begins by considering the value of pre-reflective and perceptual components of experience and then outlines two forms of meaningful experience based on a phenomenological study of participant experiences on a river journey. I will conclude by considering some ideas for paying attention to perceptual aesthetic experiences in the outdoors.

MARCUS MORSE

EXPERIENCE AS INTERRELATING

Understanding experience is at the heart of this chapter. The idea of experience lies within a paradox that involves a tension between what might be considered personal, private or subjective and what is collectively or socially shared. A view of culturally constructed and commodified experience can be a challenge to personal, lived experience and Martin Jay (2005) argues for an understanding of experience that rests within this tension: ''experience,' we might say, is at the nodal point of the intersection between public language and private subjectivity, between expressible commonalities and the ineffability of the individual interior' (pp. 6-7). Common to many understandings of experience, however, is an encounter with a sense of otherness. Jay (2005) suggests that 'however much we may construe experience as a personal possession – 'no one can take my experiences away from me,' it is sometimes argued – it is inevitably acquired through an encounter with otherness, whether human or not' (p. 7). Similarly, Jay Roberts (2012) finds a consistent theme at the 'interplay between experience and otherness' (p. 115), suggesting that the notion of experience 'necessitates an engagement with something more than mere self' (p. 115). This sense of interrelatedness or engagement with something more than self involves pre-reflective and perceptual components of experience that provide opportunities for meaning making and a sense of being-in-the-world that may be easily overlooked.

Experience, then, is more than just seeing and thinking, it involves a constant embodied interrelationship with the world around us. David Abram (1996), in *The spell of the sensuous,* asserts that perceptual interrelating is at the heart of human experience: 'humans are tuned for relationships. The eyes, the skin, the tongue, ears and nostrils – all are gates where our body receives the nourishment of otherness' (p. ix). And Will Adams (2007) reminds us that 'interrelating is an essential given in human existence... *interrelating is our essence, our calling, and our path*' (italics in original, p. 28). Within experiences of the outdoors there may be qualities of interrelating that can profoundly influence both perceptions and conceptions of who we are in the world. John Quay (2013a) provides an example of perceptual qualities of interrelating in considering Martin Heidegger's understanding of environmental experience: 'Heidegger's sense of environmental experience is aesthetic, holistic; it is not experience of the environment as we might understand that term in its scientific and ecological significance. Environmental experience is pre-reflective or pre-theoretical and thus phenomenological' (p.76). In this way environmental experience is considered to be not *of* the surrounding environment but to emanate from *within* the surrounding environment, and the way in which the surrounding environment is perceived brings with it an ontological positioning not easily described.

RETURNING TO THE QUALITIES OF PRE-REFLECTIVE EXPERIENCE

Perceptual qualities of interrelating within the surrounding environment will always be difficult to describe via what must ultimately be post-reflective recollections of experience. If the inherent qualities of interrelating within pre-

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reflective experience are worthy of attention, and I contend that they are, how can we return to the lived experience and describe it? How can we cognitively pay attention to and describe that which is pre-cognitive and must remain, at least in part, ineffable? Phenomenology provides one possible way to return to and to describe perceptual experience as it is lived. Although experience will always be mediated by social and cultural ways of being in the world, phenomenology aims to return to and describe, as accurately as possible, experience as it is lived.

Erazim Kohak (1984) suggests that as a philosophical tradition and a methodological approach phenomenology requires us to 'look to experience with a fresh eye, taking as our datum whatever presents itself in experience, as it presents itself and only insofar as it presents itself' (p. 22). Phenomenology seeks to describe not only that to which attention is paid within experience but also how attention is paid. It is a return to the investigation and description of the essence of things as we live through them. As Max van Manen (1997) asserts, 'phenomenology is the study of the life world – the world as we immediately experience it pre-reflectively rather than as we conceptualize, categorize, or reflect on it' (p. 9). Although it begins with rich descriptions of individual lived experience, phenomenology attempts far more: 'the aim is to use these descriptions as a groundstone from which to discover underlying commonalities that mark the essential core of the phenomenon' (Seamon, 2000, p. 159).

TWO EXAMPLES OF MEANINGFUL RIVER EXPERIENCE

Adopting a phenomenological approach within a recent study of meaningful river experiences (Morse, 2014a, 2014b) I reported two key findings. The aim of the study was to reveal the structure and essence of participants' experiences of an extended river journey on the Franklin River in Tasmania, Australia. Data sources included observations and participant interviews, journals, and written responses to follow-up emails from 32 participants (aged between 17 and 65) on eight Franklin River (ten day) journeys. A mapping of individual and collective interpretations, which then provided a framework for reinterpreting the original individual descriptions of lived experience, allowed thematic structures of participants' experiences of river natures to be revealed. The two key recurrent 'streams of experience' or forms and flows of meaningful experience revealed were (i) *a feeling of humility* and (ii) *being alive to the present*.

A Feeling of Humility

The form of meaningful experience that involved 'a feeling of humility' comprised four recurrent qualities:
i)   A sense that 'things' might become 'something',
ii) A tension between vulnerability and comfort,
iii) An intertwining with the more-than-human world, and
iv) An imminent paradox (Morse, 2014a).

Elements within the surrounding environment (for example, geological features, carved river channels and forest micro-worlds) were perceived as being part of something larger within a 'more-than-human' world (Abram, 1996). There existed a tension between the perceived 'something other' and a feeling of being part of this something other: 'at the heart of this profound experience was a paradox: that one can perceive something as the other, in its alterity (otherness), and also be a part of that other' (Morse, 2014a, p. 50). The two perceptions were intimately connected, yet constitute a paradox: it is not possible to be both a part of the world yet separate from it at the same moment.

> So there was that side of being alone in this big environment, as well as feeling connected to all things. Those two feelings aren't mutually exclusive, I don't think. I think there's a relationship between them. (Morris)

The meaningful qualities of this form of experience appeared to occur at the pre-reflective level, with many participants describing a sensorial awareness they were unable to capture at the time. The simultaneous perceptions of connection and separateness had an unsettling effect upon participants. Although it was difficult for participants to describe the way in which these related yet divergent possibilities were interrelated, the imminent possibility of the paradox appeared to place participants directly into the world in a profound way. The French phenomenologist Maurice Merleau-Ponty (1968) describes the potential relationship of two such possibilities as 'chiasmic' (see pp. 130-155). The term *chiasma* describes the anatomical intertwining of two threads that intersect and cross but remain independent, similar to a DNA helix or fibres woven into a fabric, and Merleau-Ponty uses the term chiasmic 'as a figure for understanding both the paradoxical contact and separation of the intersubjective relation' (Toadvine, 2009, p. 111).

> But at the same time that you feel small, a part of something bigger, so you feel diminished. At the same time, you're also aware that you're part of that system and there's something comfortable about that. (Vickie)

> Standing on this rock, I ask myself the question, how can I feel so connected to a place and at the same time be so terrified? (Alison)

Merleau-Ponty (1968) describes the phenomenon by considering the idea of touching an object. If, for example, we attempt to touch an object with our right hand and at the same time another person's hand moves to touch our hand, we potentially have two perceptions of being, that of the toucher and that of being touched. The perception that our right hand might be the touched heightens our experience of the touching of an object and places us directly into the world. As Merleau-Ponty (1968) suggests, 'the seer and the visible reciprocate one another and we no longer know which sees and which is seen' (p. 139). In this way there is a profound and inescapable openness to the world; it intrudes into us and we intrude into it. In this way, participants described a sense vulnerability and intimacy that placed them directly within the surrounding environment.

> It was like a moment for pause … I felt extremely empowered by how I felt by being there, and, I was feeling … feeling small … despite your size you can still be, you can still climb that big mountain, you can still go over that big rock, you can still swim in that big river, you can still climb that big tree. Like there's … you can live within it. Yeah, I'm not sure if I'm going to be able to verbalise that. (Beth)

This quality of interrelating within an already meaningful world provided, for many participants, a feeling of humility. Such experiences involved a sense of pre-reflective interrelatedness with an other that is, as Kohak (1992) suggests, 'there-for-itself, an appresented Other, with an integrity of its own and calling for respect' (p. 176). The simultaneous perception of two related yet divergent possibilities (being separate, yet intimately connected) was at the core of the form of meaningful experience described as involving a feeling of humility.

Being Alive To The Present

The second form of meaningful experience, described as 'being alive to the present', comprised the following three qualities:
i)   Interaction characterised by intimacy
ii) A sense of being lost within, and
iii) A 'rightness' in being effortlessly aware (Morse, 2014b).
At the heart of this form of meaningful experience was a sense of paying unforced attention within the surrounding environment. As participants journeyed down the river, the ambient environs simultaneously evoked effortless attention and a sense of intrinsic worth: 'attention appeared to be invited, captured and held more readily by natural complexity than it might otherwise have been within everyday surrounds' (Morse, 2014b, p. 9). Additionally, the way in which this effortless attention was paid often involved a sensuous, embodied experience.

> It's a totally, a whole sensation. I mean the sound and the smell and what you're actually looking at as well, it just felt like a sensory banquet, you know? I was just so satisfied with the whole experience … even as it was happening. So I think, there's something that really rests your brain when, largely, you're just engaging your body for ten days. (Amy)

> It was about day four or five where I was just totally where I was. And again it was very much about, a bird flying past or a, you know, leaf falling down, like that, this kind of a sensation-based experience. You're quite, you're really quite, ah, overwhelmingly in it, in how much I felt moved by it, you know? Amazing. (Amy)

Simon James (2009) points out that 'natural things have not been designed to fulfil any human purpose and so there typically seems to be more to them than can be comprehended in instrumentalist or functionalist terms … so natural things can invite attention' (p. 108). However, in the context of the study it appeared to be more than just paying effortless attention to the things themselves that provided

meaning; it also involved the way in which attention was paid. Similarly, Merleau-Ponty (1962) asserts that it is not only a matter of what is available within the surrounding environment, but also the context in which it is available: 'our perception, in the context of everyday concerns, alights on things sufficiently attentively to discover in them their familiar presence, but not sufficiently so to disclose the non-human element which lies in them' (p. 322). In this way, experiences of nature are noteworthy in terms of perceiving intrinsic worth because the surrounding environment may be composed and available in such a way that it appears to be there-for-itself.

> It also happens to you. Because there are no distractions, so you... it gives you that time, and mental time as well, partly because of the distance maybe involved, to focus on the things around you. To maybe pay attention in a different way, to gain an intimacy with the place. (Rachel)

> It's a moment of awareness. I don't know how to explain it, but that's the only way I can sort of describe it, like a moment where it all is there. So I'm calling it just that, I just can't think of the name. You know, there's a moment where you're coming out of there and there's the temptation to grab it and hold it and maybe it's just better to let go. I just let it pass and I appreciate what happens. (Trent)

At the core of participant descriptions involving this form of intimate interaction was a sense of 'rightness' in paying attention. Like an all too rare conversation with another person in which one listens and is entirely present, participants were able to pay attention in a way that they sensed the surrounding environment deserved. The wilderness river journey described in the study provided opportunities for meaningful experiences via a sense that the surrounding environment in its perceived givenness (there-for-itself) demanded respectful attention. Charles Brown and Ted Toadvine (2003) suggest that such forms of experience can flow from interactions with more-than-human surrounds, indeed that they may be crucial: 'our conviction that nature has value, that it deserves or demands a proper treatment from us, must have its roots in an *experience* of nature' (italics in original, p. xi).

PERCEIVING VALUE

Pre-reflective sensorial and embodied components of experience can be foundational both in terms of providing meaning and attributing value. Kohak (1992) suggests that 'for the vast majority of humans, the effective life-world of their daily acts consists almost entirely of artifacts, neither created nor grown but manufactured by humans for human use' (p.179), and that 'perceiving a world of artifacts whose sole meaning is their utility, humans might very well gain the impression that they are the source of value, and that all reality is reality-for-them' (p. 179). He argues that perceiving the intrinsic worth of the other is a crucial task because although a perception of utility (there-for-us) will always remain in perceiving the world, gaining a perception of the world as there-for-itself, as an

other deserving of respect, may temper this inferred utility: 'thus utility must tread humbly, with gratitude, ever conscious of the cost it exacts – and willing – at times – to be overridden by it' (p. 177). By perceiving the world as there-for-itself and worthy of respect there might proceed an element of humility in the way we conceive of and act towards the more-than-human world. Indeed, Kohak (1992) argues that it is potentially more important to *perceive* the good (intrinsic worth of the world around us) than to *conceive* of the good, because any conception of value and meaning must be based on a prior perception of value. In this way pre-reflective perceptions of the world around us, that can be taken for granted or remain hidden, are crucial. Experiences that provide opportunities for such perceptions require careful attention, as Quay (2013b) suggests: 'any reflective experience is always underpinned by an aesthetic experience. Yet we can sometimes overlook the important educational contributions that our program design and conduct make to aesthetic experience' (p. 153). It is worthwhile considering components of the aesthetic experience of being on the river that appeared to contribute to the meaningful experiences described.

AESTHETIC RIVER EXPERIENCE

For participants in the study a lack of distraction, rhythm, sense of remoteness and length of journey all played a part in the way they were able to pay attention within the surrounding environment. The lack of distraction involved more than just a lack of everyday distractions; it involved a lack of intrusion into meaningful experiences as they were occurring. In other words, experiences were able to run their course with a sense of intimacy and completion. This did not necessarily mean that other participants were not present, rather, that the quality of attention remained uninterrupted. The rhythm and extended length of the journey provided an opportunity for participants to immerse themselves in the place, or as one participant put it 'arrive in the landscape', with many of the most meaningful experiences described as occurring after the fourth or fifth day.

The 'riverscape' of the Franklin River was also a key component of experience. From the moment of embarkation on a river like the Franklin the focus of attention falls upon the river. To pull away from the bank is to look downstream, to listen for incoming streams, to search within the valley for the river's path and to consider what might be around the next corner. Sensorial attention is enclosed within the valley for the length of the river journey. It is a very different experience to walking in the mountains and being able to looking beyond, towards home.

> If you invert the world it [the river] dominates the landscape of the area, as much or more than the mountain, which is the more obvious feature. I guess if you poured a cast and turned it upside down then you'd see the influence. (Sarah)

Trees and ridgelines surround you and campsites slope gently towards the river providing a natural sitting position with your back to the hillside and a view across the river. To walk over tree roots is to feel the timescale of the forest, to stroll

barefoot on a pristine beach is to be reminded of the unstoppable force of the river as it rises and falls, and to hear a waterfall is to know that the place continues on regardless of your attendance. Such things can be easily taken for granted or remain in the background, yet they are integral to the way in which attention is constantly held within the river.

> The orientation to the river is continuous; one is either travelling *down the river* or oriented *towards the river,* and the focus of attention is downstream or within the river valley. Movement, orientation and sensual experience are relative to the river. The constant focus towards the river is expressed both within participants' language and their physical orientation. (Morse, 2014a, p. 52, italics in original)

River journeys such as the Franklin involve moments of relaxation and tension. To stand at the top of a steep ravine, to paddle a turbulent rapid or to portage above a cliff through the forest all require a consistent focus of attention. However, it was rarely these moments of tension and adventure that comprised the meaningful experiences described by participants. It was, instead, often the moments of release after having passed through the sections of perceived tension that provided an opportunity for participants to wander, wonder and gain a sense of intimacy. It was as if concentrating on something entirely and then subsequently being released from that experience provided an openness and vulnerability, which provided an opportunity for the place to intrude directly via the senses. Brian Wattchow (2008) identifies a similar quality in a study of participants on river journeys, finding that a key theme of *sensing a connection with river places* commonly occurred 'on sections of rivers below the major rapids and perceived dangers, such as the lower reaches of the Snowy' (p. 14). Although it was the quieter sections of river that appeared so powerfully for participants, without the previous moments of tension and adventure the meaningful experiences described may not have appeared in the way they did.

CONCLUDING COMMENTS

I have sought to highlight perceptual and pre-reflective components of experiencing the outdoors by drawing attention to ways in which the qualities of interrelating on an extended river journey might provide meaning. I am not suggesting that experiences of remote wilderness rivers should be the focus of outdoor programs, or that such wilderness experiences are not in themselves unproblematic; rather, that such journeys can provide opportunities for paying attention from within the surrounding environment in a unique way. By paying attention to the wellbeing of another in an intimate manner it may be possible to gain a sense of rightness and our own wellbeing in the world. It has not been my intention to artificially separate pre-reflective and reflective experience; though these are necessarily intertwined, experience can involve much more than what we see and reflectively think about. By paying careful attention to components of experience that might otherwise remain hidden my aim is to reveal ways in which

aesthetic and embodied components of experience might provide meaning and value.

Kohak (1992) highlights the important role that lived experiences of the natural world can play in perceiving intrinsic worth. However, he further suggests that such perceptions need to be acted upon. Kohak argues that the experience of encountering the world as there-for-itself and worthy of respect should be extended to one of caring for the perceived other in a practical sense, suggesting that 'not in taking, but in giving of ourselves to the other do we learn to *see the good*' (p. 185, italics in original). Today the challenge may be to provide opportunities for not only perceiving the intrinsic worth of the other but also acting to care for an-other that is worthy of respect. I have drawn attention to the potential primacy of perceptual experiences within nature as a way of contributing towards tempering our utility of a world in which we are intimately involved.

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Marcus Morse
La Trobe University
Australia

LESLEY HODGSON

11. THE SPACES OF OUTDOOR LEARNING

An Actor-network Exploration

We shall not cease from exploration … (T.S. Elliot Little Gidding)

INTRODUCTION

This is a chapter about spaces of learning; in particular those experienced in outdoor and environmental education. Traditionally university courses focus on learning activities within the institution but outdoor experiences play a pivotal role in outdoor education courses. Outdoor educators recognise that there is an intrinsic value in outdoor experiences and the inclusion of off-campus trips in subjects is an accepted assumption that underpins the development of all coursework. As a consequence outdoor education courses are relatively expensive to run, potentially and actually disrupt the university norm in such areas as timetabling, transport and safety as well as affecting students' capacity to take electives in other disciplines. In spite of these limitations and importantly, in subject evaluation questionnaires, students frequently comment that their 'outdoor experiences' contributed most significantly to their learning.

What happens in the outdoors during these times that makes students value the experiences so highly? Or, as Robyn Zink (2013, p. 100) suggests a more appropriate question to ask might be: Why does a particular activity outdoor seem like a good thing to do? Zink (2013) uses the work of Foucault on power, in particular his interest in "how *relations of power* work to produce and to repress possibilities of human thought and action" (p. 102). A relational view rather than a hierarchical view of power can raise questions about outdoor education practices, including assumptions that may be taken for granted and maybe need rethinking.

If, as suggested, both students and staff in the Outdoor Education discipline value the outdoor experiences so highly then asking such a question is important – especially in today's educational climate where budget cuts often threaten the operation of outdoor activities and suggestions that 'virtual' experiences can compensate for lack of 'real' ones as has been occurring in undergraduate geography elsewhere (Stumpf, Douglass, & Dorn, 2008). While student questionnaire responses may provide significant justification to run off-campus trips I want to step back and interrogate what are perhaps unquestioned assumptions about the 'good' that a field trip can do. I pose the following questions. How does a particular learning space enable learning opportunities? What performances occur in learning spaces by students, staff and other objects

and what effect does this have on power and agency? These questions focus on the learning space dynamic and consider the learning space as a 'network' with links between humans and the material environment they engage with. One way to explore this perspective is actor-network theory described by Law (1992) as

> a body of theoretical and empirical writing which treats social relations, including power and organisation, as network effects. The theory is distinctive because it insists that networks are materially heterogeneous and argues that society and organisation would not exist if they were simply social. (p. 379)

In actor-network theory Foucault's ideas of power and agency are extended. Power is the effect of a network rather than something held by any one thing or person. As such, power always has the potential to move, as relations between elements within a network change.

The origins of actor-network theory stem from work done by Bruno Latour (1987) that focused on the social role of science and technology. It has since extended to numerous disciplines (Fenwick & Edwards, 2010) including education. Actor network theory focuses on the creation of networks in which both humans and the materials they engage with are given equal consideration and, more specifically, enable detailed scrutiny of what is happening in those spaces. As such, actor-network theory provides an alternative way of thinking about what is happening in educational space.

This chapter uses actor-network theory to explore shifts in power and changes in agency that occurs as educational spaces of learning change from a classroom to the outdoors. It focuses on the network relations between students, teacher and materials change.

SPACES OF OUTDOOR EDUCATIONAL EXPERIENCE

Reference to recent theoretical developments related to the identification of network spaces that influence learning helps frame the discussion. The geographies of real and relational space as outlined by Murdoch (2006) (and considered relevant for the theme of outdoor education) and actor-network theory studies in education such as Fenwick and Edwards (2010) and Fenwick, Edwards and Sawcheck (2011) provide a useful starting point. Over the past forty years there have been significant challenges to the idea of space and how it is analysed. Murdoch (2006) suggested an ontological shift is needed when considering the term 'space' as used traditionally in geography. While topographical space is a 'real' space that reflects the physical environment, more recent theorists have considered non-representative, 'imagined' relative spaces that reflect the social environment. Associated with these 'imagined' relative spaces is the idea of time-space compression (Dodgshon, 1999) that can serve to distort our experience of 'real' space; something that has been significantly influenced by communications technology. Merging both 'real' and 'imagined' space is current reality.

With this assumption the network of learning spaces indoors as it extends to the outdoors is the task at hand. In one sense, these 'learning spaces' are 'real' physical environments where learning is situated. In another sense, relations occur between the entities within each learning space that lead to networks being developed related to the learning spaces in a social sense. Murdoch (1998) wrote of "spaces of actor network theory" and his 1998 paper aimed to "assess how the theory might usefully be applied to the critical analysis of space" (p. 358). He similarly identified two different types of spaces, prescribed and negotiated, that suggested different levels of control of those spaces. Prescribed spaces are those that are 'tightly ordered'; a network that may have developed over a long period of time or, where power relations do not allow for any movement within the space. On the other hand, negotiated spaces are very fluid and 'disordered'.

Fenwick and Edwards (2010) provide an educational example of these two network types in their description of a comparative study of undergraduate physics and management students by Nespor (1994). The physics students he studied followed a well-established system of lectures, laboratory work and assessment with content that could be easily replicated in any university. This resulted in students with a very firm disciplinary identity and tightly knit networks within the physics community; a 'prescribed space' as described by Murdoch (1998). Power is held by the physics text and curriculum and learning is an effect of the material enclosed within a set text book with limited opportunity for change. In contrast the management students developed projects in conjunction with the local business community; a process that required them to both be off-campus and negotiate their project time within their other daytime commitments. As a consequence, their experience was "disaggregated … that resulted in a churning of the relationships in which they participate" (Fenwick & Edwards, 2010, p. 44). The network developed was more disparate but, importantly according to Nespor (1994), gave the students more choice and was more empowering than that of the physics' students. This is a 'negotiated space' as described by Murdoch (1998), who does suggest that such a dichotomous division is misleading, preferring the term "multiplicity of spaces" that may range from ordered to disordered with networks constantly either in a process of 'becoming' or 'falling apart'. However, such dichotomous divisions provide a useful framework for analysis.

Drawing on Murdoch's (1998, 2006) study to 'assess' how actor-network theory might be used in critical analysis of teaching spaces is an issue of importance to outdoor education. Using a field trip that investigates cultural landscapes in Central Victoria emerging ideas about 'spaces of learning' are illustrated in both the lecture and field based experiences that follow from teaching a second-year university subject. "Australian Culture and Land" is a compulsory subject for Outdoor and Environmental Education students at La Trobe University, Bendigo.

THE SETTING OF LEARNING SPACES

The subject overview states:

> Students … learn about the Indigenous and European cultural origins and characteristics of land tenure and management of both public and private lands in Australia. They will be introduced to the history of our current land management system. Students will engage with ideas related to the cultural construction of nature and the way in which current beliefs and practices about land use are imbedded in cultural accident and history. In exploring the current institutional and legal structures involved in land use, students will be able to understand why differing expectations, regulations and practices apply to a range of land designations. (Subject Learning Guide, 2013)

The subject activities include lectures, tutorials and a 3-day trip along a walking trail in the Castlemaine Diggings National Heritage Park. The trip "traverse[s] different land tenures and management regimes and … explore[s] past and present attitudes to, and use of, the land" (Subject Learning Guide, 2013, p. 4). The trip directly addresses two subject learning outcomes related to understanding of "Australian social and cultural perspectives on the landscape" and "historical influences on the relationship between land tenure and nature conservation" (Subject Learning Guide, 2013, p. 1).

The trip is related to a major assessment task, a 1500 word essay in which students are asked to demonstrate their critical understanding of attitudes and values towards land in the Castlemaine region. Many students find this subject challenging. They are expected to accommodate abstract ideas of changing attitudes and values to land over time. This can be difficult to contextualise in a subject which is often unfamiliar and appears to offer little interest. However, the value of such knowledge is increased due to the fact that most outdoor education experiences in Australia occur on protected public land. As future outdoor education practitioners developing a critical capacity towards past, present and their their own values and attitudes to the land they use for their practice may be of benefit to student, particularly in terms of continued protection of land (Slattery, 2001). As Slattery (2001) aptly note, "there are strong connections between the practices of Outdoor Education and the land (and) these can be enhanced by incorporating environmental history into our knowledge skills and actions" (p. 28).

The assignment attached to the field trip contributes to student learning (Fenwick & Edwards, 2010). It is the culmination and consensus of what the student has gained from the task and associated activities in a range of learning spaces the students engages in and with. Specifically, I concentrate on the network developed around the 'content' that is delivered within two spaces; (a) the lecture room and the pre-trip lecture and (b) the walk on Castlemaine Diggings National Heritage Park. 'Content' is the material that students are provided with to assist with completing the assignment and, actor-network terminology, is a non-human entity performed in a variety of ways within the spaces described.

THE LECTURE ROOM AS A LEARNING SPACE

Prior to the walk the students attend two lectures specifically linked to the field trip and to the assignment requirements. Interaction between participants and other material entities comprise the lecture. These include the lecturer and students, computers, laptops, note books, phones, screen, chairs, tables, slides, video and speakers. All these are linked to a network that is the Australian Culture and Land class but for the purposes of this discussion the focus is on the PowerPoint slideshow and its production of the subject content with which the students are expected to engage both in this class and on the field trip.

In the 100 minute lecture students view 79 slides that include writing, artworks, maps, photographs as well as links to wider networks including songs and news reports. Students are seated at desks in front of the slides. Material from the subject learning guide is repeated on the screen. The field trip questions are also repeated. These initial slides invite 'in anticipation' the student to imagine being in the outdoor learning space that is the field trip. That is, the lecture room network is linked to the physical space beyond the lecture room.

Six slides then follow that introduce the students to the concept of a cultural landscape to provide a theoretical context for the trip. All too soon the slides move to the field site. In the space of the next 70 slides, the layers of culture (Indigenous, European and Chinese) are worked through chronologically. The slides include some written material and many photographs of historic or contemporary images of areas that will be visited on the field trip. Through the slides the 'outside' and the 'past' is brought to the lecture room; time and space are compressed (Dodgshon, 1999). Through the lecturer's prior knowledge and experience, the goldfields landscape is presented as read. While the students are invited into the network, the lecturer is empowered to choose the order and the order chosen has involved a rearrangement of the topographical space to privilege the chronological component. Images included focus on the visual qualities of the landscape and few words are included in the PowerPoint presentation. The way the slideshow is structured and sequenced tells a story the lecturer wants to tell; a story that links not only to the field trip but to the assessment task as well. In fact, student could complete the assessment task now even though the 'answers' to the question are bound up in the lecturer's interpretation. At the end of the lecture, the material provided and available to students online, together with their wider reading, puts them in a position to address the assignment question. So, is there a need to go on the field trip?

Attendance at this lecture is voluntary and students are prone to drift into their private spaces including their mobile devices. Hence, the learning space is tightly controlled, both physically and in its performance. It is an example of what Murdoch (1998) calls 'prescriptive' space. While the lecture room clearly has a defined 'physical' or geometric space that influences the layout of various components it is also a discursive and topological space. Entities, human and non-human, are placed and responded to in ways that are highly predictable, and behaviour in them is 'normalised' (Murdoch, 1998); bound by timetables and

expectations of a PowerPoint presentation. There is an 'imagined' barrier between where the lecturer *stands* and the students *sit*. There is great emphasis on 'getting through' the slides and questions are rarely asked.

More importantly the slideshow becomes a topological space (Murdoch, 2006). The PowerPoint slides have the capacity to 'enrol' the goldfields landscape into the lecture network. The 'bush' images become content and are able to be rearranged and ordered to fit within the boundaries of the network. Choice and selection of images with a specific focus have strengthened the capacity of the lecturer to perform the teaching task. In this case the lecture represents such a network termed by Murdoch as a 'space of prescription' in which the network is strongly prescribed "imposing rigid and predictable forms of behaviour" (p. 362). The PowerPoint program enables the enrolment of distant material with little, if any, disruption to the established university norm that is a 120-minute lecture.

THE CASTLEMAINE DIGGINGS AS A LEARNING SPACE

The 3-day field trip for the subject takes students through the Castlemaine Diggings National Heritage Park. The Park is about 40 kilometres south of the University campus and is accessible by road and rail to Castlemaine. The park is unique in Victoria and noted for being the first land given the new land designation of a National *Heritage* Park; protected for its cultural heritage values (Parks Victoria, 2005). It surrounds, but does not include, various towns including Castlemaine, Chewton, Fryerstown, Irishtown and Vaughan Springs. It is approximately 7500 hectares and follows gold-bearing Ordovician sedimentary rocks that extend from Castlemaine to the south, where the rocks are overlain by a more recent volcanic landscape. The geologic divide is significant in terms of past and current land tenure and land use. The gold bearing Ordovician sandstones that underlie the Park were exploited from the 1850s until the 1930s for the gold found both in the rock strata and alluvium in adjacent streams. The land was cleared in a matter of months as gold was extracted and trees cut down to supply food. When the gold ran out the land was frequently abandoned and returned to forest over time. The land remained as Crown land – termed the *Forgotten Forests* by the Victorian National Parks Association (Calder & Calder, 2002). In 2002, following an extensive campaign to protect the forests associated with the gold bearing strata through much of Victoria, the forests were rebadged as the Box and Ironbark Forests and protected under the *National Parks (Box-Ironbark and Other Parks) Act 2002* (Parks Victoria, 2005).

This section will follow the content or material as it is provided on the field trip to support their assignment. The field trip is a thirty kilometre walk along part of the Great Dividing Trail, a recreational trail through the Castlemaine Diggings National Heritage Park that has been developed over the past twenty years (see www.gdt.org.au). The land has not been designed as a teaching space, and while the Great Dividing Trail provides a route and a direction (from north to south OR south to north) it has been up to the outdoor education staff to develop the walk as a teaching tool. This involved selection of accessible sites that provide good

examples of the various layers of impact on this landscape and how it is now represented without involving long side treks from the main trail. There is little formal interpretation along the trail. Teaching opportunities rely on knowing where artefacts and sites are and providing students with information about them *in situ*. Most artefacts have been identified and recorded by archaeologists (Bannear, 1993) although they can be increasingly difficult to locate particularly as they become obscured through regrowth of the forest (Figure 11.1).

Figure 11.1. Remains of a puddling machine on the walk; subdued and overgrown with young trees. Source: Author.

I will now trace the way the content emerges to form a network that influences the way students can engage with the material. In the lecture the content was compressed into 70 PowerPoint slides that could move spatially across the region to enable thematic sequencing by the lecturer. On the field trip the way students experience the content is influenced by the need to follow the Great Dividing Trail. It disrupts the neat organisation of the landscape by themes as was demonstrated in the lecture theatre and forces students to think through, read and create their own themes and structures associated with each site.

In the field, the content is more dispersed and occurs both at a particular site and between sites. Staff chose particular sites because they provide specific material that helps illustrate aspects of land use and attitudes to land that are relevant to the

assignment. These could be termed content nodes, which become a focus of particular content. The site becomes the content where students stop, listen to the lecturer, read out stories, listen to songs, and/or look at old photographs. The site is the same as the slide from the PowerPoint show but it is in three dimensions; it is set within a broader real landscape and, importantly there is time for students to explore not only the artefacts that are the focus of the location but the surrounding area. Reading the landscape *in situ* is not as easy as being presented with a 'read landscape' in the lecture room as the various artefacts compete for attention. There are no chairs to sit on; in the field students either stood or, for longer periods, leant against their packs, rocks or trees.

Between these sites physical space is traversed, connected by the Great Dividing Trail; a trajectory linking the nodes as described by Nespor (2003). Unlike the slideshow, the field trip requires walking across the physical landscape. This topographical space, the physical trail that we walk on, becomes important. The experience involves such things as climbing into, and out of, gullies created by miners over 100 years ago, exploring mine shafts and, like the miners, camping out under the stars. This topographical focus takes time. In a very real sense the students are more dispersed. The compression of time and space that occurred in the PowerPoint presentation is flattened out in the field trip giving the students time to immerse themselves in the landscape. They choose how, and if, they are going to use this 'between site' time to respond to the landscape. The walking pace is relaxed enabling the students to look around. It is up to the student to use this time to start to 'read' this wider landscape. The trip, by requiring the students to negotiate the landscape between sites enables students' greater agency in relation to their own capacity and desire to learn providing evidence of Mudoch's (2006) negotiated landscape. On one occasion a student was on the track walking into Castlemaine. Ahead of the group he suddenly stopped, turned round and showed a large paper image of the same spot over 120 years ago. This interpretive moment was one of the best ways for students to engage with the historic aspects of this landscape and a credit to the student who was able to 'see' the old landscape in the contemporary one.

As a negotiated space the sequence in which the content is experienced is messy and, as such, requires the students to be more attuned to the content. In the PowerPoint presentation, images of artefacts were isolated and shown in a chronological sequence to reflect changing attitudes and values to the land. On the walk the selection of sites is controlled by its linear nature and results in artefacts being presented in a non-chronological sequence. In the park there is no clear demarcation between observed artefacts and their time sequence; evidence of alluvial mining (1850s) occurs alongside evidence of shaft mining (1870s). The Trail itself is an artefact of 20th Century values and attitudes to conservation and recreation in the park. In addition artefacts are not isolated from their surroundings. For example, a manager's stone hut adjacent to a tramway provides a story of real individual's lives on this site. It is up to the students to record and 'read' that chronological sequence in the landscape.

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While the content of the slide show is fixed, serendipitous experiences can occur on the trip. A chance meeting with a local resident along the way invites new stories. The occurrence of orchids and other wildflowers can never be predicted. Each year the students bring different artefacts and stories to share.

In the same way that song and story supplemented the PowerPoint slides in the lecture a range of other materials were used to supplement the tangible evidence found along the trail. However, while in the PowerPoint slides these were introduced by pressing the URL link on the slide, on the walk it relied on access to materials carried in pack. These included photographs, books, excerpts from books, speakers, spare batteries and an iPod. The latter was used to play songs and stories recorded for a commercial Audio Tour developed for the Castlemaine Tourism (Living Stories, nd) that provided an intangible connection to The Park and its past activities.

Figure 11.2. The facilities at Vaughan Springs 2012; a recreational area developed in the early 20th Century in an old quarry. Spring water and slide still used. Source: Author.

The field experience is not all work. Students are able to play on the leisure. equipment at Vaughan Springs (Figure 11.2) that has been there since the 1930s They were able to hear the story of Charlie Sanger the hermit 'outlaw' of the region and search for his gravesite in the Fryerstown cemetery as well as read of the sad tales of child deaths – both at Fryerstown and at Pennyweight Flat near Castlemaine. Sitting on a hill, quietly listening to the song about these children

added poignancy to the tangible remains and affected many students' responses to those sites.

The walk experience changes the way in which students engage with the assignment task. The time students engage with the topic, together with the extension of space increases their agency. For three days students are able to focus on the walk and the assignment topic. Unlike the lecture, the field trip space is less controlled and is an example of Murdoch's (2006) 'negotiated space'. Although it is compulsory to attend the trip, there is both time and space within the trip for students to negotiate their own learning. The 'real' landscape the students are immersed in provides a relevant context to the scale of mining activities in the Castlemaine region. As a negotiated space it is also unpredictable in terms of understanding how students will respond and the state and existence of expected artefacts.

TEACHING AND LEARNING SPACES AS NETWORKS

This chapter has used actor network theory to explore the spaces of learning in outdoor education. I have traced the network developed around the 'content' of a subject in two different settings, where 'content' is a non-human actor that has an effect on the learning experiences of the students. It included all the material presented to students to enable them to engage with their assignments and included both the tangible evidence of what is 'seen' in the landscape together with stories, song and images that helped translate the tangible evidence into abstract concepts of 'attitudes' and 'values' both past and present. It is clear that the same content was, presented in both the classroom and on the field trip. However the nature of the network that developed around the content in the lecture room differed from that outdoors and, led to different power relations that were significant in terms of the learning opportunities for students.

Using Murdoch's (1998) terminology the network developed in the classroom is a 'prescribed network' that is tightly ordered. The 'prescriptive' space of the classroom is contained and controlled in terms of the activities that occur within the room. Students have little choice in how the content is experienced - a consequence of a university lecture structure that is deeply embedded through such things as timetabling, room allocation, provision and expectation of PowerPoint slides as the principle means of presenting material in an order that in itself tells a story. Such a network is durable as the pattern and structure of a lecture, including the way content is presented, and is similar regardless of discipline and position on a campus. In the classroom power is held by the lecturer who controls the way content is delivered. The capacity of the PowerPoint slides to compress time and space actually limits the capacity of students to assimilate the material, particularly those who have not encountered the material before.

The network developed during the field trip is less structured and the learning space is 'negotiated' (Murdoch, 1998). The content itself is dispersed in both space and time as students move between sites where content is delivered. The time in the field is also interspersed with other more mundane daily activities such as

eating meals, setting up camp and play. The content is also unpredictable. For example, it is not known beforehand what artefacts students will bring and whether they can be used to either enhance the experience. Importantly, the 'negotiation' of space can be interpreted as a relative expansion to the space and time relations – space and time are not compressed in the field. Such a change demands that the students take more control of their learning. From a Foucauldian (1970) perspective on the relationship between power and structure the field trip shifts power from the lecturer to the students; it empowers the students in terms of their capacity to learn. While at each site the leader is in control of the content, between the sites the students can negotiate how they may use this content to read the landscape. Such negotiation reflects the increased choices for learning that are made available to the students. It is messier, but perhaps more challenging, as the students have to 'read' the landscape; it is not interpreted for them. The content is less tightly bound; the teaching and learning enactment messier, time and space are stretched out to expand the way content can be delivered.

Fenwick and Edwards (2010) have been cautious about the significance of 'choice' in an environment where most subjects are compulsory. However, while attendance on this field trip is compulsory this chapter has demonstrated that the field trip affords more choice for the students than the lecture. On field trips, where students are together all the time, know each other and have strong bonds, it is the content of the trip that holds the 'enactment' of teaching and learning together, but it is interspersed with a range of other activities that occur. The choice is about where, when and how they may engage with the content and it is possible that, for example, five minutes playing on a children's slide in Vaughan is more meaningful insight into the past than reading an interpretation board or listening in a lecture.

CONCLUSION

This chapter began by asking a question about what 'good' that outdoor experiences can provide in education. Importantly, Robyn Zink (2013) has suggested that, as outdoor educators, we should be asking these critical questions to provoke us to think differently about the practice of outdoor education, particularly in changing economic environments that may threaten this practice. This chapter shows that, in the change from a classroom structure to an outdoor setting, different networks are formed that affect the relations between students, teacher and content and with this is a change in the power and agency provided to different actors. What might this mean for outdoor education practice? It has been demonstrated that the messy, disaggregated and less stable nature of fieldwork allows students to negotiate their own learning and its significance should not be underestimated in development of outdoor curriculum. If, as evidence from students suggests, field trips comprise beneficial spaces of learning then perhaps we should be listening to this.

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Lesley Hodgson
La Trobe University
Australia

IRENE NGA-YEE CHENG AND JOHN CHI-KIN LEE

12. ENVIRONMENTAL AND OUTDOOR LEARNING IN HONG KONG

Theoretical and Practical Perspectives

Tell me I forget, Show me I remember, Involve me I understand
(A Chinese proverb by Xun zi, 312–230 B.C., from his book *Zun zi*)

INTRODUCTION

Outdoor education, a general term describing the use of resources (including both natural and artificial environments) outside the classroom, has long been considered a method to improve student learning (Knapp, 1996). It is a popular teaching and learning tool in environmental education due to its anticipated effectiveness in promoting students' pro-environmental behaviour, knowledge and positive attitudes towards the environment (Rickinson et al., 2004). According to Brookes (1993), outdoor experiences help students develop 'alternative understandings of the nature of knowledge, the role of science, the ways in which nature should be valued, the relationships between individual and the wider community' (p. 16). Palmberg and Kuru (2000) viewed that outdoor learning activities are able to foster in children a strong and clearly definable empathic relationship to nature, better social behaviour and higher moral judgments. Outdoor learning experiences were also seen as more effective for developing cognitive skills than classroom-based learning, and engaging in more active and independent inquiry learning (Cranby, 2002; Eaton, 2000; Hoalst-Pullen & Gatrell, 2011). As Kent, Gilbertson, and Hunt (1997) noted, student learners are able to abandon the teacher dependent model of the classroom.

With the advancement of information technologies and the widespread use of Internet today, virtual field trips, spatial databases and other modern devices or applications emerge as alternative ways, apart from authentic fieldwork, to understand outdoor learning in a wider perspective (Hoalst-Pullen & Gatrell, 2011). This chapter briefly outlines the development and application of outdoor learning in environmental education and in Hong Kong. Four types of outdoor/environmental learning activities are presented, through a conceptualized framework that transcends from inquiry-based to structured learning in one dimension and from field-based study to virtual learning in another. Factors influencing outdoor learning practice are discussed to inform the future development of environmental and outdoor education in Hong Kong.

OUTDOOR EDUCATION AND LEARNING EXPERIENCES

Outdoor education, originally used mostly for nature study, has now emerged as a "context" for learning. Outdoor education includes a wide range of educational activities in many different settings (Rickinson et al., 2004). Relevant examples include outdoor adventure education, field studies, nature studies, heritage education, environmental education, and experiential education. Rickinson et al. (2004) examined 150 pieces of research on outdoor learning published in English language between 1993 and 2003 and categorized outdoor learning activities into three main types, namely:

– fieldwork and outdoor visits (e.g., learning activities linked with particular curriculum subjects such as science, geography or environmental studies, in outdoor settings such as field study centres, nature centres, farms, parks or gardens);
– outdoor adventure education (e.g., outward bound programmes, visits to outdoor activity centres, wilderness trips and summer camps); and
– school grounds and community-based projects (e.g., school grounds greening initiatives, horticultural growing projects in and around the school, and community-based environmental work).

However, this type of categorization, according to Rickinson et al. (2004), did not include learning activities in indoor settings like museums, art galleries and zoos; general school sports and physical education; and virtual field trips.

Outdoor education emphasizes the value of learning through direct and first-hand experience beyond classroom settings and focuses on personal and social development of young people through experiential activities, such as outdoor pursuits, physical challenges and risk-taking (Gair, 1997). In this connection, geographical/ environmental fieldwork which adopts experiential approaches in field investigations shares similar emphasis with outdoor education (Lai, 2006). The importance of the learning process, apart from the body of knowledge to be learned, is recognized in the works of Hawkins (1987) who proposed an awareness-to-participation process approach, aiming to enhance students' awareness, equip them with knowledge and understanding of the environment, and develop in them a sense of personal concern and responsibility (p. 221). Through incorporating this learning process approach in fieldwork, Hawkins (1987) anticipated more student learners would concern about the environment rather than being alienated from it (Lai, 2006).

Outdoor learning activities can lead to multivariate outcomes (Rickinson et al., 2004). They include cognitive impacts (concerning knowledge, understanding and other academic outcomes), affective impacts (encompassing attitudes, values, beliefs and self-perceptions), interpersonal/ social impacts (including communication skills, leadership and teamwork), and physical/ behavioural impacts (relating to physical fitness, physical skills, personal behaviours and social actions).

In Hong Kong, outdoor learning activities are mostly conducted in subjects like geography, science and physical education, and cross-curricular study of

environmental education. In the revised 1999 *Guidelines on Environmental Education in Schools* (The *Guidelines*), experiential learning in the field where environmental factors and ecological processes can be examined through first-hand experience was recommended (Curriculum Development Council, 1999, p. 11). It was written that each subject area of the school curriculum focuses and explores different aspects of human understanding and experience of the environment, and then collaborates to help students look at environmental matters from different angles, which finally contributes to their building of a holistic perspective of the environment (Curriculum Development Council, 1999, p. 10).

Environmental education suggested in the *Guidelines* is not limited to learning in the outdoor/ natural environment as mentioned in the categorization of outdoor learning activities proposed by Rickinson et al. (2004). It can be of any form inside the classroom, outside the classroom but within indoor settings, and in the field (Curriculum Development Council, 1999). Given a packed and tense formal school curriculum and the non-mandatory nature of environmental education in Hong Kong, outdoor activities which can facilitate environmental education in the natural settings, are often likely to be absorbed in geography and biology through fieldworks due to their higher relevance to and closer connection with the nature, ecosystem, physical landscapes and features. Taking Geography at secondary 4-6 (high school) level as an example, the Curriculum and Development Council and the Hong Kong Examinations Authority (2007, pp. 69–70) suggested that fieldwork could be conducted in field of 'field excursions', 'guided tours', enquiry-based fieldwork and virtual fieldwork through the use of information technology (IT).

Fieldwork conducted outdoors often involves hands-on tasks and first-hand experiences through some physical activities away from the person's normal environment, such as using buckets to collect water samples for analysis of water quality, observing and assessing the coverage of lichens on tree trucks, counting cars and categorizing them into types, and so on. Nonetheless, geography fieldwork focused more on academic inquiry (Lai, 2000), whereas outdoor education is concerned with "educating students for life-long leisure" and "personal development of the students" (McRae, 1990, p. 6).

Because of space, it will not be possible to give a comprehensive study of outdoor learning activities in the other components of the school curriculum in Hong Kong. This chapter refers only to the geography/ environmental fieldwork as a basis to illuminate the outdoor learning experiences of Hong Kong secondary school students. The outdoor experiences are presented in two dimensions, one basing on the role of student-centred inquiry and the other focusing on the authenticity of the field environment.

CONCEPTUALIZED FRAMEWORK OF ENVIRONMENTAL
LEARNING THROUGH FIELDWORK

Inquiry-Based or Structured Learning Experiences in the Field

Inquiry-based learning is seen as an approach to teaching that is question-driven and involves active and student-centred learning (Spronken-Smith, Bullard, Ray, Roberts, & Keiffer, 2008). Students take increasing responsibility for their learning and the development of skills in self-reflection. Teachers act as facilitators rather than presenters of information. This kind of learning stimulates students to follow up on lines of inquiry which interest them most and to concentrate on their own initiative their efforts to undertake further work. Inquiry-based learning was said to be a pedagogy which best enabled students to experience the processes of knowledge creation (Kahn & O'Rourke, 2005; Spronken-Smith, Angelo, Matthews, O'Steen, & Robertson, 2007).

Lai (2000, pp. 165–166) in his research about the geography fieldwork experiences of secondary school students in Hong Kong, distinguished fieldwork strategies into two main types, namely the intellectual-focused fieldwork and affective-focused fieldwork. According to his descriptions, the former is more inclined towards 'structured' learning experiences whereas the latter represents the group of 'inquiry-based' fieldwork.

Of course, differentiating the two types of fieldwork as more inquiry-like or structured-like were not the intent of Lai (2000). We are not going to any conclusions that environmental attitudes can only be enhanced through inquiry learning or structured fieldworks neglect students' affective development towards the environment. However, this distinction does offer some insights into our understanding of the different foci of field studies, whether it is focused on the inquiry process and personal reflection or on the acquisition of knowledge and consolidation of previous learning.

Given the brief review of outdoor learning practices in Hong Kong through geography fieldwork, it is hinted that teachers implementing structured fieldworks may comply more with an examination-driven orientation. The teachers tend to place higher priority on ensuring students' acquisition of hard-core knowledge in the field to cohere with classroom-bound learning, and hence, neglect some other possible outcomes such as environmental attitudes that are difficult to be structured, as they are not easily measurable and tangible as academic achievements.

Table 12.1 below depicts the differences between the inquiry-based and structured type of fieldwork with reference to their learning objectives and style of organizing students' learning experiences. Exemplars of fieldwork in the two orientations could be found in the website of Hong Kong Ho Koon Nature Education cum Astronomical Centre (2013a, 2013b).

The studies of school fieldwork by Lai (2006) revealed that despite the works of Job (2002), and Smith and Reid (2000) on enhancing students' inquiry and reflectivity during fieldwork, teachers in Hong Kong rarely engaged themselves

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Table 12.1. Differences between inquiry-based and structured fieldwork.

	Inquiry-based	Structured
Learning objectives/ Area of study	Students are free to work on the topics they are interested in so long as they are closely related to the concepts concerned.	Pre-designed learning objectives and area of study.
Format of organizing learning experiences	Various possibilities (e.g., regarding the inquiry topic, sampling methods, equipment to be used, analysing methods, means of presentation) are given to guide students to develop their own investigation plans. Students are free to draw their own conclusion from their chosen topic. Opportunities for evaluations / reflections are provided for students to inform their next inquiry.	Investigation plan / procedures (including the equipment needed and the sampling and analysing methods) are pre-designed and listed in details for students to follow in order to achieve the learning objectives. Students are guided to reach the pre-designed conclusions of the fieldwork study. Students are guided step-by-step to analyze / discuss the issues raised in the worksheet using the data collected in the field.

and their students in processing and reflecting on the personal and group experiences after fieldwork. The focus of fieldwork, according to Lai (2006), was on subject content, thus restricting students' engagement in both the initial and decision-action transformative phases of fieldwork (p. 167).

Authentic Outdoor Learning Experiences or Virtual Fieldwork

Geographical fieldwork has been part of the tradition in many schools in Hong Kong for many years and has long been considered as a vital teaching and learning tool (Scott, Fuller, & Gaskin, 2006). In a study conducted by Boyle et al. (2007) reported student respondents' positive comments towards outdoor field study as the following (pp. 309, 311–312):
– Getting hands-on experience instead of text book learning.
– Seeing reality rather than textbook.
– Working as a group when doing practical things such as measuring river characteristics.
– I really enjoyed the trip, mostly the visit to the quarry.
Field learning experiences described so far in this chapter are authentic field study that involves leaving the classroom and learning through first-hand experiences. In principle, these activities take place in a real context where students are provided opportunities to carry out hands-on tasks that are informative or stimulating for a number of senses (e.g., touch, smell, sight, hearing, etc.). During the process, students are given opportunities to engage in making multiple connections to the real-world and hence, accomplishing understandings that could not be achieved in

the classroom environment (Brickell, Herrington, & Harper, 2005). It is believed that the outdoor environment in which fieldworks take place is a wonderfully rich, life-enhancing arena for growth and discovery (Beames & Brown, 2005). Students' physical risk-taking in such an environment helps student learners develop confidence in themselves and the disposition to manage risk effectively (Stephenson, 2003).

With the advancement of digital technology, for example, Geographical Information System (GIS), satellite remote sensing (RS), animations and virtual field exercises, some components in the curriculum, including geography, biology, environmental education, and so on, have been moving away from the need to leave the classroom. Stainfield, Fisher, Ford, and Solem (2000) defined virtual field trips as varying from 'a simple tool for organizing photographs, field data and perhaps some diagrams from specific natural examples of geology' to the more empowering yet significantly more challenging view that they are 'an attempt to place further autonomy in the learners' hands, by allowing observations to be made without being on the actual site or having a teacher around to explain'. Through virtual field trips, students can interact with remote, inaccessible or potentially hazardous areas (e.g., volcanic lava flows) through participation, exploration, analysis and the learning and the testing of skills at any time due to the removed barriers of space, time and geographical location (Litherland & Stott, 2012; Tuthill & Klemm, 2002). They can also study the spatial process and pattern of an area by integrating related geo-spatial data on the computer (Cheung, Pang, Lin, & Lee, 2011). Ratinen and Keinonen (2011) suggested that field trips done with Google Earth facilitate students' spatial thinking and critical analytical skills. These digital technologies also help students examine the earth in a dynamic and interactive manner by allowing them to engage in the lesson, explore the earth, explain what they identify and evaluate the implications of what they are learning (Cates, Price, & Bodzin, 2003). Virtual field trips are believed to be helpful in building students' confidence and familiarity with the area prior to a 'real' visit.

Nevertheless, instead of replacing hands-on outdoor learning experiences, Kent et al. (1997) note that virtual field learning experiences are most likely to represent an additional source of information to supplement a field visit or to assist with fieldwork preparation (p. 328). Bodzin (2010) has put it into practice by adopting a hybrid approach of instruction using web-based activities and face-to-face site-based experiences on the study of environmental issues in the Lehigh River watershed. Google Earth was used to bring about a virtual fieldtrip in class to enhance students' understanding of the scope and size of the watershed, and highlight specific areas that will be visited later during field trips and other significant locations pertaining to the issues of study that will not be visited on-site, but related to issues presented in other class materials. Web-based GIS maps of the watershed area were also used to facilitate scientific inquiry and environmental literacy in class. In the case of social studies education, Stoddard (2009, pp. 431–433) developed a virtual field trip model which highlighted the need to link the virtual field trip modules with the curriculum, the arrangement of discussions and interactions with students and other people (e.g., experts and teachers), the

provision of field trips with disciplinary inquiry and the availability of professional development for teachers

Technology like GIS, satellite images and digital photographs have been proposed in the secondary 4–6 (high school) geography curriculum in Hong Kong to compare information collected in the past with the current fieldwork data for analysis; or to compare regional transport networks and simulating future developments with socio-economic data from government reports (Curriculum Development Council & Hong Kong Examinations and Assessment Authority, 2007). It is suggested that by adopting the technology, students would be facilitated to develop data-processing and problem-solving skills with the up-to-date information (e.g., weather data) and hence, fieldwork can become more inquiry-oriented, interesting and relevant (Yeung, 2010).

The level of use of GIS in geography teaching in Hong Kong was, however, still rather low and teachers' understanding of how GIS could be used in teaching to enhance student learning in geography and other subjects was still limited (Lam, Lai, & Wong, 2009). Despite this, attempts have been made to enrich virtual field learning resources at both secondary school and university levels. At the secondary school level, a project which aims to apply GIS and RS to help students acquire critical thinking, information technology and life-long learning skills through the Independent Enquiry Learning Approach was funded by the government to support Hong Kong teachers using GIS and RS to teach secondary 4-6 Liberal Studies and Geography (Cheung et al., 2011). With the help of the 3D visualization of the outdoor learning environment, students and teachers participated in the project can overcome the physical site constraints and freely explore and analyze the 'location', 'conditions' and 'connections' among features in the real context easily by integrating geo-spatial data related to an enquiry area into the Google Earth platform or other geo-spatial visualization tools (Cheung et al., 2011). At the university level, there has been the experimentation of using virtual field visits to the Pearl River Delta in environmental studies and the results have been positive (Wong, Ng, & Wong, 2010). Such experiences could possibly be adapted for application in the secondary school setting.

At present, virtual field learning experiences have not become a vital teaching and learning tool in Hong Kong secondary schools to replace outdoor learning in the real environment. However, projects working on the use of digital technologies have been conducted to help teachers develop their competence in developing virtual field learning tasks.

DISCUSSION AND CONCLUSION

There is no recipe for the most effective learning experiences for students. Conducting field learning authentically in the outdoors and doing it virtually in indoor settings, whether in the form of organizing structured inquiry or student-centred inquiry-based approaches, are pedagogical practices to facilitate students' learning in cognitive, affective and behavioural aspects. Figure 12.1 presents a framework which transcends between these four modes of pedagogical practices.

There is, however, no static guide of organizing outdoor learning activities because they can be of various types and the logistic requirements for each vary (Ajibade & Raheem, 1999).
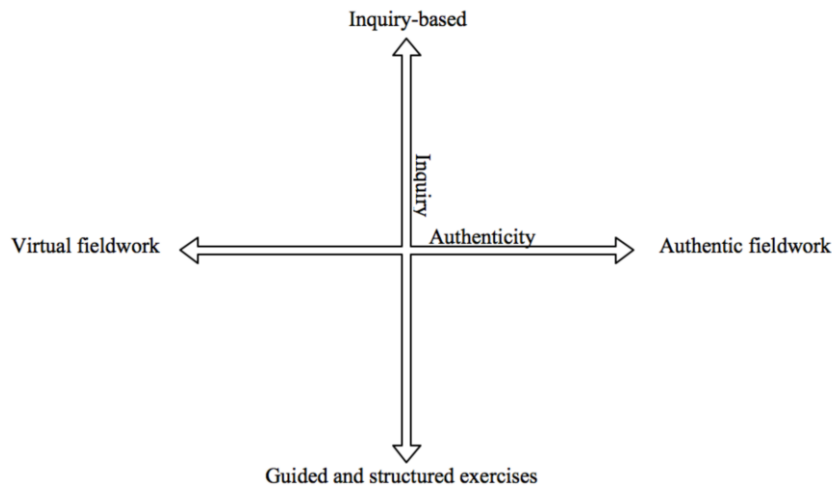

Figure 12.1. A framework of outdoor learning practices.

An inquiry-based outdoor learning task values the learning process students experience in taking a closer look at his/ her surroundings. Cognitive activities which involve the processing of information and the construction of meaning throughout the inquiry process can enhance performance of students in achieving the learning outcomes when these experiences are mediated by deep approaches to learning (Boyle et al., 2007; Entwistle, 1991).

Research has been conducted to examine the relationship between approach to learning and student performance (for example, Biggs, 2003; Vermunt & Verloop, 1999) and what teaching and learning methods can assist students to adopt a deep approach to learning. Boyle et al. (2007) found that field learning experiences that provided students a chance to develop their problem-solving skills, and connected first-hand experience with prior learning students acquired in classroom study led to deeper learning and hence, stimulated effective learning.

According to Hart (2003), teachers committed to environmental education are more likely to provide outdoor learning experiences or other similar activities that involve actually being in the "out-of-doors in natural or rural settings or in open urban spaces" for their students (p. 199). However, Lonergan and Andresen (1988) noted, "effective learning cannot be expected just because we take students into the field" (p. 70). Teachers who are committed to environmental education should also be equipped with appropriate teaching techniques and provided with sufficient teaching time to make use of the outdoor learning context to promote effective teaching and students' deep approach to learning. This requires teachers to

facilitate a more holistic outlook of the problems to be investigated and resolved, and to highlight the close interrelationship between the outdoor environment, and human action and activities (Lai, 2006). Otherwise, outdoor learning will be reduced to a discrete event, separated from experiences related to the issues under investigation. Teachers should engage themselves and their students in a systematic reflection and evaluation of the fieldwork experiences so that skills and knowledge acquired in the field are able to be transferred to the classroom setting and future life events students come across (Lai, 1999).

Virtual field trips are seen as an alternative to help reduce the work and trouble entailed in the logistic arrangement for authentic field learning, and resolve the safety issues of conducting outdoor learning activities within a formal school curriculum. Litherland and Stott (2012), however, argue that virtual field guides were usually tutor-authored and pre-authenticated representations of the field sites, heavily overlaid with guiding interpretations, which students were expected to accept – the 'explanatory' outweighing the 'exploratory'. These traits of virtual learning experiences are similar to the structured form of learning experiences in which the procedures of work and assessment were usually prescribed. Hence, learning tends to be teacher-centred and content oriented. In addition, the accuracy and authenticity of the data given by software like Google Earth may not be easily available. Sometimes, the software's capabilities and tools to support true spatial analytical operations are limited in that the tools are not capable of inquiry (Ratinen & Keinonen, 2011).

In addition to these constraints of virtual learning experiences, teachers also need to be trained and be proactive to see the practicality of using digital technologies in their teaching, even though this is not mandated in the curriculum (Lam et al., 2009; Stoddard, 2009). To facilitate inquiry-based learning, either in authentic context or in virtual digital form, a supportive leadership and school climate with adequate funding, technical support and teaching time would definitely be beneficial to its effective practice (Yeung, 2010). In view of the concerns on students' safety in out-of-classroom settings, some scholars proposed an alternative of using the safer and less hostile green school grounds as sites for outdoor learning (Dyment, 2005).

When effective teaching practice is concerned, outdoor learning experiences designed for a student-inquiry process of learning seem to have a greater chance of inducing better students' performance in learning. However, Kwan (2000) saw the application of inquiry-based field learning in Hong Kong as a challenge. She argued that fieldwork in Hong Kong schools mostly belonged to the 'look and see' type of which students were engaged only in passive listening and observation (p. 124). Teachers' reluctance to take risks also hindered the utilization of fieldwork for outdoor environmental education. The implementation of experiential learning which values hands-on tasks as recommended in the *Guidelines* seems more difficult in reality.

The traditional emphasis on gaining success in public examinations has led to great pressure experienced by students in Hong Kong and they tend to focus on learning the right answers in order to overcome examination hurdles. Teachers,

pressed by the demand to ensure good examination results of students, find it hard to resist giving facts and answers to students. All these further hindered the development of an experiential inquiry type of outdoor learning activities which stress the importance of students to give open feedback, share feelings and take risks (Beams & Brown, 2005). The overloaded syllabus also prevented teachers to spend adequate amounts of time on outdoor trips. This type of learning activities may be provided only when there is additional time at the end of the school year (Kwan, 2000). In this regard, outdoor environmental learning experiences may be treated as an ad hoc event, detached from students' holistic learning as proposed in the current secondary 4-6 (high school) curriculum (Lai, 1999).

Different approaches have been used in outdoor learning, whether they are inquiry-based or structured, authentic or virtual. These approaches are believed to have their own strengths and shortcomings in teaching daily issues that confront our young learners, including the environmental problems. Factors such as teachers' belief of environmental education, their understanding of environmental issues and principles, and their competence to utilize various approaches to facilitate students' understanding, reflective ability and action-taking competence can influence the effectiveness and outcome of outdoor education practices. In this chapter, outdoor learning experiences are discussed mainly in the context of environmental and geographical education. Outdoor learning, however, should not be restrictive to these two areas only, but open to any component in the curriculum that involves leaving the classroom and learning through first-hand experiences.

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Irene Nga-Yee Cheng
Department of Science and Environmental Studies and
Centre for Education in Environmental Sustainability
Hong Kong Institute of Education
Hong Kong

John Chi-Kin Lee
Department of Curriculum and Instruction and
Centre for Education in Environmental Sustainability
Hong Kong Institute of Education
Hong Kong

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COLIN HOAD

13. AFFORDANCES OF AN OCEAN WALK

The true mystery of the world is the visible, not the invisible. (Oscar Wilde)

INTRODUCTION

Internationally outdoor education has a number of differing foci ranging from adventure based therapy to environmental and ecological awareness. Diversity of what constitutes education in the outdoors is observed when one looks at North American adventure education which has roots drawn from Kurt Hahn and the Outward Bound movement and has seen substantial growth over the past 15 years (Attarian, 2001). Priest and Gass (2005) also highlight many similarities in both historical beginnings and program aims between former colonial nations such as Australia. Breadth of interaction for differing cultures with the natural environment is also observed with the Scandinavian 'friluftsliv'. Though not without its' own interpretation and subjectivity, friluftsliv moves away from a skill and risk based focus towards a more 'green philosophy' based interaction (Pedersen Gurholt, 2008). Friluftsliv is not "mere abstraction" (Repp, 2004, p. 121) but a practical way of being and arguably a more simple way of life with 'deep ecology' foundations. Outdoor education has considerable breadth and depth, yet as with many things Australian, the roots of outdoor education are viewed here as being located in the United Kingdom.

This chapter establishes a conceptual framework for understanding and interpreting the interactions that take place in outdoor education programs. The framework stems from research into the experiences of secondary school students' (average age 15 years) during a field trip along the Great Ocean Walk in Victoria, Australia. The students were from a co-educational, non-government school from suburban Melbourne and the trip was part of a sequenced secondary school outdoor education program. Participants were part of a case study with their interactions during the program used as examples of how the framework might be applied in a practical sense. In the construction of this framework I sought to move away from conventional conceptualisations of outdoor education experiences and looked for an alternative lens. Psychologistic cause/effect approaches prove to be too reductionist to give useful analysis given the complexities involved in outdoor educative paradigm. This alternative framework arose from the work of James Gibson (1975, 1977, 1986). Gibson's theory of affordances originally comes from investigations into the ocular system of animals as they interact with their surrounding environments. His affordance theory provides a conceptual framework for understanding how humans might perceive and interact with their

environments. I use this as a framework for understanding the interactions of the participants on this field trip.

OUTDOOR EDUCATION IN THE AUSTRALIAN CONTEXT

Outdoor education in the Australian context can be thought of as a conglomerate of interests and histories. Much of the history of outdoor education is said to have roots in the military, scout movement, and outward bound (Brookes, 2002, 2003a, 2003c, 2004; Brown, 2012; Nicol, 2002a, 2002b, 2003). It is resultant from a blend of history, intent, and curriculum situated in different locations. Outdoor education takes many different forms from residential camps, to field trips, and one off trips.

In Australia, specifically Victoria where this study is situated, outdoor education has been a component of the School curriculum in its own right since the publication of the Personal Development Framework in 1989 (Lugg & Martin, 2001). Particular aspects of the Australian context sees outdoor education as moving away from the 'one off' camps or extra curricular activities outside of school toward a more discrete entity that is closely linked to a curriculum. Having said that, the one-off camps still provide many of the outdoor experiences had by Victorian state school children. However, the introduction of outdoor education's Victorian Certificate of Education (VCE) as a senior secondary subject, as well as tertiary outdoor education courses provide the basis for explicit differences between the Australian context and the rest of the world. This brings about certain outcomes that may, or may not, be shared. Research conducted by Lugg and Martin (2001) within Australia highlight that for Victorian schools, the most important outcomes identified (by principal's and teacher's) are group cooperation, improved self esteem and increased responsibility. The point here is that Australian outdoor education is taking a form of its own, yet remains related to the British model.

Outdoor Education in the School Studied

For the school involved in this study, the type of outdoor education that is articulated can be broadly perceived as a fairly 'typical' example of what constitutes outdoor education in the Australian/Victorian context. The program is sequenced over a period from Year 5 to Year 10 (ages ranging from 10 years to 15 years) and is aimed at "significant personal development … interpersonal and technical skills … and helps the students develop an understanding of personal and environmental sustainability" (Woodhouse, 2013) and has a VCE option for year's 11 and 12. In years 5 to 8, the students go on a residential camp with activities involving sailing, canoeing, mountain biking, fishing, and rafting. They consider and explore the local ecosystems with investigations of the flora and fauna. Additionally, the focus of teamwork, problem solving, risk taking, leadership and discovering one's own comfort zones are all elements of the program articulated both through the espoused aims and program design.

This school program is nested within the rich history of the Australian outdoor education that is established from a history of influences that have shaped much of what contemporary outdoor education *is* in Australia today. The British context is suggested as having shaped the Australian one. The military roots perhaps explain some of the intent as well as the methods adopted.

Emergent Interactions

Nicol (2002a, 2002b, 2003) highlighted British post-war common themes of "fitness for war", "character building", and "social education" as emerging and competing claims of outdoor education. Difficulty defining and legitimising outdoor education stems from indecision on whether it is an approach or a subject. Over this period the "character" being built was in line with a particular social agenda of the day with the "value" of outdoor education being intrinsic and individual as well as instrumental and social (Nicol, 2002a). The expected learning outcomes intended in 1950's outdoor education still had firm allegiance with military and civic objectives, included obeying orders, teamwork, loyalty, and inspiring others in adverse conditions. Understandable is the way in which the military links remained tight with proximity to war and the employment of officers and other ranks into this proliferating field (Nicol, 2002a). This is easily noticeable in contemporary outdoor education in Australia today with the donning of packs and instead of engaging with the enemy, the 'mission' is to engage with each other and the natural environment.

Inherent in this shift of purpose is the problem of showing the results of the efforts. As the ideological progression of outdoor education's *raison d'être* shifted from preparation for war and survival at sea to a general recognition that simply being in the outdoors was beneficial and could be linked to a curriculum, so too did the problem of showing the outcomes in the same way other curricula endeavors can. Although, as Nicol (2002a) suggested, the practitioner's relationship with the natural environment moved from the battleground to the playground, with the playground having replaced the psychiatrist's chair.

The tendency to focus on the social outcomes, which themselves have proved a nebulous concept, remains with outdoor education today. However, through the 80's, the terminology changed from outdoor education to adventure education with a particular focus on outcomes relating to the concept of self and interpersonal relations (Nicol, 2002b). Nicol (2002b) points out the literature of this period refers to adventure education due to a focus on personal and social aspects over that of environmental ones, a trend that can be traced to the present. Since then, the human/nature relationship has become a focus of outdoor education pedagogies within Australia yet the personal and social development remains a tightly linked aspect of outdoor education.

This slightly compartmentalised style can be dispensed with if we take an emergent approach in viewing interactions that take place on programs. No matter what the name of the concept, Outdoor Education, Outdoor Adventure Education, Outdoor Environmental Education, the essence is likely to be activities and other

people in the outdoors. Emergent from these interactions might be development in social, cultural or physical outcomes. The point being, that this framework can apply to all conceptualisations as they contain varying degrees of intent for many of the same concepts.

Psychological Reliance

One of the main critics of the developmental beliefs derived from outdoor activities is Brookes (2002, 2003a, 2003b, 2003c, 2004). He draws on theories from the social psychology field. His main argument is that the positive aspects of personal development are not only lacking in definition but are a "flawed concept" (Brookes, 2003c, p. 119). The assumption is that personal traits are merely situational responses to conditions experienced. The problem with Brookes's argument is twofold. Firstly, the conflation of argument between lack of definition in the term 'character building' (as one aspect) and the demand that behaviour is viewed purely as situational (as the second aspect), does not mean there is no such thing as enduring capacitates over differing situations. Secondly, to whole-heartedly throw out the suggestion that development is possible from interactions that take place in the outdoor education context as a result of a borrowed psychological (situationalist) theory, is akin to denial of the existence of virtues. Although, Brookes does go on to concede that one cannot "rule out the possibility that [Outdoor Adventure Education] may offer particularly effective ways to develop certain skills or knowledge, or to change beliefs" (Brookes, 2003b, p. 53). With this contribution to the discourse one is left to search for the positive impacts in the wider debate and praxis of outdoor education: one such implication is the pressure to have specifics articulated in program aims and outcomes.

The point taken from Brookes's criticisms is that more needs to be done to identify what is happening in the outdoor education context. However, in his thorough appraisal of this psychological discussion, Alzola (2007) offers a comprehensive account of the dispositional/situational debate and concludes "the 2300-year-old Aristotelian moral psychology can be safely rescued from the situationist attack without denying our intuition that both dispositions and situations contribute to shaping moral behaviour" (Alzola, 2007, p. 354). And so this investigation continues in the belief that a situation is entered into with previous knowledge, attitudes, and experience that contribute to the perception of the individuals in that space and time.

Adopting a Different Perspective

As argued, the historical roots of outdoor education in the Australian context have beginnings in its colonial past. As other disciplines have advanced, their theories have been utilised by scholars in the outdoor education field. This has influenced the perspectives from which outdoor education has been viewed. As a result, ways valuing outdoor education have mirrored the psychological cause-effect, or medical intervention-outcome methodologies. Here, a different perspective is

proposed. One that is more in line with viewing the environment as rich in possibilities that may, or may not, be engaged with. The conceptual lens proposed seeks to move away from conflicting stop-start perspectives of events, towards a more ecological view of interactions that are nested within previous and future events. This conceptual lens relies heavily on the work of James Gibson and his affordance theory.

AFFORDANCE THEORY – AN OVERVIEW

Gibson's (1977) theory of affordance is of particular interest when adopting an ecological perspective of situations and the interactions that may occur. For Gibson, the term *affordance* refers to what it is about an environment that contributes to the kind of interaction that subsequently occurs. Importantly, affordances of an environment are facts of the environment not appearances. This suggests a particular epistemological perspective but Gibson shunned many of the dualistic approaches in his theorising. For him, it is "a mistake to separate the cultural environment from the natural environment, as if they were a world of mental products distinct from the world of material products" (Gibson, 1977, p.70). This particular area of the literature points out that at the level of individual-environment interaction, conditions that enable interactions emerge from the complex interplay between certain properties of the individual, along with certain properties of the environment. Within a more sociocultural paradigm, the properties of the individual are referred to as "*abilities*" (Greeno, 1994, p. 338) and these *affordances* and *abilities* are said to be relational in some interpretations of the theory. The affordance relates to the attributes of the environment within which the individual can utilise their ability: a form of symbiotic dependence. Gibson puts forward that as with broader philosophical and psychological concepts, the debate of whether values are phenomenal or physical is no longer applicable as affordances are distinguishable from values (Gibson, 1977). This conceptual structure is threaded throughout this chapter and forms the framework for understanding the environment and the reciprocal actions that take place within it.

Affordances require an attunement to constraints and in turn, constraints are conditional. The physical and social aspects of the natural environment 'afford' amongst other things instances of humour, teachable moments, physical activities, and serendipitous interactions with the flora and fauna that would otherwise not be available in the traditional classroom setting. Yet the abilities of the students and group leaders might determine the interaction with these local affordances and result in the actual behavioural, cognitive and affective outcomes. Greeno (1994) points out this inter-dependence can apply to dialogue as well as physical activities; in conversation non-verbal communications provide information that influence the opportunities for a person's actions. Should a person or leader in a group create or take advantage of a humorous situation, this may signal to other participants 'this context affords a relaxing, non-threatening social environment'. However, Gibson (1977) commented on the possibility of affordances being able to be misperceived. He gave examples of experiments showing human infants

crawling across apparatus that give the appearance of a hole covered with a sturdy sheet of glass. The infants will pat the glass but not venture over it. Further misperceptions are shown when mistaking a closed glass door for one that is open. In the former, a safe or positive affordance is taken as-if-to-be a negative one, and in the latter, the negative affordance of collision is perceived as a positive affordance of safe passage. Within the context of outdoor education these affordances have been exploited implicitly with the concepts of perceived and real risk and may also be the cause of anxiety for students when, perhaps, there is little reason for worry. Gibson (1977) pointed out "at all these levels, from matter to men, we can now observe that some offerings of the environment are beneficial and some are injurious" (p. 77).

If this conceptualisation is applied to the social affordances created in the context of outdoor education, the emotional stresses that may be placed on students due to being away from their home comforts, their families, and their normal routine, may perhaps be the cause of anxiety that they have to deal with. Relationships may take a different form than that of previous interactions for teachers and students: both may not normally interact in such a close and personal manner as they do in many outdoor education experiences. In the navigation of a new landscape, the journey towards feeling safe requires the establishment of new relationships, with new dynamics, new things to care about, and new people to be cared by. How participants deal and engage with this new time and space differs.

Closer analysis of the literature surrounding affordance theory will be conducted to explicate the use of the theory within the conceptual framework for analysis of data. Examples are used from the Year 9 experience to explicate the framework.

AFFORDANCES OF OUTDOOR EDUCATION AS A CONCEPTUAL FRAMEWORK FOR INTERACTION

This conceptual framework utilises affordance theory as a means of analysis. The framework is broken into three main parts: physical affordances, social affordances, and cultural affordances coupled with interconnectivity of place. These are shown to be interrelated conceptual entities yet are distinguishable for the purpose of analysis of data. Gibson's ecological theory provides the basis for a framework that is sufficiently flexible and encompassing to allow all aspects of the context to be represented in analysis. At times the data can be interpreted from the perspective of one or all of these elements within the same event but for clarity, the framework set out below makes explicit the concepts used for analysis and the structure within which this is achieved.

Brymer and Davids (2014) have made clear that ecological dynamics provide a viable framework for the understanding of emergent behaviours and beliefs for participants in the outdoor education arena. The capacity to focus on the relationships between individuals within their natural and social environment is instrumental in furthering the understanding of the field.

> Ecological dynamics proposes that perception, cognition, decision-making and actions emerge as each individual in a complex system interacts with other individuals. (Brymer & Davids, 2014, p. 4)

Ecological dynamics facilitates focus on emergent, developmental indicators as shaped by unique physical and sociocultural situations (Brymer & Davids, 2014). By way of illustration, the environmental conditions might shape the interactions due to factors like weather, important surfaces, events, and objects (Brymer & Davids, 2014). That said, from a sociocultural perspective, the fact that it is raining might mean different things for someone from Norway than someone from Australia.

The framework has foundations in Gibson's seminal work: importantly, his main focus was on the physical world. Whilst he acknowledged the social as having rich potential, his main concern was the perception of the physical environ with reference to its potential for interaction. The surfaces, substances, and mediums offer physical affordances of movement and climbing, right through to tasting and eating.

> The world of physical reality does not consist of meaningful things. The world of ecological reality, as I have been trying to describe it, does. If what we perceived were the entities of physics and mathematics, meanings would have to be imposed on them. But if what we perceive are the entities of environmental science, their meanings can be *discovered.* (Gibson, 1986, p. 33, original emphasis)

As previously mentioned, other elements expressed are not to be under-represented, but are delaminated for the purpose of analysis. Each area of analysis has influence on the other and is compartmentalised purely for the purpose of discussion/research.

Physical Affordances

The location chosen and activity carried out are often done in relation to one another for the purpose of outdoor education programs, though often not put together within the lens suggested here. The program under consideration is no different and the undulating coastline was selected as it offered a challenge deemed sufficient for the sequencing and age of the participants. The up and down of the coastal land provided the physical setting for the activity of walking during this program. For Gibson, the physical environment does not surround the individual in the same way it surrounds the other physical properties. It encloses in special ways, the same way ambient light is not lost as a result of no one being there to perceive it. Physical affordances are not lost as a result of not being realised, furthermore, the physical properties are perceived in such a way that they have intrinsic meaning for behaviour unlike the formal or intellectual concepts of mathematical space (Gibson, 1986). Different layouts of the environment afford different behaviours for the animals that interact with them. The physical affordances point both ways,

to the observer and to the environment. Affordances of the physical environment are specified in stimulus information and *seem* to be directly perceived because they *are* directly perceived. This perception is not the perception of a value-free physical object; it is the perception of a value laden ecological object: "Physics may be value-free, but ecology is not" (Gibson, 1986, p. 140). The mathematical movement of the arm through space is viewed very differently from the motion, or gesture of a tribal chief or elder during a ceremony or ritual.

The physical affordances of the environment are not just functional; they have aesthetic possibilities.

> We modern, civilised, indoors adults are so accustomed to looking at a page or a picture, or through a window, that we often lose the feeling of being *surrounded* by the environment … We do not look around. We live boxed-up lives. Our ancestors were always looking around. They surveyed the environment, for they needed to know where they were and what there was in all directions. Children pay attention to their surroundings when allowed to do so. Animals must do so. But we adults spend most of our time *looking at* instead of *looking around.* (Gibson, 1986, p. 203)

The physical properties can be utilised, manipulated, as well as observed, and analysed. Additionally, they have the potential to be misperceived or injurious. It does not take much imagination to consider how the undulation of the coastline might be undesirable to a Year 9 student with a pack on their back. The physical properties of the environment may be chosen for the aim of the outdoor education program. Physical characteristics will certainly play a part in the selection of the geographical location of the outdoor experience, but perhaps they may not have been considered in quite the same way as we would with affordance theory providing the analytical lens. This framework will consider the physical affordances offered and analyse the data as one of the three interrelated aspects. Attention now turns to the second in this framework, that of social affordances.

Social Affordances

Students in different social situations are exemplified here to show social affordances. The following are direct quotations from the students discussing their experiences and viewed as social affordances of the outdoor education program.

> "… I think that people start talking to each other and like point out things to each other, like the view or they'll like offer people some of their food just like because "do you want some food?" makes interaction with different people …

> … I get this kind of vibe that everybody, it's kind of bringing people together in a way cos when we're the group leaders we have to look out for everybody and basically then we have to like talk to people and say 'are you OK?' …

… the whole day and night together under the tarp and everything, and when you laugh I guess you just get to know each other a bit better, laughing at the same things …

These findings are consistent with surrounding literature. Greeno (1994) pointed out that social inter-dependence can apply to dialogue as well as physical activities, and in conversation non-verbal communications provide information that influence the opportunities for a person's actions. Here it is interpreted as a social interaction brought about within the physical and cultural context.

Teamwork, personal responsibility, creativity, empowerment, and leadership are all characteristics encouraged through educational and developmental processes within experiential learning programs (Brymer & Davids, 2014; Priest & Gass, 2005). Experiential education provides the foundation for much of what is carried out in outdoor education and is often erroneously synonymous with it. Social aspects of personal development provide much of the discussion within this domain. For the purpose of this framework, social affordances are seen as the interactions that take place *between* individuals as well as events that might arise from the interactions. There is no denial of the possibility of artefacts such as books and even mobile phones being construed as having social affordances. However, for analysis and the need for conceptually explicit understanding, in this instance, social affordances are viewed as the interaction between people. To a certain extent, these self-imposed boundaries are themselves problematic, but no less so than not having them at all. Gibson made clear that one of the "richest and most elaborate affordances of the environment are provided by other animals and, for us, other people" (Gibson, 1986, p. 135). In others we search for "information that specifies what the other person is, invites, threatens and does" (Gibson, 1986, p. 128). These interactions are viewed on differing planes with analysis and interpretations made as explicit, and rigorous as possible. The interrelatedness of the elements (physical/social/cultural) are delaminated and brought back together in the discussion section. This is because in some cases certain physical elements afford social opportunities as well as cultural affordances and vice versa.

Bang (2008) produced a similar framework and viewed the environment as a dynamic unit of *things, social others, and self* as the basis for interpretation of students in a maths classroom. Here, physical affordances, social affordances, and cultural affordances form the basis of analysis with the distinction of self and other is not analysed in this framework. Additionally, whilst taxonomies of affordances may be available, it is the understanding of emergent interactions under investigation in this study that is important, not quantitative validation of entities observed. Whilst there are other differences from Bang's study, it is also fair to say that both this and her approach are starting to view the educational context from a wide, ecological and structurally similar lens.

Gibson's (1977) notion of self-perception stemming from understanding of one's place in the world as separate from the rest is a dichotomy he sought to undo. For him the fact that we see out from the edge of our nose into the environment meant that we 'see' our self *in* the world, thus negating the use of such a

dichotomous approach. Analysis of social affordances might include knowledge gained from mutual understandings of discussion, collaboration achieved via pursuit of mutual goals, as well as negative affordances such as reification of power differentials between teacher and student, teasing and bullying. All (and many more) are affordances available in the social milieu. Analysis is taken to the social interactions that emerge from the situation.

Social interactions highlight or even require personal qualities in reverse roles: interactions such as *listener* may also instigate *talker*, a helper's reverse role is a participant requiring help, and offering instructions requires instructions to be acted upon. All these reverse roles in social interaction add to the developmental possibilities for socialisation and enculturation. Analysis is within social praxis without compromising the integrity of the whole.

Bang (2008) made clear both the significance of the social and the interconnection of the cultural when she states that with "social interaction, others do have affordances because they interact in socialised and culturally developed ways and not only as single decontextualized individuals" (p. 130). Social affordances and expectations can be transmuted to that of the cultural. As teacher and peer expectations of behaviour and conduct are put into action, these deeds and behaviours go to form the culture of the group. Analysis of such interactions is continued through this framework on a social plane.

This framework also facilitates the capture of developmental potentialities that are afforded to participants on their outdoor education experience in relation to the social. This is not limited to the outdoor education experience or to the social elements prevalent in many experiences. It does however provide a framework to run the lens over the elements that capture data within the acknowledged, embedded whole.

Cultural Affordances and Place Connectivity

Payne (2002) has highlighted that many of the terms used in education seem to be lacking in conceptual clarification and empirically based insights. Here, this is avoided with clear concepts around culture and cultural affordances. For the purpose of this framework culture is understood as multidimensional. It is viewed as a dynamic concept, one in constant transition, yet also a concept understood as having a definable form, thus enabling participants to understand how *they* might have a culture of their own.

'Culture' is a contested term and recognised here as a shared set of beliefs amongst a group of people. Cultural affordances for outdoor education stem from opportunities for interaction/observation of unusual or different artefacts and/or people that may hold different values or meaning within different communities. This provokes contemplation of what it might be like to live in a time, place, or space where 'shared beliefs and norms' are different from those known by the individual. It is possible that interaction with a differing culture comes in many different forms. One example might be a discussion around the shipwreck coast where this case study took place. Students might be asked to consider what it was

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like for the lighthouse keeper and his family during the months without seeing anyone. As they look across the Bass Straight they are invited to picture, in their imagination, a boat that has come from London and is on its way to Melbourne. People on board send a message via semaphore with news of a change in monarch and what supplies will arrive after they have docked. This activity facilitates an interaction that requires an empathetic understanding of individuals living at a different time. Although it could be suggested they are from the same 'Western' culture. The students live in such a different time that the shared beliefs, and behavioural norms provoke thought of what it might be like to live with those cultural values. A second activity conducted during this case study highlights the potential to engage with different cultures in another way. An Indigenous elder was invited by the school to present to the students. The presentations take many different forms and the elder never does the same thing. He chats to the group and after a while asks what activity they might like to do. On this occasion he took them to a river outlet where it meets the ocean and picked some 'bush tucker'. As this happened the students asked him different questions regarding 'men and women's business' how 'marriage' ceremonies were conducted, and he talked about the local 'place' as it was a meeting point for different families and a place where 'politics' were discussed. A whole range of things were considered and many of the discussions where initiated by the students questions. Once again this was an opportunity for students to consider what life might be like in a different culture.

Here, culture is viewed as a dynamic entity, a process of cultivation that changes over time as opposed to something in a concrete form. Outdoor education itself in Australia is said to be "a 'set' of social and cultural constructions" (Payne, 2002, p. 5). Wattchow and Brown (2011) point out that Australia was never a place for settlers to imprint their meaning over an otherwise blank sheet. Nor did the participants on this trip go to this place and 'imprint' a culture, yet a culture of its own emerged during the trip. The cultural experiences and stories created over this trip are multifaceted and multidimensional. On one hand there is the cultural history investigated in terms of the 'ship-wreck' coast within which the students were travelling. On the other hand, there is the *difference* in culture highlighted with the 'bush-tucker' activity with a local indigenous elder. When questioned, the elder would talk of cultural differences and different ways of 'knowing'. Additionally, there is the culture being *cultivated* by the group whilst on the trip. Cultural elements of this case study took many different forms and were often guided by the students. This was dynamic and changed over the period of the trip. It is worth highlighting that within this study, culture played an important part in the understanding of the experience. What is afforded in terms of 'in-group' culture can influence the social affordances and therefore the experience.

Embodiment

The importance of the embodied experience on the cultivation of shared understanding is not to be underestimated, particularly in the context of this

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investigation. Shared behaviours, beliefs and motivations serve to make an observable culture. Casey (1993) highlighted the embodiment of culture when he showed it is through the body we experience anything at all. This parallels Mace's (1977) maxim "Ask Not What's Inside Your Head, but What Your Head's Inside of" (p. 43). All this suggests that the embodied nature of an experience be brought to the fore. Social and kinaesthetic aspects are thought to play key roles in the learning milieu by both teachers and researchers but the relationship has "been immensely difficult to capture using longstanding concepts and routine methodological approaches" (Seaman, 2007, p. 3). Ultimately, physical and social elements interact to make cultural conceptual understanding. For the purpose of this investigation it is the fact that there can be no separation of learning from the social, cultural, and historical context from which it occurs, distinctions are only made for the purpose of clear conceptualisation and framed for analysis.

Place

> Our living-moving bodies serve to structure and to configure entire scenarios of place. (Casey, 1993, p. 48)

The confluence of theories is suggested in the discussions surrounding place, mobility and embodiment. Mobility plays a key aspect in Gibson's theory of perception, as well as discussions surrounding place-based pedagogy (Stewart, 2004; Wattchow & Brown, 2011). Wattchow and Brown (2011) point out that we are destined to experience multiple places of significance and we may come to care for these places as a result of interactions with them. The interactions we have are influenced by the understanding we have of the place. This understanding comes from cultural ideas, beliefs, and histories that posit the philosophies and ways outdoor education is practised and learners encounter, move through and identify with these spaces (Wattchow & Brown, 2011). For the participants on this trip, there was an opportunity to discuss and experience how 'place' may be viewed form an indigenous aboriginal perspective. A point made by Wattchow and Brown (2011) is that an unintended outcome of outdoor education with an intensely nature focussed approach is the nullification of possibilities offered by the local people, their histories and their stories. An affordance would be left un-actualised if no attention be paid to the local people and is only centred on the physical elements of a place. Place can be viewed on many different levels and as seen from this example the social element of the place is taken advantage of and was well received by the participants. For Wattchow and Brown (2011) in the educational context it can be viewed as an unfolding phenomenon of learner experience, ideals of group culture and the physical reality of the location itself. This interconnection of place, development and interactions is also considered by Gruenewald (2003) who points out that physical places generate and teach particular ways of thinking and being in the world.

More recently, Greenwood's (2013) argument is that place-conscious education can provide a framework that bridges cultural and ecological concepts and

responds to the diversity within. Here, I highlight some of the points he makes about place salient in the consideration of culture, as I have come to conceptualise it, as well as emphasising the interconnectivity between person, place, and culture. The suggestion that local places can provide the context for global relationships to emerge (Greenwood, 2013) indicates that from little things, big things grow. It is only through the collection of diverse experiences with places that we have understanding of the world (Greenwood, 2013). For Greenwood (2013), places provide a local focus for socioecological experiences and enquiry, as well as the construct itself has helped to overcome the dualism between 'culture' and 'environment'. Place-consciousness can lead to vital understanding of relationships with each other in the culturally and physically situated world (Greenwood, 2013).

There is a reciprocal relationship between people and place. People shape places and places shape people. Places themselves can be thought of as "primary artefacts of human culture" (Greenwood, 2013, p. 93). People themselves live emplaced, embodied lives and in many ways, places are pedagogical (Gruenewald, 2003) with place signifying a unique cultural and biophysical environment. Complexity is found in analysis of place-based research due to the diversity of possible places, and variety of human relationships to these places stemming from different cultures (Greenwood, 2013). As Greenwood (2013) states, "culture, place, and identity are deeply intertwined" (p. 93) and for that reason we acknowledge the role of place in the culture formed during the study as well as the broader impact on a more macro level.

> As the nexus of environment and culture, place serves as a reminder that all cultures are nested in biophysical environments and environments are culturally produced. (Greenwood, 2013, p. 94)

Context and Pedagogy

Context has been argued as an unfolding phenomenon between person, place, and culture. Wattchow and Brown (2011) considered how *place* develops from a complex combination of community exchanges, geophysical properties, and cultural beliefs. Here, this study focuses on the reciprocity of those interactions and ask what develops or is afforded by 'place' as part of a context for the physical (encompassing geophysical properties), the social (encompassing the community exchanges) and the cultural (encompassing the cultural beliefs as well as processes of cultivation).

Cultural understanding mediates learning. This assertion challenges assumptions made regarding learner autonomy, the direct experience, and the centrality of cognitive reflection within outdoor education (Seaman, 2007). This mediation focuses on the relationship between artefacts, subjects and the situated process of community. Seaman (2007) offers an insight for participants experiencing a challenge course by utilising Cultural-Historical Activity Theory (CHAT) as a framework for understanding mediation in the meaning making process. Wattchow and Brown (2011), as with this investigation, have equivalences with this

contribution from Jason Seaman. For Seaman (2007) the discussion focuses on the relationship between artefacts, subjects and the situated processes of community. Here, the focus is on the affordances of the physical (including culturally developed artefacts), the social (including the 'subjects'), and the cultural elements (including the situated interactions arising from the context).

Cultural observation have been criticised in some of the discussions in the past surrounding outdoor education practice. Some of the underpinning elements stemming from 'critical outdoor education' are dealt with in order to move on. A critical appraisal of the activities undertaken by Brookes (1994) suggest some activities in the outdoors (orienteering being his main focus) encapsulate the inherent Cartesian approach that attends to outdoor activities with universal approaches such as maps and symbols requiring limited knowledge of the place. When viewed in this sense, the natural environment is viewed as a series of abstract symbols to be acknowledged, related to in terms of mathematical positioning, and passed through. He goes on to suggest a contrast might be found in observing animal habitat and developing knowledge of local ecology, terrain, and history so as to better serve the cultural dimension of the outdoor education process (Brookes, 1994). Thus, as with many pedagogical endeavours, the potential to constrain or develop may be dependent on the intention and abilities of those leading the groups. Conversely, Wattchow and Brown (2011) pointed out, in the same way it is possible for educational practice to diminish the local environ, it is equally capable of bringing it to the fore. This investigation analyses such possibilities through the cultural/place aspect of the framework. Instead of saying what does, or does not happen, this framework seeks to establish what emerges from these possibilities.

This section of the framework also looks at what happened in a cultural sense, during that time, within that context. The reciprocity of culture and context is salient in this understanding, as is the definition of both concepts. To reiterate, separation of physical, social and cultural entities are problematic and the influence one has on the other is acknowledged.

Table 13.1 is an attempt to offer visual (and therefore conceptual clarity) in the construction of this framework. Certain 'entities' might be possible to be represented in one, or all of the elements shown in the table. Every effort is made to acknowledge that an artefact or activity may belong to a number of these areas. For the purpose of analysis, one element is not viewed as being discrete from the rest, merely compartmentalised for the construction of this framework.

The compilation of this table has brought many conceptual problems requiring resolution. This two-dimensional linear expression of something in reality multifaceted and interrelated created many dilemmas in its construction. Nevertheless, to not have some expression to represent the analytical frame is equally confusing. Additionally, whilst the table may read as having discrete categories, this is not the case, nor is it complete. In capturing both data and literature these categories have been put in place for the purpose of this lens yet it is acknowledged there are multiple crossover and blending of concepts. Take for example student interaction with an indigenous elder where the student was invited

to eat local 'bush tucker'. This interaction could be viewed as physical by virtue of the fact that they physically go and find the food, bring it back and then eat it. However, it could also be said that this is clearly a social aspect by virtue of the fact the elder is interacting with the group in a definitely social manner. Although, it is equally possible to view this interaction with a cultural lens as the stories and discussion that went with the instruction to look for food suggests that the activity was secondary to the passage of knowledge surrounding indigenous ways of living. Instead of the endless problematising of concepts and categories, the explication of what is being viewed from which perspective for the purpose of analysis is offered as a solution to the problem, thus preventing 'paralysis via analysis'. At times interactions can be interpreted from the perspective of one or all of these elements within the same event but for clarity, the framework makes explicit the concepts used for analysis and the framework within which this is achieved.

Table 13.1. The conceptual framework.

Affordances of OE		Engagement in context	
		Actualised/realised or intended affordances.	Outcomes (concepts/percept's)
Physical	Movement and locomotion. (climbing, walking, swimming, etc).	Technical skills Exercise	Laughter Embodied knowledge Fitness
	Physical interactions (taste, feel, injurious, etc).	Breadth of experience Problem solving	Resilience
	Physical use, manipulation, value and meaning.	Sustainability Embodied experience	New concepts. Cultural transition
	Aesthetically different.	Beauty Perspective changing	Engaging rather than entertaining
Social	Developmental.	Team work Independence	Cohesive Safe Expansive
	Peer interaction.	Making/strengthening friendships	Cohesive Challenging
	Student–teacher interaction.	Communication Time spent together	Cohesive Challenging
Cultural	Process of cultivation.	Dynamic Influenced by duration	New way of interacting Shared experience
	Social roles/identities.	One's place in the context	Part of the larger
	Beliefs and understandings.	Reflective	Connection with … Novel Humorous Shared experience Cohesion with group
	Place/culture reciprocity.	Embodied Perspective taking	Understanding of self within bigger ecosystem

COLIN HOAD

SUMMARY

The theory of affordance has opened up the possibility of framing and analysing the interactions that take place in outdoor education. Its strength comes from the fact that from its conception, affordance theory has considered the interactions that take place in the environment. Its ecological nature provides a more holistic perspective to be adopted when analysing interactions that take place. As a result, some of the traditional approaches to viewing interactions imported from other disciplines have proved difficult in terms of explaining events. The Australian context, with its colonial past, provides rich experiences for participants of outdoor education programs. This contribution offers a framework to better understand the emergent interactions that can, and do, take place during outdoor education programs and provides a means of capturing, and understanding these exchanges.

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Colin Hoad
La Trobe University
Australia

GLYN THOMAS AND BRENDON MUNGE

14. BEST PRACTICE IN OUTDOOR ENVIRONMENTAL EDUCATION FIELDWORK

Pedagogies to Improve Student Learning

There is merit in encouraging practitioners to consider the theories and values that inform their teaching and learning practices   student-centred pedagogies are best suited to enhance the student learning on field trips in outdoor environmental education programs. (Author Summary)

INTRODUCTION

In school and university outdoor environmental education programs the practical trips, or fieldwork components, are often the most popular aspects of courses with the students. In courses preparing future outdoor environmental education professionals, fieldwork is a signature pedagogy (Shulman, 2005), meaning it's one of the "fundamental ways in which future practitioners are educated for their new professions" (p. 52). This positive view of fieldwork reported in many studies, provides an ideal opportunity to maximise the learning that is possible. However, we suspect that fieldwork pedagogies do not always undergo scrutiny and there may be insufficient consideration given to the teaching methods and processes selected by many teachers. Consequently, outdoor educators may not be using best practices when facilitating fieldwork and in this chapter we will review the literature on fieldwork, draw on our own teaching experience, and make some recommendations for best fieldwork practice.

Fieldwork can be defined as "any component of the curriculum that involves leaving the classroom and learning through first-hand experience" (Boyle et al., 2007, pp. 299–300). In this respect, fieldwork is an application of an experiential education approach, and John Dewey (1938), often described as the father of experiential education, argued the facilitator's role is to provide opportunities for learners to engage in purposive experiences, help them to reflect on those experiences, and build upon past experiences, preconceptions and knowledge. Dewey maintained the need for learning experiences to be enjoyable and interesting enough to keep the learner engaged.

Despite the popularity of fieldwork in some educational disciplines there is actually little empirical evidence that it provides a deeper approach to learning (Kent, Gilbertson, & Hunt, 1997) and the pedagogical benefits have been under-theorised (Nairn, 2005). Furthermore, while there is evidence to support the

efficacy of fieldwork most of it tends to be circumstantial and inferential rather than research-based (Hope, 2009).

To begin our critique of fieldwork pedagogies, we would like to set the scene with a case study, which will serve as a reference point throughout the chapter.

> Phillip is leading a 20-day bushwalk in the Australian Alps. This trip acts as a rite of passage for students entering the second year of their three-year university outdoor education degree. Consequently, by day six of the trip the students are expected to assume responsibility for leading and managing both themselves and peers. Working in pairs, Phillip encourages the students to have: a plan to communicate with each other and the rest of the group; an agenda of actions that will occur throughout the day; and a theme for the group to focus on. This theme usually revolves around the purpose of the day and an awareness of each other and the environment they are travelling in. Each day the student leaders facilitate some environmental learning activities between the navigation, group rest stops, lunch, and domestic tasks such as finding water and establishing a campsite. Phillip positions himself as a resource person for the student leaders to draw on, but early in the trip, they tend not to make optimal use of this available expertise. Regardless, Phillip waits patiently for the teachable moment, and usually after about six days the leaders realize they need to consult Phillip on how they can encourage their peers to engage with the environment at a deeper level. At this point, with the full attention of the group, Phillip is able to go back through the preceding week, and help them to identify some of the missed learning opportunities. Typically, for the next six to eight days the group is able to shift from grappling with the day-to-day challenges of a long bushwalk to one that is able to engage more fully with the environment.

The experience described above highlights many of strengths of fieldwork in outdoor environmental education. Experienced facilitators combine their knowledge about cultural and natural histories with an understanding and awareness of group processes to make decisions about appropriate interventions (or non-interventions as the case may be) to capitalise on learning opportunities as they emerge. For Dewey (1938) experiential education was not just serendipitous learning, he held that educators should use careful planning, develop extensive background knowledge, and be ready to teach subject matter when required. Hence, being student-centred did not mean that the facilitator relinquishes his or her authority or responsibility to guide (Simpson, 2011).

Although there may be a paucity of empirical research investigating fieldwork pedagogies, there has been a significant body of writing on the value of fieldwork in the literature for the fields of outdoor, environmental, and geography education. The next section will interrogate the claims commonly made in these literatures regarding student-centred learning in fieldwork.

STUDENT-CENTRED LEARNING IN FIELDWORK EXPERIENCES

Swedish educational psychologists, Martin and Säljö (1976), found that the teaching and assessment strategies used by teachers had a bearing on the learning approaches adopted by students. They proposed that in a *deep* approach to learning, students attempt to develop understanding, make sense of their own experiences, create meaning, and link different experiences. In the less desirable *surface* approach to learning students use rote learning and reproduce ideas in order to meet external assessment demands. Clearly, this oversimplifies the range of learning approaches that students could assume and Biggs and Tang (2007) also identified the *achieving* approach where students work strategically to enhance their opportunities for academic success. For the purposes of the discussion in this chapter, we are suggesting that teachers need to carefully design and facilitate fieldwork experiences in order to increase the prospects of engaging more students in deep approaches to learning.

Over the last decade an important shift in teaching and learning has been the move away from teacher-centred approaches to learner-centred approaches to teaching. Weimer (2002) offers one of the most compelling accounts of how teachers can make this transition and she outlines five key philosophical shifts that characterise learner-centred teaching. They can be summarised as follows:

− The Role of the Teacher. The focus of instruction is on student learning – not what the teacher does.
− The Balance of Power. Students are invited and encouraged to be more involved in decision-making about their learning.
− The Function of Content. Teachers are less focused on covering content, and while they still build a knowledge base there is more emphasis on developing learning skills and learner self- awareness.
− The Responsibility for Learning. Teachers seek to create learning environments that motivate students to accept responsibility for learning and as students become more autonomous, they need teachers less.
− The Processes and Purposes of Evaluation. Assessment activities are designed to promote learning and to develop self- and peer assessment skills.

The design and delivery of geography fieldwork has changed considerably from the traditional observation-focused trips of the 1950s to the problem-oriented fieldwork of the post-1970s (Kent, Gilbertson, & Hunt, 1997). Although these observation field trips may have been an effective means to share staff experience and ideas with large groups of students at one time it is likely they encouraged student passivity, inattention and reproduction of ideas. Leydon and Turner (2013) suggest it is unlikely that observation-focused fieldwork experiences promote the critical engagement found in deep approaches to learning. On the contrary, a superior approach to fieldwork encourages "active learning and student engagement through direct experience with course material, enhances student understanding of geographical features and concepts, promotes skill development, reinforces course material, and increases student recall, comprehension, and application" (Leydon & Turner, 2013, p. 248).

The importance of a learner-centred approach was especially highlighted in an Australian study (Ballantyne & Packer, 2009) of students' and teachers' experiences in high school outdoor environmental programs. Ballantyne and Packer's mixed-methods study found "triangulated evidence from observations, student interviews and teacher interview converges on one point: the most engaging, effective, and enduring learning experiences in the context of learning in natural environments, occur through experience-based rather than teacher-directed strategies" (Ballantyne & Packer, 2009, p. 259). Revell and Wainwright (2009) concurred that field trips are "considered another important way of encouraging deep versus surface learning, as students get so much out of seeing and experiencing things for themselves" (p. 215).

According to the literature, some of the keys to effective geography fieldwork include: the inclusion of active, direct experience; the use of authentic, real-world contexts; the ability to engage students' emotions, feelings and values; and the requirement to attend to new environments and/or people (Ballantyne & Packer, 2009; Boyle et al., 2007; Hope, 2009; Kent et al., 1997; Leydon & Turner, 2013). In a good summary of the importance of direct experience, Hope (2009) explains:

> Fieldwork is important because at its heart lies a direct, active encounter with 'the other' – others who call us to attention with a jolt; who challenge us to rethink our preconceptions; who draw a sense of fellowship from us – and a new attentiveness that aids a deeper understanding. It is this direct encounter that makes fieldwork challenging and at times difficult and it is these features that, in my view, continue to make it a valuable mode of learning. (p. 180)

Whilst we agree with Hope's (2009) intent, we would add that students also have active encounters with places or environments. However, we believe that good fieldwork would intentionally try to avoid 'othering' places and that experiences would be framed and facilitated in ways that encourage students to see themselves as being connected with nature, rather than apart from it.

Our case study, presented at the start of this chapter, reinforces a number of the key points made in this section regarding the importance of student-centred learning. Phillip shared responsibility for learning with the students, by allowing them to assume leadership positions and by delegating decision-making responsibilities to them. In the short-term, this led to ineffectiveness and potential frustration for the student leaders and their peers. To his credit, Phillip was able to step out of the limelight, avoid the trap of offering his expertise and wisdom before students were aware they even needed it, and when the time was right (6–7 days into the trip) he was able to guide the students through a reflective process that allowed them to identify their learning. This example of masterful facilitation overcame many of the challenges common in fieldwork. The next section will highlight some of those challenges described in the literature.

THE CHALLENGES TO FACILITATING FIELDWORK
EXPERIENCES EFFECTIVELY

The main challenges that will be addressed in this section include increased student numbers, student participation issues, safety management, staffing issues, the emergence of new technologies, and mismatches between theories and practice. The massification of higher education has created numerous challenges for programs and courses that utilize fieldwork. Some of these include the growth in the size of student cohorts, the wider ability range of students, the increased numbers of *new-generation* students (Thomas, 2013), increased budgetary constraints, and the decision to transfer costs to students where possible (Kent et al., 1997). Put simply, increased numbers of students makes it harder to do high quality student-centred fieldwork that encourages deeper approaches to learning. Increasingly, students are being asked to contribute to the costs of fieldwork (as much as university rules and government regulations allow it), which creates potential equity issues for students from low socio-economic backgrounds. This is also leading to changes in the perception of what constitutes value for money and while running trips locally may reduce costs that decision may not be consistent with students' perception of good value for money.

In terms of student participation, although most students have positive experiences on field trips, we acknowledge that some students may have negative experiences. Hupy (2011) expressed some frustrations with students who were 'going through the motions' and adopting a surface approach to learning. He suggested that engagement can be improved by incorporating assessment tasks but if students perceive the assessment as a hoop-jumping exercise then enjoyment may be further stifled. Hupy's solution was to introduce a competitive game (capture the flag) to motivate students to learn relevant geography and navigational skills. However, competition between students is very common in education, and we believe that motivational issues can be solved through non-competitive alternatives. Kent et al. (1997) highlight that the fitness demands of some fieldwork may also impact on enjoyment for some (even if non-competitive options are used), and this potentially creates equity issues for those with physical disabilities or low levels of physical fitness.

The appropriate management of student safety on field trips can be a major challenge as most educational institutions have conservative approaches to risk management (Boyle et al., 2007). Couper and Stott (2006) argued that there is a growing literature on fieldwork pedagogy that recognises field safety as being of paramount importance. Australian academic Andrew Brookes has conducted extensive analysis of fatalities on outdoor education field trips and through a series of papers in the Australian Journal of Outdoor Education (for example, Brookes, 2011) he highlights many strategies that can be employed by fieldwork facilitators to optimise student safety. Student safety challenges are not static either and they vary across time and places. In Victoria, Australia there were high levels of risk aversion after the catastrophic bushfires in 2009 and many educational institutions redesigned their programs to avoid walking and camping in areas deemed to be high bushfire risk areas.

Staffing issues have always been prominent in discussions about fieldwork and Boyle et al. (2007) argued that the increased contact time required to lead field trips has a negative impact on academics' time to complete other duties, particularly their research. A colleague at one of our institutions (R. Wilson, personal communication, April 23, 2012) has managed this tension by using undergraduate biology students on field trips to collect research data for externally funded projects. Not only does this solve the problem of maintaining research activity, the students are inducted into a research culture from the first year of their program.

The emergence of new technologies that can enhance student learning on fieldwork is posing one of the biggest challenges both now and in the future. In the geography literature, some have argued that instructional technologies (like GPS, remote sensing data, and GIS), may help to increase understandings of global environmental issues by linking local investigations to ecological system phenomena (Peffer, Bodzin, & Smith, 2013). Empirical research by Peffer et al. has found that technology can enhance learning and cognition, reduce negative experiences, and build emotional ties to the environment. However, a substantial number of respondents also reported that they felt technology reduced emotional connections to the environment. In the future, virtual field courses may be a strategy used by universities to save costs while preserving student learning. However, Leydon and Turner (2013) discuss how the idea of virtual field course may run counter to active pedagogies and there is doubt that a virtual field course would be able to replicate the student experience of operating in real-world field activities.

The final challenge to be discussed in this section concerns the mismatch that can sometimes occur between theoretical understandings of fieldwork practices and the pedagogies students experience in the field. As explained in the previous section, the student-centred approach to learning recommended in the teaching and learning literature is based on different assumptions and roles than those underpinning a direct instruction approach. Research exploring the experiences of teachers and students on fieldwork trips to museums (Anderson, Kisiel, & Storksdieck, 2006) noted that learning suffers sometime because teachers struggle to adjust to less formal, student-centred approaches. They observed that "the educational worth of a museum field trip may be heavily dependent on the agenda of the teacher leading it, primarily in finding the balance between enjoyment and focused learning" (Anderson et al., 2006, p. 367). It can be challenging for fieldwork facilitators to ensure that there is constructive alignment between their intended learning outcomes, the learning activities they organise, and the assessment used to measure learning. This calls for a high level of intentional design and implementation and fieldwork facilitators may not always be able to access the support available to help.

Returning to our case study, managing student safety when bushwalking through heavily forested environments in a hot Australian summer can be a significant leadership burden. It is tricky for Phillip to share the responsibility for leading the trip with the students. While it may sound like a great opportunity to

relax and let the students do the work, in reality Phillip must constantly monitor conditions of favourability and be ready to intervene if needed. One of Phillip's jobs is to create a safe environment, both physically and emotionally. He must also note when the conditions of favourability (such as environmental conditions, group cohesion, and individual wellbeing) change enough to warrant a shift in his leadership style from one of careful delegation to one that is more directive (Priest & Gass, 2005). Sadly, there are no textbooks to tell emerging fieldwork facilitators how to lead under every possible circumstance. Rather, they must develop the experience-based judgment required to both notice and manage risks to optimize student safety.

Fortunately, there are some examples of good fieldwork practice in the literature, which the emerging fieldwork facilitators can consult. The next section will outline two examples of good pedagogical practice in outdoor environmental education fieldwork.

LEARNING FROM EXEMPLARY PEDAGOGICAL PRACTICE IN FIELDWORK

In this section, we will draw upon two fieldwork examples, which we have been involved in first-hand or observed in colleagues' practices. In each example, we will note the characteristics that were excellent, and we will substantiate these claims with references to the fieldwork literature.

La Trobe University – Fieldwork Leadership Induction.

The undergraduate degree programs in Latrobe's Faculty of Education – Department of Outdoor and Environmental Education have produced more than 1500 graduates and have a long history of high quality fieldwork. A key feature of their programs is the transition from being a participant, peer-leader, and teacher over the period of the three-year degrees. Under the careful supervision of experienced staff, the students develop their skills and experience in a range of environments and outdoor activities. In the second year of their program students assume responsibility for leading peers under supervision, like in Phillip's case study described earlier. As their learning continues into third year, students assume responsibility for leading both first year novices and students from primary and high school groups external to the university. In most cases, the programs use outdoor activities to learn about the natural and cultural history of places. Students tend to teach only at places that they have developed extensive expertise based on the premise that strong local knowledge is essential to managing student safety. At times, the student leaders/facilitators wrestle with the competing demands of technical aspects of outdoor activities and place-based education. The level of success in managing this tension varies.

Some authors, (for example, Lugg, 2004; Wattchow & Brown, 2011) have encouraged a de-skilling and reduced emphasis on adventurous activities in order to restore an environmental or place-based focus in programs. We find this dichotomization unnecessary. Many adolescents, though not all, enjoy the focus on

physical activities and skills and they help to engage and motivate students to be outdoors. The participation in activities also provides a foundation for future engagement in the outdoors and capacities for deeper connections with places. Clearly, an excessive focus on thrills and skills can be detrimental to other educational objectives, but ultimately the degree to which adventure activities become 'all consuming' is within the control of the fieldwork facilitators (Thomas, 2005b). Moreover, the unintended consequences of removing adventure from outdoor environmental programs needs more research (Martin, 2004). What is clear though, is that the increased responsibility delegated to students over the course of their degree, provides opportunities for authentic, deep approaches to learning.

On a practical level, Thomas (2005b) provided a number of recommendations to address this tension based on his action research and experience with Latrobe University's approach. First, prepare for the teachable moments that allow you to capitalise on opportunities for learning as they present themselves. This necessarily requires students to develop a deep understanding of the places where they will teach. Fortunately, repeat visits to the same location, over the duration of their course, helps students to build up their knowledge and awareness of learning possibilities. Second, carefully manage the challenges associated with the technical/gear/skill intensive nature of outdoor activities is recommended. On shorter programs rethink the need to use activities that require extensive skill development or preparation in favour of modes of travel like walking which needs less preparation. Thirdly, use deliberate facilitation and careful planning to ensure the inclusion of environmental content. In simple terms, make time and space in your program for a range of learning activities.

Voyageur Journeys

Canadian academic, Tom Potter, teaches into outdoor environmental education programs at Lakehead University in Thunder Bay, Ontario. One of the more popular field trips he leads involves the re-creation of a journey taken by early French Canadian fur traders. Using replicas of the Voyageur craft used in the 18th and 19th Centuries, the field trips involve students in paddling (and portaging) journeys whilst studying cultural and natural history. This first-hand, direct experience of the difficulties and challenges faced on these arduous journeys allows the students to develop an authentic understanding of this important aspect of Canadian history. The trip is consistent with Potter and Henderson's (2004) description of what is unique about so much of Canadian outdoor environmental education:

> With a self-propelled group travel focus and a perception of "wild" remote landscape of the Canadian north as a setting … there is a holistic view of an education "of" and/or "with" the outdoors that denotes a relational presence to the practices and way of the Canadian north. (p. 74)

The journeys with the Lakehead students are made more authentic through careful student research and preparation for historical re-enactments, role-playing, the use of historical dress, and community living. Careful facilitation allows the students involved in the trip to explore sensitive cultural issues through different lenses.

> A gaze back towards the past can serve to move our cultures forward together as we dwell on this well-storied Canadian soil, for there are many Canadian traditions that must stand side by side. Nonetheless travel heritage and interpretation, pioneer lifestyle, and Indigenous peoples' material culture and spiritual view are all part of storytelling, craft, and skill understanding in Canadian outdoor adventure education. (Potter & Henderson, 2004, pp. 75–76)

The Voyageur field trips facilitate student learning because they demonstrate many of the characteristics of effective fieldwork. They provide opportunities for actively being in the environment, so students can see things for themselves and make personal connections (Ballantyne & Packer, 2009). They embody careful design, appropriate preparation and skill development, and effective use of post-field trip debriefing (and celebrations) (Leydon & Turner, 2013). Finally, consistent with Hope's (2009) recommendations for fieldwork, the Voyageur re-enactments provide a vivid encounter that draws forth an emotional response, which deepens the students' understanding.

TRANSFORMATIONAL OUTCOMES THROUGH A CRITICAL APPROACH TO FIELDWORK

Fieldwork is often valued for its educational potential to challenge students thinking and actions. However, a number of academics have questioned the degree to which fieldwork, if not carefully managed, just reinforces pre-existing worldviews. Nairn (2005) in particular argued that facilitators have an ethical responsibility to critically examine whether students' experiences during fieldtrips reinforce "us/them discourses along the well-worn lines of 'race', class and gender, without any interrogation of these effects" (p. 304). Nairn continued, "It is not a simple matter of hoping the 'right' direct experiences, or direct experiences per se, will do the work of challenging individual students' ideologies when the ideologies remain unexamined" (p. 306).

Although Nairn's (2005) writing was most concerned with fieldwork in human geography, Stewart (2011) expressed similar concerns about environmental education pedagogies that fail to address the power relationships between human and the more-than-human world. Stewart proposed an approach based on "becoming- speckled warbler" (a small, threatened Australian bird) for its capacity to help students to "re/think and re/create environmental education pedagogy that reflects the natural history of this content" (p. 77).

We both support the need for fieldwork facilitators to challenge the taken-for-granted assumptions that may otherwise negatively influence the impacts and

outputs of direct experience. Previous writing by Thomas (2005a) has highlighted the difficulties that facilitators seeking to challenge students' worldviews and assumptions may experience. It is recommended that extra training and professional in-service activities on this component of facilitation would assist fieldwork facilitators to do the sensitive work of challenging their students' thinking and beliefs.

In response to these concerns, Hope (2009) conducted research on 7–10 day residential field trips to Scottish islands to determine the impacts on students preconceptions. His findings confirmed that some student's initial preconceptions remained unchallenged, but for many others "the direct encounter of the field trip encouraged a positive affective response that helped them link theory and practice and deepen their understanding of the issues" (p. 176) being explored. He found that when students are encouraged to challenge preconceptions and assumptions students can become aware of the limits of their thinking, and by evaluating their own thinking they may start to understand other people's views in a new light. Hence, Hope counters the view of Nairn, that direct experience can obscure our understanding of the wider structures and processes that underpin this experience. He argues that, "active, direct experience can act as a catalyst that deepens our emotional engagement with others and thus our understanding of the wider world (p. 179).

From our perspective, one of the key differences between the fieldwork that is critiqued by Nairn (2005) and that defended by Hope (2009) is the time spent in the field. Nairn observed the deficiencies of direct experience on shorter 2–3 day programs, whereas Hope observed 7–10 day programs. Therefore, on Hope's programs the length of the fieldwork experience, in the words of one of his students: "meant you couldn't hide" (p. 176). We concur that the length of a field trip has an important bearing on the effective facilitation of fieldwork. Clearly, in Phillip's case study the extended duration of the trip (20 days) allows sufficient time for the intended learning outcomes to be realised without having to resort to direct instructional approaches in a flawed rush to cover content (Weimer, 2002).

CONCLUSIONS

We have argued that the outdoor environment education practitioners using fieldwork experiences should intentionally consider the way they facilitate in order to more effectively advance student learning. In this chapter, we have highlighted from the literature, and illustrated with examples, some principles of best practice. We concur with Ballantyne and Packer (2009) that further empirical research is needed to support the development of practical strategies for implementing student-centred learning activities that advance student learning in fieldwork. Although, it is difficult on a number of levels to conduct research that investigates the impact of fieldwork pedagogies on student learning, there is a need to move beyond self-reporting studies. In closing, it is our hope that the facilitators of fieldwork continue to reflect on the theories and values that inform their teaching and learning practices. As more practitioners, like Phillip in our case study, find

new ways to enact student-centred pedagogies the research will hopefully demonstrate improved student learning on field trips in outdoor environmental education programs.

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Glyn Thomas
University of Sunshine Coast
Australia

Brendon Munge
La Trobe University
Australia

15. SAFETY LTD. INC.

Accident Theory and the Institutionalisation of Outdoor Education

> … is it possible to have (let alone design) an institutional culture which supports resilience and reliability … or is this a fiction, a dangerous smoke screen behind which the reality and resistance of organizational dysfunction and blindness to error will always lurk? (Pidgeon, 1987, p. 1)

INTRODUCTION

Society's understandings about the processes behind and causes of accidents, serious incidents, and catastrophes, have significantly developed over the last thirty years. As in many elements of post-industrial society though, accident understanding and safety management have increasingly become understood in positivistic and reductionist terms. Yet as Beguin, Owen and Wackers (2009) suggest, "rules and procedures are not sufficient for the successful achievement of safe and reliable work" (p. 6). Pidgeon (1997) instead asks that "our theoretical lens now needs to focus upon a range of deep-seated organizational preconditions and patterns which have, time and time again, been shown to pre-date catastrophic events" (p. 1).

Outdoor education has been slow to adopt theoretical developments in safety management and harm minimisation of dependant groups in the outdoors. Examples of theoretical developments that have occurred in OE over the past 30 years include Davidson (2005), Leemon (2005), Salmon et al. (2010), and Salmon, Cornelissen, and Trotter (2012). Outdoor education has not been slow, though, in adopting notions of risk as central to its identity and, at times, positioning risk as integral to providing learning and wellbeing to participants (for example, Priest and Gass, 1997). Brown and Fraser (2009, p. 73) even suggest that "risk has monopolized" outdoor education to the detriment of other pedagogical alternatives. Such an approach to curriculum and pedagogy has led to particular safety practices and ideas in the outdoors. As the outdoor education profession increasingly provides alternatives to such risk dominated approaches (see for example, Brown & Fraser, 2009; Wattchow & Brown, 2011), so to can it re-evaluate theories that underpin attitudes to safety.

It is not the purpose or the will of this chapter to define outdoor education, for it has a multitude of meanings, descriptors and forms. In the context of this chapter though, outdoor education is simply understood to mean formalised education in the outdoors, which could be in the guise of "residential camping, expedition programs, leadership training, personal development courses or environmental

projects" (Wattchow & Brown, 2011, p. xiii), or could even be derived from other contemporary alternatives.

Charles Perrow (1984) in *Normal Accidents* and Scott Sagan in (1993) *The Limits of Safety* turned organisational theory against the normative trend with their provocative research on accident theory and accidents in high-risk technologies. Their work highlights the social and political restraints to safety, which I will briefly introduce and describe. This chapter then seeks to establish some of the learning and findings of *normal accident theory* that might be transferred to the wellbeing and safety of dependant groups in the field of outdoor education. Humberstone and Stan's (2009) discourse on the nexus between wellbeing and safety offers a valuable insight into some of the tensions surrounding outdoor education curriculum, pedagogues and safety within both a risk averse and a risk sensationalist society.

Weick (2004) suggests that *normal accident theory* remains relevant into the 21st century because it is a tool that can frame events, link multiple levels of analysis and provoke new questions about safety and practices. Sagan (2004a) outlines the broad application of *normal accident theory* in society, suggesting a major impact beyond the intended subfield of high-risk technologies. Perrow (1999, pp. 99–100) raises the issue that certain educational organisations may not fit into his model of accident theory, yet *normal accident theory* offers enough interesting insights and outdoor education has enough significant complexities that allows for changes to how safety is perceived and managed. *Normal accident theory* can, at the least, remind us of the limitations of current safety practices.

HIGH RELIABILITY & NORMAL ACCIDENT THEORIES

Sagan (1993) details two contrasting theories of organisational safety and explains these two theories in relation to organisational safety in the nuclear weapons industry. While the domain of education, and particularly outdoor education, is vastly removed from the logistics and outcomes of safety breaches with military nuclear weapons, it may be possible to transfer some of the theoretical learning between the two. Sagan firstly outlines his understanding of *high reliability theory*[1] where "accidents can be prevented through good organisational design and management", and then summarises (1993, p. 46) that this theory sets out to maintain and create necessary safety in organisations by ensuring that:
1. safety is the priority organisational objective;
2. redundancy enhances safety: duplication and overlap can make "a reliable system out of unreliable parts";
3. decentralised decision-making is needed to permit prompt and flexible field-level responses to surprises;
4. a "culture of reliability" will enhance safety by encouraging uniform and appropriate responses by field-level operators;
5. continuous operations, training, and simulations can create and maintain high reliability operations; and

6. trial and error learning from accidents can be effective, and can be supplemented by anticipation and simulations.

In turn he also outlines the competing *normal accidents theory* (founded on Perrow's *Normal Accidents*, 1984), which suggests there are several discrepancies with the thinking behind *high reliability theory*. Sagan (1993, p. 46) details *normal accident theory's* view in that "accidents are inevitable in complex and tightly coupled systems" and then summarises its response to the above six points of *high reliability theory*:

1. safety is one of a number [of] competing objectives;
2. redundancy often causes accidents: it increases interactive complexity and opaqueness and encourages risk-taking;
3. organisational contradiction: decentralisation is needed for complexity, but centralisation is needed for tightly coupled systems;
4. a military model of intense discipline, socialisation, and isolation is incompatible with democratic values;
5. organisations cannot train for unimagined, highly dangerous, or politically unpalatable operations; and
6. denial of responsibility, faulty reporting, and reconstruction of history cripples learning efforts.

Perrow premises normal accident theory on the failure or weakness of orthodox understandings of accidents and asks us to delve deeper and recognise just how accidents do occur in organisations.

> Conventional explanations for accidents use notions such as operator error; faulty design or equipment; lack of attention to safety features; lack of operating experience; inadequately trained personnel; failure to use the most advanced technology; systems that are too big, underfinanced, or poorly run … But something more basic and important contributes to the failure of systems. (Perrow, 1999, p. 63)

In his study of the nuclear weapons industry from the perspective of these two theories, Sagan found that the high reliability method led to a number of positive safety measures but fundamentally consisted of too many paradoxical practices that ultimately undermined safety. "It is the combination of complexity and tight coupling that confounds even smart and dedicated organizational efforts to produce perfect safety" (Sagan, 2004a, p. 17), or as Skilton and Robinson (2009, p. 43) succinctly state, "system structure creates barriers to the detection, comprehension and correction of variations in outcomes". In essence, within complex/coupled systems, accidents are ultimately inevitable, or as Perrow (1999) suggests, a 'normal' if infrequent occurrence. Thus, in theoretical terms, Sagan found the normal accidents method was more reliable in the high technological organisation of nuclear weapons than the high reliability method.

Perhaps the most important feature of normal accidents theory is its perception of primary cause in accidents. Perrow (1999, p. 7) states that "the cause of the accident is to be found in the complexity of the system" and not necessarily due to the individual failures of "design, equipment, operators, procedures, or

environment". In fact it is the interface between these components failing that often explain accidents. Both Perrow (1999) and Sagan (1993) mention the tendency of organisations to blame components rather than the system in the event of an accident. This often takes the form of 'operator or human error', 'equipment failure' or 'unforeseeable environmental effect'. In the case of an accident, any or all of these events may have occurred, but normal accident theory asks for a more thorough analysis of the system holding these components together. Importantly, Sagan (2004a, p. 17) outlines that dangers are "rooted in the structure of organizations". Such a systemic viewpoint is paramount to safe practice, for as Pidgeon (1997) extrapolates, conditions conducive to accidents can 'incubate' over time, each condition going unheeded or unnoticed until the right combination of events occur for an accident to eventuate.

> There are always very many preconditions to disaster, some originating years prior to the actual event. This phenomenon of increasing underlying system vulnerability, in which a chain of concealed errors and other partially understood events builds-up in a way that is at odds with the existing beliefs and norms about hazards, is labeled … as the disaster incubation period. (Pidgeon, 1997, p. 2)

Sagan suggests (1993, p. 276) that from a normal accidents approach, a "new strategy for safety would be to try to reduce the characteristics of interactive complexity and tight coupling in modern nuclear arsenals" as it was particularly these two issues that led to numerous near misses and dangerous incidents during the 1960's and 1970's. This is an interesting suggestion, as interactive complexity and tight coupling are known to promote production efficiency, but unfortunately can also heighten the potential for accidental events (Perrow, 1999, p. 88). This highlights the common issue with prioritising different and at times competing organisational objectives, such as profit/efficiency and safety.

Perrow (1999) and Sagan's (1993) suggestion to reduce interactive complexity and tight coupling and to instead promote flexibility and simplicity (or seek more linear systems where possible) can be directly transferred to other domains as a means to consider safety. In fact, such a suggestion has significant relevance to the safety of dependant groups in outdoor education (Leemon, 2005). There are also the positive safety practices from the high reliability model that should be considered. Bain (1999, p. 129) believes that the two theories should be "complementary, not competing, perspectives", a point that Perrow (1999, p. 372) conditionally supports, and suggests that they can inform each other – and thus outdoor education may also be able to draw lessons from elements of the high reliability model.

APPLICABILITY OF NORMAL ACCIDENT THEORY TO OUTDOOR EDUCATION

There has been much discourse and debate between the normal accident and the high reliability theorists that further encapsulate the two theories[ii]. We should have enough background understanding of *normal accident theory* to apply in the OE

context and find its relevance to our understanding of safety and wellbeing in the outdoors. Using Sagan's perspectives on *high reliability* and *normal accident theories* to frame the discussion is helpful, as they encapsulate many of the safety issues that are pertinent to outdoor education. These safety issues are centred on organisational objectives, complexity and the use of redundancies, the centralisation and decentralisation of decision-making, a culture of reliability, training, and learning from accidents.

1. Organisational Objectives

As in any organisation, outdoor education organisations have numerous objectives to fulfil that are constantly being prioritised. In addition to safety, there is a need for an educational rationale, financial objectives (budgetary restraints, profits, etc.), logistical priorities, reputation of the organisation and many other competing objectives within outdoor education organisations. *High reliability theory* asks for safety to be an 'organisations first' objective but both Perrow (1999) and Sagan (1993) agree that this is a decidedly optimistic viewpoint on organisational behaviour. Even if organisational leaders have safety as their utmost priority, "such rules might not be followed in any case" (Sagan, 1993, p. 60).

Sagan (1993, pp. 37–38) states three significant conflicts in regards to organisational objectives:
1.   "Significant pressure to maintain high production rates" – this can lead to "hasty decision making, violations of safety rules, and jerry-rigged procedures";
2.   Differences and tensions between organisations/industries and regulatory agencies, and
3.   Misinformation about the nature or frequency of dangerous operations between lower-level operators and organisational leaders.

All three of the above points can be transferred to outdoor education organisations. With regard to 'maintaining high production rates', in outdoor education other objectives can potentially 'override' safety as the first priority in some situations. For example, there may be pressures to ensure outdoor trips occur when timetabled. Organisations can hastily arrange new staff, suddenly change venues or alter activities at the last minute just to ensure the timetable runs smoothly and the trip goes ahead. All these preferences impact upon the safety management of the trip. New staff may not be familiar with specific environments or organisational protocols. Altered activities may not be as well planned and managed as activities that have performed multiple times by staff.

Humberstone (1995, p. 141) describes the 1993 Lime Bay[iii] fatalities as a tragic example of "sales before safety", where management did not fund essential safety equipment. This attitude, according to Perrow (1999) can occur because of the attraction to the benefits of running risky systems. Major accidents are rare events, so "the benefits truly do outweigh the risks" (p. 371). Well, they do until an accident occurs.

As in many organisations and industries, outdoor education has experienced the influence and tensions of regulatory bodies and resulting mandates being introduced into practice. Differing objectives, politics, funding, and notions of autonomy are just some examples that drive these tensions. Outdoor education organisations also have potential for 'misinformation' between the hierarchies of workers because of the autonomy of most operators when in the field. In many cases, an operator could easily not report an incident or could choose to practice in a way that hierarchy would disapprove of, simply because they cannot be easily checked.

There does not seem to be any 'quick-fix' answer for this issue, other than awareness and understanding that competing objectives within organisations do exist and that every possible means to ensure safety is prioritised should be grasped. An organisation-wide 'safety culture' needs to be nurtured and continually encouraged and a normal accident perspective of analysing systems and interactions between components, as opposed to blaming individual components, may support this. Pidgeon (1997, p. 9) outlines the difficulties that organisations face when they adopt, consciously or not, a blame-focused safety culture.

> If a 'culprit' has to be found whenever an error has occurred the processes of political sensemaking will emphasize avoidance of blame rather than critique and honesty. Hence efforts to motivate people to act safely through sanction may be self-defeating, resulting in the very state of poor or incomplete information which is a precondition to vulnerability. (Pidgeon, 1997, p. 9)

Leemon (2005, p. 246), while acknowledging that it is human instinct to blame and identify responsible parties, instead encourages us to address systems and understand how the "controls … failed". Pidgeon (1997, p. 11) suggests that a strong safety culture should be seen as only one part of enhancing safety. This pessimism rests in the limitations of organisations' culture – "their intrinsic cultural blindness", their "uncritical gloss on the realities of organizational life", and their "powerful, yet perhaps ultimately hollow, rhetoric" on safety. Sagan (1993, p. 29) highlights the normal accidents view of an organisation not as a rational entity, but instead as "organized anarchies" with conflicting politicised visions and capricious behaviours. This organisational pessimism, coupled with the following safety issues, highlight outdoor education's difficulty in maintaining safety in the outdoors.

2. Interactive Complexity (Redundancy)

Sagan (1993) asks us "to be more conscious of the potential for bizarre, unexpected interactions in complex systems, and therefore be more wary against habitual efforts to improve safety simply by adding more and more redundancy to the system" (p. 274). Gough's (2012) discourse on complexity in environmental education inquiry provides valuable insight for the curriculum and pedagogical development of outdoor education.

Complexity invites us to understand that many of the processes and activities that shape the worlds we inhabit are open, recursive, organic, nonlinear and emergent. It also invites us to be skeptical of mechanistic and reductionist explanations, which assume that these processes and activities are linear, deterministic and/or predictable and, therefore, that they can be controlled. (Gough, 2012, p. 42)

Gough (2012) actively encourages a re-conceptualisation of "curriculum, teaching and learning" that "foregrounds the unpredictable and generative qualities of educational processes, and invites educators to value that which is unexpected and/or beyond their control" (p. 41). Whilst centred upon educational inquiry, this perspective is relevant because it coincides with a normal accident viewpoint on complexity within organisations and systems. Normal accident theory asks us to be wary though of interactive complexity from a safety viewpoint. Like the modern discourses focused upon risk discussed earlier – a move to reevaluate curriculum can help us to also reevaluate our attitudes and positions about safety and acknowledge the tensions that exist between the two.

Outdoor education organisations, like any other organisations, consist of at least five components that interact with each other and potentially provide complexity. They are (with outdoor education examples):

1. design: group size, number of groups, length of trip, difficulty of trip, venue and activity of trips;
2. environment: Weather, hydrology, terrain, vegetation, etc.;
3. people: staff, participants and external people. Also experience, skills and knowledge of these people in conjunction with staff/student ratios;
4. equipment: design, condition, complexity and appropriateness of equipment, including safety equipment; and
5. procedures: methods of operating such as cooking circles, communication schedules, preparation of participants, etc.

Perrow (1999, p. 78) clarifies two different ways that these components interact:

1. Linear interactions are those in expected and familiar production or maintenance sequence, and those that are quite visible even if unplanned; and
2. Complex interactions are those of unfamiliar sequences, or unplanned and unexpected sequences, and either not visible or not immediately comprehensible.

While some elements of expecting or not expecting an event can be attributed to experience and knowledge, Sagan (1993) and Perrow (1999) suggest that there are some events and sequences of events that are incomprehensible even to an expert. Of the above list of components, it could be reasonable to suggest that 'design', 'equipment', and 'procedures' are relatively static once a trip is underway, and 'environment' and 'people' are less static or more variable in their unexpectedness. We can try to understand how these 'less static' components can interact in complex ways with other components. The wind can interact with equipment (e.g. blowing canoes around/over); people (e.g. emotionally and physically); other components of the environment (e.g. fetch, falling trees, etc.); design (e.g. impact on trip timeline); and procedures (e.g. multiple capsize, inability to get to camp,

etc.) that can all be very complex. This in turn creates further sequences of events and in turn more complexity. Brookes' (2003a) study of fatalities in outdoor education highlights how quickly and easily events (particularly concerning weather) can escalate and cascade into serious incidents. Perrow (1999, p. 75) warns that even in predominately linear or simple systems, the environment will be "at least one source of complex interactions … since it impinges upon many parts or units in the system".

Redundancies (or back up systems) are often implemented to counter the safety problems with interactive complexity. According to *normal accident theory*, these redundancies are not only "the main line of defense, but … also the main source of failures" (Perrow, 1999, p. 73). An example is of an outdoor education trip that has seven groups rotating through seven campsites over the course of seven nights. In order to manage this and promote safety, the organisation in charge requires field educators to perform 'secret' radio schedules at breakfast and dinner times each day. In an attempt to centralise power and decision-making, the organisation in essence is taking the leader away from the group at a critical supervision time (where participants are cooking on stoves). Such a common redundancy can actually inhibit safety rather than promote it.

A simpler example lies with the issue of paddle leashes on sea kayaks. A paddle leash (where the paddle is tied to the kayak) is a back-up device for when paddlers accidently let go of their paddle in rough conditions. This avoids the situation of a paddler not being able to control their kayak because of losing their paddle, although leashes ultimately create another issue where they can cause entanglement. While this redundancy method may be effective on one level, it creates another problem, which in turn also needs to be addressed, so the complexity of the system becomes more intricate. The more an organisation relies on intricate and complex interactions, the more "it multiplies the opportunities for hard to understand accidents to occur" (Skilton & Robinson, 2009, p. 43).

Sagan (2004b, p. 939) also highlights the problem of 'social shirking' in regards to maintaining and promoting safety. He maintains that when operators are used as a redundant safeguard, or there is a diffusion of responsibilities, there can be a "decrease [in] system reliability" as workers assume "that someone else will take care of the problem". This situation may or may not represent laziness by workers, but could also constitute miscommunication, or a lack of communication between workers. Ultimately, Sagan is suggesting that extra 'hands on deck', or in an outdoor education context, increased staff:student ratios, does not automatically or necessarily make the system safer as is often assumed.

3. Coupling (Centralisation/Decentralisation)

Sagan's (1993) view is that although complexity increases the "likelihood of … incidents", it is tight coupling that escalates these incidents into "a full-blown normal accident" (p. 34). "Tightly coupled systems will be characterized by hierarchical authority that creates unambiguous performance standards, low tolerance for delays, invariant sequences, rigid and little slack in supplies,

equipment or personnel" (Skilton & Robinson, 2009, p. 44). A loosely coupled system on the other hand, "allows certain parts of the system to express themselves according to their own logic or interests" (Perrow, 1999, p. 92).

Ultimately, loose coupling allows for flexibility in decision-making. Within complex systems, which outdoor education certainly has the potential to be (Williams, 2013), it is imperative that flexibility is encouraged so that educators can quickly respond to failure of any of the system components. In essence, flexibility is encouraged by a decentralisation of decision-making. Much of outdoor education has traditionally been inherently decentralised due to the autonomy of educators in the field – although there are significant efforts to centralise the control of many decisions. Standard operating procedures, communication schedules and universal programme designs are relieving many field educators of the responsibility and opportunity to ensure safety in the outdoors. Such a centralisation of power and decision-making is not conducive to improving safety (Perrow, 1999; Sagan, 1993), and will only slow the response to component and system failure.

In the example mentioned earlier, where an outdoor education programme manages seven groups in seven campsites over seven nights, there is no slack or buffer in the system. If for any safety reason a group leader needed to not move through the system (i.e. to the next campsite), then the whole system is compromised – backlogged at one end and not used at another. This issue is compounded if the organisation is adamant on creating the impression of isolated groups who should not see each other. Does the leader feel forced to push on to keep the system operating as the organisation intends or are they able to feel confident that the organisation will support their safety decision?

If the system is tightly coupled, or has no built in flexibility, then it is very difficult to make the minor adjustments that ultimately avoid the need to either make major adjustments or be responding to an accident. Of note, is Sagan's (1993, p. 40) suggestion that organisations with built in slack or flexibility in their systems can be tempted to instead use this redundancy "to move to higher and more dangerous production levels". This is an example of organisations continually needing to re-prioritise safety as their most important objective.

4. Culture of Reliability

Promoting a culture of reliability can be seen as a tool for promoting a 'centralised decentralisation'. Again, Sagan (1993) provides wise advice. He explains that organisations try to create a "uniformity of decentralised decisions" (p. 40) through "formal rules and standard operating procedures" (p. 23). Sagan found that developing such a culture can increase safety very effectively in a heavily institutionalised organisation (such as the military), but would be largely ineffective when employed in organisations that are not conducive to such military discipline (such as most varieties of outdoor education for example). In fact, Sagan suggests that an "intense organizational culture…is seen as being simply impossible to achieve in an individualistic, democratic society" (1993, p. 41).

As a move to increase safety, an institutionalisation of outdoor education, that results in one dimensionality, little flexibility, and a sense of conformity – is at odds with much of the safety measures already discussed. This contradictory outcome to safety can be attributed to the paradoxical nature of such a move to institutionalise, and highlights some of the issues with high reliability theory and the increasing trend of many OE organisations to adopt such 'militarised models' of operating into their programmes.

There has been much work discussing the gradual and seemingly inevitable institutionalisation of outdoor education from philosophical, educational and risk viewpoints (Barnes, 2003; Brookes, 2002, 2003b, 2004b; Brown & Fraser, 2009; Boyes et al., 2003; Dumble, 2003; Higgins, 2003; Humberstone, 1995, 2009; Loynes, 1998, 2002; Lynch & Moore, 2004; Rea, 2008), but only little on the impact institutionalisation has upon safety (see Humberstone, 1995, 2009; Brookes, 2004a, for examples).

Brookes (2004a) suggests safety would be decreased by the institutionalisation and standardisation of the profession, and instead encourages measures of organising outdoor education less on nationalistic terms (such as those suggested by Salmon et al., 2010) and more on regional and local boundaries.

> Unlike industrial production, office work, or even sport – activities that take place in more or less standardised, controllable environments, and that might benefit from national or international standardisation – outdoor education is inherently tied to local physical environments and embedded in local educational structures, local land use practices, and state legal frameworks. (Brookes, 2004a, p. 48)

Humberstone (1995) also questions the role of institutionalisation, or in her words, commercialisation, and its connection with safety in outdoor education. Like Perrow (1999), Humberstone (1995, p. 140) argues that safety can be compromised when it is not the highest priority of commercialised organisations, as the "pursuit of profit are paramount in private enterprise".

5. Training

Both the *high reliability* and *normal accidents theories* agree – in principle at least – that "continuous training and operational experience helps develop and maintain the information necessary for maximum safety" (Sagan, 1993, p. 41). *Normal accidents theory* however, recognises several significant difficulties with the overall effectiveness of this approach. Sagan (1993, p. 61) outlines these limitations:
1. "No one will have practiced fixing problems that have not been imagined;
2. Full training for particularly dangerous operations may not occur simply because the training itself is so dangerous", and
3. Politically sensitive training may not be conducted.

Sagan (1993) surmises that the tensions between organisational goals can incubate accidents and that training can either contribute to this process, or

conversely, strengthen safety. Among Sagan's recommendations, he advises that the US Strategic Command (the organisation responsible for managing nuclear weapons during the cold war) no longer perceive themselves as warriors but rather "guardians of a highly dangerous technology" (p. 272), and that training can aid this cultural shift over the long term with "prolonged education and gradual personnel turnover" (p. 272). Perhaps outdoor education can heed this counsel – Brown & Fraser (2009) also call for a rethink on terms such as *instructor*, with its preoccupations of risk, to that of *educator*, which is "more complex and nuanced" (p. 72).

Not only can sensitive training be avoided on politicised grounds, but the *type* of training can be politicised also. Brookes (1998) questions the appropriateness and usefulness of extended and technical first aid training for outdoor education practitioners and suggests that it can distract "the outdoor education profession from careful thought about the optimal approaches to keeping basic first aid skills honed" (1998, p. 9). Both Brookes and Sagan (1993, p. 272) suggest that it would be "useful to have more training and exercises devoted solely to preventing accidents", which supports the age-old proverb that 'prevention is better than the cure'.

6. Learning from Accidents

High reliability theory puts great faith in 'trial by error' learning – that is, ensuring when an accident or near miss does occur, that organisations and people learn from them and correct their systems and behaviour. Salmon et al. (2010, p. 938) call for a range of implementations in outdoor education so that this learning may occur.

> The development of standardised accident and incident reporting systems, the development of a led outdoor activity specific accident and incident analysis methodology, the development of a universal database of outdoor activity accidents and incidents and the development of taxonomies of system failure and human error.

However, Sagan (1993, pp. 207–210) outlines some significant constraints to 'trial by error' learning that make it "very difficult, if not impossible" (p. 41) for effective learning to occur. These four constraints are just as relevant to outdoor education as to the nuclear weapons industry that he was studying. These concerns are:

1. 'the real world often provides highly ambiguous feedback' – biased perceptions, entrenched and preconceptions;
2. there are politicised reviews – protection of interests, biased, likely to blame individuals over the organisation or system;
3. misreporting of incidents – cover-ups, underreporting' and
4. secrecy – limited sharing of information.

These constraints are fundamentally based in organisational objectives that do not hold safety as the first priority. Instead they stem from issues of politics, reputation (individual and organisational), power, profit, blame and competition.

Perrow (1999, p. 371) suggests that organisations and individual employees can be tempted to run risky systems and operate unsafely as "they learn that disasters are rare" and "most of the time cutting corners works".

In conjunction with cultivating a healthy culture of safety in organisations, Sagan (1993, pp. 268–270, original emphasis) also suggests how to encourage safety learning in organisations with. He asks for:

1. a more vigorous and more *independent* review of … operations and safety;
2. extensive *vicarious* learning' and
3. more detailed studies of past … safety problems.

Essentially, safety learning should be 'proactive' before it is 'reactive'. "Where accidents are infrequent but the potential damage to people and the environment is considerable, the possibility of reflecting on normal daily work to derive safe practices is clearly preferred" (Norros & Nuutinen, 2009, p. 46).

REAL SAFETY AND OUTDOOR EDUCATION?

Outdoor education has obviously far less potential than the nuclear weapons industry of an accident resulting in excessive catastrophic results – yet the consequences of any error are still substantial and can still result in numerous casualties. The history of Australian fatality records in outdoor education (Brookes, 2003a) suggests a collection of tragic results for participants, teachers/adults, rescuers, employers and the families/friends of all concerned. Most of these accidents were, Brookes argues, preventable. It is imperative that these preventable accidents be avoided if outdoor education is to have any meaningful and justifiable role in education.

Perrow (1999, p. 4) suggests, "risk will never be eliminated … At the very least, however, we might stop blaming the wrong people and the wrong factors, and stop trying to fix the system in ways that only make them riskier". Perrow (1999, p. 379) instead argues for a culture of questioning that centres around "technique and management", 'humanizing work', and about "finding ways to make the drive for efficiency compatible with safety and culture". He asks for questions to be raised about production pressures, privatisation and industry deregulation and how they can compromise safety by evading 'scrutiny and accountability'. Perrow (1999, p. 371–372) asks us to look at various system characteristics that can contribute to accidents from a normal accident approach with outdoor education examples.

Above all, it comes down to how outdoor education values both Human life and the quality of this life. Is Human life more valuable than an educational rationale, an increased profit or the reputation of organisations? The answers should be obvious and so, with some transfer of learning, outdoor education may be able to draw much from the work of Perrow (1999) and Sagan (1993) to improve safety and reduce serious incidents in the outdoors.

The key issue I have tried to address in this chapter is the 'turning of the tide' in organisational objectives. Each time a serious incident occurs in OE, students, teachers, schools, and the general public can come to accept the bush as a dangerous and risky place. This is counter-productive to many of the prevalent and

established aims of outdoor education, which, as Brookes (2007, p. 9) suggests, "should not be conceived around notions of necessary risks, but around learning to feel and be safe in the bush". Perhaps, as alternative notions of risks proliferate within outdoor education curriculum (see Brown & Fraser, 2009), then similar developments could progress into managing safety. With less of a preoccupation with risk, our practices may indeed become safer. It is also essential – and ethical – that outdoor education work towards safety from the more 'comfortable' position of reviewing daily work, as opposed to relying more heavily on a 'trial by error' approach where incidents have already occurred.

Normal accident theory is useful to outdoor education because it does indeed 'frame, link, [and] provoke' (Weick, 2004, p. 27) our understanding of safety and organisations. Perhaps *normal accident theory's* significant gift to outdoor education is that it encourages us to look at culture and power as fundamental components of safety implementation and highlight that deeper thought and analysis needs to come with any action on safety. Sagan (1993) highlights the issues of reputation, power, protection of interests, and ambiguous perceptions, all form constraints to enhancing safety in organisations. Both Sagan (1993) and Perrow (1999) ask us to practice a degree of pessimism about our safety practices. They ask us to question not only the way we currently operate, but they also provoke an analysis of suggested safety measures that may in fact be detrimental to safety instead of enhancing it. Developing alongside the institutionalisation of outdoor education curriculum has been the institutionalisation of safety within outdoor education. *Normal accident theory* along with the proliferation of 'de-institutionalised' outdoor education theory can help us re-frame our perceptions of safety so that our practices are indeed 'safer'.

NOTES

[i] Many in the outdoor education field confusingly and erroneously attribute high reliability theory to Sagan – for examples see Leemon (2005) and Capps (2007).

[ii] See Sagan (1994), Perrow (1994), La Porte (1994), and La Porte and Rochlin (1994) for an excellent if not heated conversation.

[iii] The Lime Bay incident, where four teenagers drowned, instigated regulation of adventure activities in the UK. The activity provider and its owner were convicted of corporate manslaughter because of the tragedy.

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Lucas Bester
Outdoor and Environmental Education
La Trobe University
Australia

PETER MARTIN

16. LOCAL ENVIRONMENTAL KNOWLEDGE OF SCHOOL STUDENTS

City living involves an extraordinary disengagement of humans from the natural environment that is likely to be detrimental to health and wellbeing. Parks may be one of the only means of accessing nature for the majority of people in urban areas, yet most people are unaware of their full range of potential health benefits. Humans have forgotten how much the natural world means to them. (Maller et al., 2008, p. 1)

INTRODUCTION

Place, it is acknowledged by many, is a social construction, imbued with meaning and located in both time and space by the people that interact with that space (Vanclay, 2008, p. 17). Our understanding of this and how people create a meaningful world and understand their place has been a central theme in geography typified by the foundational work of Yi-Fu Tuan (1974, 1977) and Edward Relph (1976). There are alternatives of course, in that perhaps a place has meaning to itself, some sort of "genius loci, a local spirit of place … already residing there" (Wattchow & Brown, 2011, p. 59). For western culture, however, the dominant discourse is one of place nurtured by the human experience of space, often coining George Seddon's phrase, 'a sense of place' (Seddon, 1972).

It is this human experience of place, adding layers of story and meaning, that some regard as most potent in shaping life experiences that can lead towards environmental caring and community minded activism (Chawla & Cushing, 2007; Powers, 2004). Working from this belief that a land and community is cared for most by those who live there, advocates of place based education argue that curricula should evolve in response to the school community's natural, historical, cultural and economic environment, in much the same way as species can evolve over time with adaptations suited specific places (see for example Smith, 2007). Wattchow and Brown's (2011) work on a pedagogy of place is an Australasian interpretation of this. They observe that "the effects of global phenomena like climate change, shifting populations, economic disruptions and so on, are always experienced locally" (p. xv) and so education that seeks to confront these issues should have as a centralising theme the places where people live.

What underscores the interest in place based education is the realisation that, at least in western countries, urban life is increasingly isolated from the natural, topographic and cultural realities of landscape and place. As Relph (1976) foreshadowed over 30 years ago, contemporary urban life has become increasingly

placeless and largely irrelevant to the spaces upon which people play out their everyday existence. Could placeless-ness be a pathology of epidemic proportion, one unwittingly supported by a potential ignorance of the local in schooling?

Place based education "is grounded in the resources, issues and values of the local community and focuses on using the local community as an integrating context for learning at all levels" (Powers, 2004, p. 17). One of its goals therefore is to develop students' knowledge of the natural environment, resources and space that surrounds them every day. Following an investigatory path first described by Orr (1992) in his call for ecological literacy, this paper describes what 171 primary and secondary school children know about the forest and landscape that surrounds their city, a landscape fundamentally imprinted with cultural and economic significance as well as its own evolutionally history. The study also explored how these children have come to learn what they know about their place and how they think such learning could be enhanced. The central assumption to this work is that schooling ought teach students how to live well in place and that knowledge of place is valued. It assumes that Orr's call for an ecologically literate society is a worthy endeavour and that the opportunity to learn about and explore the local will indeed help promote love and care for place. Embedded in this meaning of ecological literacy are the differing notions of environmental literacy explored by Stables (1998).

THE PLACE OF THIS STUDY

The place of this study is important. In this brief introduction I will describe some of both the cultural and natural history of the region in which this study was located. This brief description seeks to speak about the place and give it prominence in the questions around which this study was based. Often in environmental or outdoor education research, place is silenced or at best a playing field upon which human actions unfold. Acknowledging the centrality of place in this study is an attempt to contrast these practices.

Bendigo is a regional centre of over 100,000 residents in the heart of Victoria, Australia. The city was founded on gold when miners converged from around the globe in 1851, dis-placing (literally) the local Jaara Jaara people, forever reshaping the relationship between human inhabitants and the local land. These early miners were mainly European. They brought with them techniques and practices acquired from other alluvial gold fields, but also cultural values and ideas founded in an alternate hemisphere, climate and ecology (Bolton, 1992). Such values remain imprinted on both city and psyche today, from notions of aesthetic appreciation that give prominence to English rose gardens or wearing business suit, collar and tie in midsummer 35+ degree heat.

European settlement and the rush for early gold had a massive and immediate impact on vegetation and landscape. Most of the extensive eucalypt forests in the Bendigo region were felled to sustain the mining effort. Today only one major mine remains and works deep underground below a thriving regional commercial hub.

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Ironically perhaps, the forests that surrounded the city on impoverished clay soils and sandstone ridges have regrown from coppiced trunks to now be regarded as ecologically significant remnants. The dominant tree species is Ironbark (*Eucalyptus sideroxylon*) due to its tough, black, furrowed outer. It grows in mixed stands with varieties of Box eucalypts (*E. melliodora* and *E. microcarpa*) that give rise to the Box-Ironbark forests of central Victoria that today cover only 13% of the region they colonised in the mid 1800s (VNPA, 2002). To conserve and enhance what remains of these forests, the Greater Bendigo National Park was proclaimed in October 2002. That the forests they decimated are now national park would no doubt surprise the early miners, but is a reminder of the slow yet inevitable creep of 'environmental amnesia' (Kahn, 2002, p. 93), whereby yesterday's impacts evolve to today's icons against all but absent less trammelled alternatives.

The growing residential sectors of the city are now interwoven with the new national park. Several years on from declaration of the park, Bendigo now badges itself as a City in a Forest. The once forgotten forest is now celebrated (VNPA, 2002). The national park has extensive borders with residential land and countless access points, perhaps more than any national park in Australia, and this raises unique challenges for its management. The park is for example, the only national park in the country where it is permissible to take dogs on leash; a recognition of its proximity to suburbia and a nod to its anthropocentric past. However, the proximity of the bush to the town should also have advantages in terms of environmental education and relationships with place. The positive links between early childhood experiences of nature, subsequent environmental behaviours and sustainability are well documented. Chalwa and Cushing (2007) in reviewing both their own environmental life history work and extensive environmental life history works of others conclude that "… half to more than 80 percent of the respondents identify childhood experiences of nature as a significant experience, including free play, hiking, camping, fishing and berry picking" (p. 440). They conclude that:

> These findings suggest that nature activities in childhood and youth, as well as examples of parents, teachers and other role models who show an interest in nature are key 'entry-level variables' that predispose people to take an interest in nature themselves and later work for its protection. (Chalwa & Cushing, 2007, p. 440)

For a city in a forest, where the national park is at worst a short bus ride and at best a short walk away, questions concerning students' experiences of the local bush promoted by compulsory schooling seemed worth exploring.

THE RESEARCH QUESTIONS

The research questions in this study were developed in cooperation with the local National Parks office, and are concerned with the ecological literacy of school students. What do local school students know about the bushland that comprised the national park surrounding where they live and go to school? What level of

knowledge do students have of local landscapes, the resources that sustain them, (the source of water and electricity), as well as what foods are sourced locally? What role do students think schooling has played in helping them understand these aspects, and which natural environments do they feel closest to?

METHOD AND SAMPLE

Research participants were students from a local primary and secondary school. The schools chosen were ones of convenience as access was enabled by the author being part of the school community. The secondary school lay less than a kilometre from the National Park. The primary school was in the city centre but still only 5 km from the edge of the park. Neither of these schools had specific environmental education or outdoor education programs at the time of data collection. One of the challenges for environmental education is that because ideas of sustainability are often considered pervasive or part of students' general capabilities (MCEETYA, 2008), in a curricula framed on subject disciplines environmental learning can be marginalized and occur only incidentally as part of other subject areas (Huckle, 1994).

Student responses were collected via a 14 item questionnaire. This instrument was developed and trialed with the assistance of teachers from the schools involved in the study and some students. Content of the questionnaire was also influenced by a related study in NSW schools by (Loughland, Reid, Walker, & Petocz, 2003). After students had completed the questionnaire, the author and a research assistant discussed the questionnaire in a classroom with the students and raised further issues related to the way in which students had learned what they knew about the local bushland – the discussions were audio-taped and later transcribed.

Data were collected from 171 school students (Primary = 95, Secondary = 76). Table 16.1 summarizes the sample. The sample was necessarily one of convenience as sessions for data collection were conducted with whole class groups so as to minimally disrupt students' normal schooling and help support a naturalistic research paradigm (Lincoln & Guba, 1985). The data collected in the primary school setting came from mixed year level classes as was the norm in the school. The composite Year 2, 3 and composite Year 3, 4 therefore skewing numbers towards an over representation of Year 3 students, although as results later indicated, this impacted minimally.

During each data collection episode the researchers visited the classroom, introduced the topic and helped ensure students understood the nature of the question. For younger students, the questions were interpreted and introduced to the class one at a time. In all sessions the researchers brought samples of bark, flowers, leaves and shrubs from the surrounding bushland into the classroom. This was primarily to make the sessions more interesting and gain student attention, but also served to help discussions post questionnaire. It may also have helped jog students' memories or with recognition. That the data collection also served as an educative component was an important goal for the researchers and part of our ethical justification for our presence in classrooms.

Table 16.1. Summary of research sample.

Primary Level	Number of Students	Secondary Level	Number of Students
Prep	10	Year 7	21
Year 1	10	Year 8	18
Year 2	10	Year 9	17
Year 3	29	Year 10	20
Year 4	10		
Year 5	16		
Year 6	10		
Totals	95		76

The 14 item questionnaire contained four questions concerning flora and fauna, three questions dealing with topography, three questions on local resources, one on how knowledge had been gained, and three questions on relatedness to nature. On the advice of teachers, the younger students did not complete all of the items due to the cognitive complexity of the tasks. However, the questionnaire included drawings, and graphic items and younger classes spent time colouring some of these drawings. Responses required written responses, drawings and labelling. For younger students the researchers and teachers helped interpret or transcribe responses from students where spelling or the meaning of drawings was unclear. We were guided by classroom teachers in this regard.

RESULTS AND DISCUSSION

Flora and Fauna

The first four items in the questionnaire were designed to gauge students' knowledge of the local flora and fauna by asking them to write common names of three birds, two eucalypt (gum) trees, three native plants and three native animals of the local bush. Recall is cognitively less complex but was used here to also gain insight into the lived experience of students as well as their base knowledge.

In presenting the data I have chosen to use percentages. While percentages can be misleading, in that they can obscure the actual number of respondents involved, they do permit comparison of different sized groups. The data for students' knowledge of flora and fauna are listed in Table 16.2.

It is clear from Table 16.2 that birds are the most well-known of native flora and fauna, and that the knowledge of birds is something that progressively improves as students get older. The most common birds cited by students were large conspicuous birds which frequent urban spaces as well as bushland. These included, in order of popularity in responses; magpies, kookaburras, cockatoos and crows. These four birds accounted for 283 (60 percent) of the 468 responses. There were only 13 of the 171 students who mentioned a small forest bird in their

Table 16.2. Percentage of correct responses for knowledge of local flora and fauna.

Year Level	% naming 3 birds	% naming 2 'gum' trees	% naming 3 native plants	% naming 3 native animals
Prep (n=10)	0	0	0	10
Year 1 (n=10)	40	0	0	30
Year 2 (n=10)	20	0	0	50
Year 3 (n=29)	55	7	3	38
Year 4 (n=10)	60	10	0	50
Year 5 (n=16)	75	31	0	63
Year 6 (n=10)	80	30	10	80
Year 7 (n=21)	85	33	5	62
Year 8 (n=18)	94	22	0	56
Year 9 (n=17)	100	12	6	58
Year 10 (n=20)	85	35	5	60
Mean for primary age students	51%	12%	2%	45%
Mean for secondary age students	91%	26%	3%	59%

response. It's reasonable to surmise these results indicate students are responding on their experience of birdlife from everyday living in suburban settings, more so than knowledge about birds that may actually frequent forested areas. Bendigo is a treed cityscape. The city's parks and gardens are well cared for, numerous and abound with life. So too are the suburbs where the traditional, although diminishing, quarter acre building block still allows plenty of space for bird frequenting trees and gardens.

Students' knowledge of animals is the next most well-known aspect of the local bushland. Kangaroos are iconic Australian mammals, and 110 of the 171 students listed them as a native animal you could find in local forests. Perhaps what is surprising here is that 61 students did not include them in their lists. Kangaroos and wallabies are commonly seen in the bushland around the city and are well known, perhaps the most well known, of Australian animals. Koalas were identified as being native to the local forest by 58 (34 percent) students and wombats by 43 (25 percent), although both species inhabit only wetter forests environments well south of Bendigo and are not present in local bushlands. Clearly students were not basing their responses on personal experience of local bushland. Foxes or rabbits were listed as local native animals by 36 (21 percent) students, either misunderstanding or not knowing the meaning of 'native' as both were introduced to Australia from Britain in the mid 1800s and triggered ongoing ecological havoc (Bolton, 1992).

It seems reasonable to conclude that students' knowledge of birds and animals is not gained through personal experience of the bushland, but more an educated guess based on their general knowledge of wildlife. Teachers also acknowledged their students had not deliberately studied aspects of local animal or bird life as part of any curricula at either the Primary of Secondary schools.

In general, students' knowledge of plant life is very poor and perhaps this is to be expected if their lived experience of bushland is low. However, despite the prominent tree species in the local bush and in much of the city's streetscape being the easily identifiable Ironbark, with its characteristic black exterior, only 14 students (8 percent) listed this as a local tree. This despite the fact that the Box-Ironbark forest is a label commonly use in the local news and tourism media. The eucalypt most commonly listed by students was the River Redgum (*Eucalyptus camaldulensis*), nominated by 34 percent of the students. Redgum do grow in the local area, predominantly along creek lines and sandy soils to the south of the city, but in comparison to Ironbark and varieties of Box are far less common.

To be expected, as students got older they generally knew more about the local bush. However, this was not the case with knowledge of native plants. Knowledge of native plants was universally low. Only five students in the sample of 171 could name three local native plants, including a student from Year 3 and one from Year 6. These students cited personal experience of the bush with family or friends as the source of this knowledge. The most commonly named plant was 'wattle' nominated by 27 percent of the sample. Wattles (*Acacia sp.*) are the largest plant genus in Australia with forms from prostrate groundcover to large trees existing locally (Costermans, 1999). Wattles have distinctive yellow flowerings and one variety or another are flowering virtually all year round. With such presence it's perhaps not surprising they were the most well known, albeit by less than a third of the cohort and only with a generic label.

Local Landscape

Which way is north? What is the lay of the land? These are two issues which bioregionalists have long thought important in helping people understand the land upon which they live (Sale, 1991). We assessed student's knowledge of direction by asking where a prominent feature was sited relative to the school and classroom where students were sitting; the question had four possible responses corresponding to cardinal points. Less than one third of any student cohort (32 percent of Primary and 29 percent of Secondary students) could correctly identify the direction of the key feature. In discussions following the survey this result was supported qualitatively in that in each class there was uncertainty about issues such as the position of the sun in the sky and the direction of sunset or sunrise. Surprisingly, age did not seem to be a factor in this understanding. Each of the cardinal points were well represented in students' responses – it appears that knowing directions is of little importance or relevance for students' everyday lives. If casual observation of most new houses orientated towards car access rather than passive solar principles is any indication, perhaps it is knowledge that remains obscure in adulthood as well.

Bendigo was founded by Europeans on alluvial gold discovered first in the creeks. The underlying geology of the area is such that the major valleys run south north. The city centre is built around the Bendigo creek, although it is now straightened and walled with stone and resembles a large drain more so than a

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natural creek. The creek does have a constant water flow, including in dry summer months, courtesy of the groundwater outflow from disused underground mine vents. Both of the schools involved with this study are situated under a kilometre from the Bendigo creek. Students were asked to draw an arrow to show water flow direction on a diagram which featured two key landmarks, the local Cathedral and City Lake, sited beside and on the creek south and north of the city centre respectively. With a 50/50 chance, 69 percent of Primary and 76 percent of Secondary students were correct in their identification of the water flow. Interestingly while secondary students were more likely to be correct, there was not a direct relationship between year level and responses, Year 4 students were the only year level to all get this correct – a factor later attributed by their teacher to a recent field trip to the creek. It became increasingly clear as we summarised results, that neither of these schools conducted excursions to the local national park nor included natural science material linked to the experience of local natural heritage. As the case of water flow demonstrates, learning such aspects is not difficult but does benefit from direct personal experience.

Local Resources

While it may be possible to argue that knowledge of local flora and fauna is not a central aspect of education, understanding the origins of the resources that sustain us should be. However, contemporary urban living does distance residents from their sources of food, water and power. We asked students a series of questions directed towards understanding their knowledge of resources.

Victoria's electricity is generated predominantly from burning coal, with peak demand loads supplemented from other sources. The dominance of coal is well reported in media and contentious due to its role in carbon pollution. Students were given five options from which to choose how "most of the electricity they use at home and school is generated". The question was asked of students from Year 2 to 10, but not all responded (Table 16.3).

A quarter of students from Year 2 to 10 correctly identified coal as the main source of electricity generation, only slightly higher than a random choice probability. The Year 5 students were most well informed on this issue. The Year 5 teacher reported that they had "done a unit on electricity" earlier in the year, so was pleased most had recalled some of this in responses. Hydro electricity was the most popular choice as a source of generated power – an unusual option to select in a landscape experiencing extreme drought at the time of data collection.

Water availability has been a topical subject throughout the last decade with south eastern Australia experiencing a crippling drought. Until 2010 water restrictions ban fixed sprinklers, washing of cars other than by bucket and restricted watering of gardens to alternate days for set times, by hand only. The survey asked students to shade a segment of a circle drawn on a map of Victoria,

Table 16.3. Years 2 to 10, number of student responses to how electricity is generated.

Year Level	Solar Power	Burning Coal	Hydro-electricity	Wind Generators	Burning Gas
Year 2	1	1		4	4
Year 3	9		9	4	7
Year 4	5		2	2	1
Year 5	1	12	3		
Year 6	2	5	2	1	
Year 7	3	4	8	1	4
Year 8	1	4	8		3
Year 9		8	4		5
Year 10	5	4	6		4
Totals n=144	27 (19%)	38 (26%)	42 (29%)	12 (8%)	25 (17%)

centred on their city. The circle had four segments covering sectors around the city. With a 25 percent probability of guessing correctly, 20 percent of Primary and 33 percent of Secondary students correctly identified the southern segment as the one enclosing the city's catchment area. Over half (54 percent) of students thought the source of Bendigo's water was to the north, *opposite* to prevailing wet weather winds, *away* from the ranges and *downstream* of natural creek flows! This result further demonstrates the lack of ecological literacy among the sample of students.

The survey asked students to identify some of the foods produced in the Bendigo region. Younger students could draw their responses. The average number of foods correctly identified was 2.3 per student. However, students on average also included another 1.7 food items that were produced elsewhere. Of the 151 students who responded, the most commonly included correct items were: apples (65 percent), beef, lamb or pork (51 percent) and grapes/wine (38 percent). Tropical fruits (banana, mango) don't grow at 35 degrees south, but 43 (28 percent) students thought they did. The disconnect in students' knowledge of local food production underscores how conceptually far even a small regional centre is from an agriculture or primary production base, as well as how ineffective the sample school's curricula are in addressing this knowledge base.

The student's knowledge of recycling was the most well-developed of all the resource areas. Seventy-one percent of all students could correctly list three or more items that could be recycled. Knowledge of recycling improved with age, although even students in prep and Year 1 were able to correctly describe at least one or two recyclable items.

Relationships of Importance

To determine what students thought about the local bushland and nonhuman aspects in general, a relational circles exercise was used. This has been used previous with tertiary age students and found to be a useful tool in enabling

students to think about their views with respect to nonhuman nature (Martin, 2002). The relational circles exercise was an attempt to illustrate students' cultural environmental literacy (Stables, 1998) in that it gives an indication of the significance of environmental aspects to students.

Students were presented with a list of words and a diagram of concentric circles, in the centre of which was the word 'me'. Students were asked to copy from the list onto the diagram, placing things very important to them in the centre and things less important further out. The list consisted of three land types (Bendigo bush, the beach, mountains), people (best friend, family, other people) animals (pet, bush animals), bush plants and garden plants. Students could also add items if they wished.

The majority of students (89 percent) had friends and family dominating the close circle. This is to be expected and helped demonstrate that the students understood the intent of the question and processes needed to respond. 30 percent of the responses also included animals in the inner circle.

The nonhuman element which was considered to be most important was pets. It was the closest placed natural element in 78 percent of the responses. Again this is consistent with other research (Martin, 2002) and reflects the importance of pet animals as the primary nonhuman being with whom we develop special relationships.

The beach was considered by most students to be more important (placed closer to me) than the other ecosystems. Closeness to the beach is clearly not geographic as Bendigo sits over 140km from the coast, but rather a function of other associations students have experienced. The natural settings symbolic of holidays and special times seem to be the places students most commonly cite as having special meaning for them (Martin, 2002), more so than the environments of their backyard or local forest reserves. This was reinforced in later discussion when students readily recounted fun filled family holidays away from home as indicative of special places for them.

Being in the Bush

Given the general lack of knowledge and awareness of resources the results indicating who had spent time in the local bush were interesting (Figure 16.1). In the class forums we asked who had been into the local bushland in the previous two weeks. This question came at the end of the session, so there could well have been a normative influence at work here with self reporting in favour of time spent outdoors given the topic of discussion and our presence as visitors in the classroom.
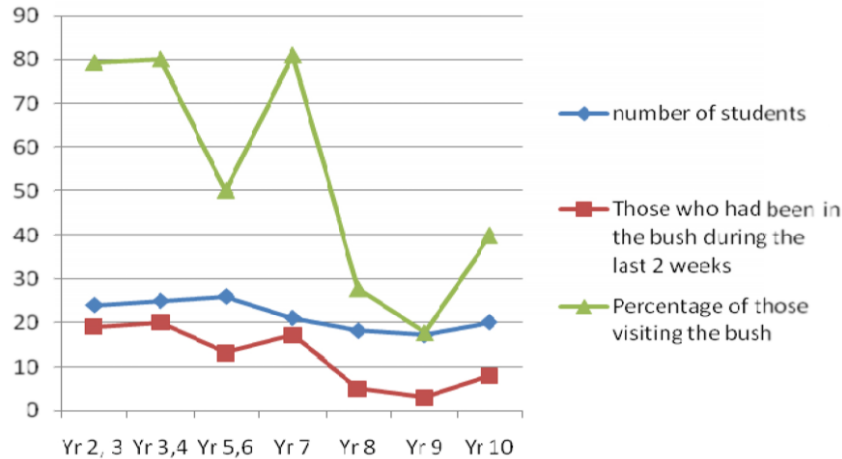
Figure 16.1. Self reported percentage of students who had been in the bush during the last two weeks.

Of interest is the decline in self reported bushland visits with increasing age. Unfortunately, in this study we did not attempt to quantify the length of time students spent in the bush. Younger students reported fairly high visitation in the last two weeks but we don't know how long this was for. Many reported that their time in the bush was simply a matter of cutting across to get somewhere else and this was particularly the case with bike riding activities and older students.

The students also discussed how they had learned knowledge of the bush. These responses were gained during the group discussions so gathering a quantitative sense was not possible. However, all of the student discussion groups up to Year 8 specifically raised being taken into the bush by fathers or grandparents – there was no mention of a mother taking kids to the bush and no mention of parental involvement for those in the Year 9 or 10 groups. The sorts of activities that took students into or through the forest included riding BMX or mountain bikes, walking the pet dog, exploring, horse riding, motorbike riding, making cubbies, camping, looking for gold, picnicking, hunting and passive activities such as reading a book or sketching. The most popular activity was bike riding of some sort and walking the dog. It is possible to suggest that the drop in visitation with more senior years is related to the lack of an appropriately motivated mentor figure. It does appear that older students may well exercise their independence by not visiting the bush simply because it lacks interest to them. However, the type of visitation also changes with older students. Seven of the 20 Year 10 students reported their hobbies as riding motor bikes (35 percent) and four went shooting or hunting in the local bushland, both activities illegal in the national park, especially for 15 year olds, and not mentioned by younger students; no bubble wrap visible here (Malone, 2007). It would be an interesting line of future research to compare

the recreational opportunities and preferences of these kids from a city in a forest to those urban dwellers of Malone's writing. At least for some of the children in this study, being free to ride and roam the local bush is an available, although perhaps not frequently elected option.

CONCLUSION

The compelling conclusion is that students seem to know little about the local bushland or the natural resources that sustain them as indicated by the survey results. However, the visitation graph above (Figure 16.1) does show students go into the bush albeit for what seems to be a mix of recreation and convenience. In discussions following the questionnaire it became clear that students had drawn on a variety of sources in responding to survey questions. While school was noted as a source of knowledge by all groups it was not dominant, nor the first reported source. Rather, parents or Dad (but not Mum), other family and TV were universally expressed as a common source of knowledge about the bush. One student seemed to sum this up by saying 'we don't do that stuff at school'. When asked about the best way to learn about the local environment students were unanimous that 'going there' was the best option, although again TV featured well. The Year 10s obviously have the most experience of schooling. In reflecting back on their school years thus far they reported that they had talked about natural bushland in classes to do with Geography, Science and cadets (survival), although none of this was reported to be about the local Bendigo bushland except on a year level camp in Year 2.

It is well researched that developing environmental knowledge does not itself lead to pro-environmental behaviour. Rather, knowledge is part of a complex interplay between values, attitudes and emotional involvement that Kollmuss and Agyeman (2002) have called 'pro-environmental consciousness' (p. 256). This is supported by notions that more critical environmental action is built upon a functional environmental literacy (Stables, 1998). Although it is relatively easy to construct a straw person view of education as irrelevant, Sanger (1997), synthesising the works of others, lists the complaints against conventional schooling as failing to develop a sense of place by: communicating a view of the individual as an autonomous being; using language and metaphors which reinforce the worldview of the independent individual separate from nature; and, deference to impersonal general abstract knowledge via the use of textbooks as a primary source of learning, a process which subordinates oral communication and distances knowledge from the knower (p. 4). We found strong evidence in this small study that such claims of irrelevance are at least true when directed towards local ecological literacy in the schools studied.

In this study we did not seek to understand student's pro-environmental behaviours. Rather, we investigated basic ecological literacy and how students came to know the national park that lay close to their place of schooling and how they generally understood their connection to natural features and resources. Relationships with places are personal, emotional connections based on lived

experience. That the students typically saw the beach as more important than local forests was because of the connection to holidays and the positive associations of that. This raises questions about how the value of local bushland could be reclaimed by the students and ultimately the broader community. It is clear from this study that the schools concerned did not value local ecological knowledge or connection, although the results did surprise the teachers involved and as a consequence a discussion about what to do about this commenced.

From what we have learned here, for the students from these two schools there was very little "place conscious" education (Gruenewald, 2003). David Soebel has previously argued that education burdens young children with content and conceptual knowledge from contexts external to their lived experience (Soebel, 2004). It would seem from the results of this study that in terms of environmental learning we should not be surprised if the students in this study show little concern and care for the local environment simply because they know so little about it and have next to no personal emotional connection to the local bush.

The ecological degradation of the Australian landscape by European and other settlers in the last 200 plus years has been well chronicled. This work highlights the often unintended yet false assumptions and ecological consequences of a succession of practices wrought by mostly well intentioned settlers ignorant of the land they colonised (Bolton, 1992). What those first settlers lacked was place awareness, and the researchers here were left wondering if contemporary education has helped in shifting us from this view. A more place-based pedagogy in the natural sciences for example, would help alleviate the unhelpful universalist notion that place is everywhere, but no-where (Semken & Freeman, 2008).

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Peter Martin
Federation University
Australia

PETER HOLMES

17. VOCATIONAL TRAINING AND HIGHER EDUCATION

Using Outdoor Education as a Lens

The only real voyage of discovery consists not in seeking new landscapes but in having new eyes. (Marcel Proust, 1871–1922)

INTRODUCTION

Outdoor education is a broad field informed by several different learning theories and psychological perspectives. The psychological perspectives include, but are not limited to, behaviourism, humanism and cognitive development. Among the learning theories that influence the outdoor education field are constructivism, which includes Vygotsky's work, Dewey's experiential learning theories, and Bandura's social cognitive theory (Merriam & Caffarella, 2001; Propst & Koesler, 1998). Outdoor education encompasses a broad spectrum of practice and definitions are at times contested according to Barnes (2006). However, many practitioners (Barnes, 2006; Higgins, 2009; Priest, 1999) agree that outdoor education is a process that uses experiential education and the learning takes place primarily in a natural environment. In much outdoor education practice, emphasis is placed on relationships between the self, others and the natural world (Priest, 1999; Ritman, 1993). Outdoor education students may typically participate in an activity that is non-mechanised and self-propelled. In Australia, activities often include bushwalking, climbing, canoeing, cycling, high ropes, rafting and skiing (Lovell, 2013). Outdoor education programmes such as The Outdoor Experience (Holmes, 1998) and Outward Bound (Dickson & Herbert, 2005) frequently involve travelling through and living in natural environments from periods of hours to several weeks.

Outdoor educators require complex skills and knowledge in order to work effectively in the field of outdoor education (Martin, 1998; Priest & Gass, 2005). Typically a person is required to demonstrate ability in several outdoor or journey based travel skills: the capability to manage a group of students out in 'the bush' (Australian slang for being in wild or remote places), crags or rivers; the capacity to teach these same skills; and be able to educate students across multiple disciplines. For example, much outdoor education curriculum focuses on psychosocial elements of human/nature relationships, as well as inter and intra-personal relationships (see for example Martin, 1996, 1999, 2004). Sometimes these foci are the backdrop to naturalist study, or perhaps technical skill

development in a particular pursuit (see for example Stewart, 2008; Thomas, 2005). Allison and Pomeroy (2000) and Higgins (2009) have argued that the complexity of outdoor education teaching requires staff with expertise in outdoor education epistemology, critical pedagogy, and significant 'know how' or vocational orientation.

According to Grubb and Lazerson (2005), the workplace expects graduates to be work ready, implying that tertiary education should be vocational in comparison to higher education curricula with its traditionally more liberal approaches to learning. This nexus or meeting point deserves critical assessment. Breunig (2005) has highlighted the intersection of experiential education and critical pedagogy, calling for a more critically informed praxis through which to reflect on our educative practises. It is from this position that I propose outdoor education as an ideal lens through which to examine the intersection of vocational training and higher education, and offer comment on whether outdoor education learning for higher education students is relevant and authoritative. Student perspectives of an embedded vocational training course within an outdoor education higher education subject can offer insights into this meeting point of educational approaches. In the following case study, I sought to identify, record and analyse students' reflective thinking about their experiences in the outdoor learning context. Three themes emerged as students reported the following:

– They found merit in a collaborative approach to the delivery of both vocational and higher education curriculum;
– They felt better prepared to enter the workplace; and
– The separation of vocational training and higher education is an arbitrary construct.

The theoretical background for the investigation that follows provides a context for the study.

VOCATIONAL KNOWLEDGE AND INTELLECTUAL KNOWLEDGE

Western civilisation has elevated certain types of knowledge over the course of its history. Hager (1998) wrote, "from the Greeks we have inherited the notion that knowledge is represented by universal necessary truth, i.e. truth that is purged of emotional or practical considerations" (p. 522). Pardy and Seddon (2011) maintained that the pursuit of objective truth has been elevated against, and separated from, practice and emotion. As a result, they claim, western culture has afforded higher value to mental/mind work and in turn given less value to knowledge that is embedded in a person's practice of their craft, creativity, unique problem solving attributes and the hands on skill to perform a task.

In his seminal work, Ryle (1949) described two ways of thinking about vocational and intellectual knowledge. He articulated that people typically have two ways of knowing about something as they participate and interact in the work force: 'knowing that' and 'knowing how'. Stolz (2013), has described 'knowing that' as being associated with mental and intellectual learning, and 'knowing how' as the practical knowledge of how to do something, where "performance is just a

matter of conditioning or habit" (p. 2). However, Winch (2009) argued that Ryle's construct is an artificial separation and that there is an intelligence embodied in the practice of doing the job and hence within the 'knowing how'. He wrote that in the performance of every physical skill there is an "underlying mental intentional action" (p. 90). Kemmis (2005) argued that a way of thinking comes through the practice of one's craft, which he refers to as a 'knowing practice'. That when a craftsperson (a skilled practitioner) is undertaking their work they are undertaking more then just doing, the habitual or routine work, 'the knowing how' of getting the job done. Pardy and Seddon (2011) concur with Kemmis (2005) as they discuss a similar concept to 'knowing practice'. They also argue that the mastery or performance of a skill as performed by a craftsperson has an intelligence embedded within it, which they refer to as 'an intelligence of practice'. Adding to this Stolz (2013) highlighted the interaction between 'knowing that' and 'knowing how' and the intelligence of practice visible as we observe a skilled practitioner. He maintained that our judgement of whether someone is masterful at a particular skill will depend on how smooth and effortless, even graceful, the enacting of the skill appears and whether it aligns to what we believe we know (both 'knowing that' and 'knowing how') to be good about that skill. Hence, the craftsperson is not judged only on their articulation of how the skill is performed or the biomechanics of the performance, but on an aesthetic of how well the task is completed.

A person becomes masterful in their profession, over an extended period of time. However, it is not only time that is required, but also mindful thinking and reflection of practice, both on an individual level and within a community of practice. Pardy and Seddon (2011) viewed this mindfulness of practice as creating knowledge that is not repetitive or mindless work, but developmental, resulting in knowledge that is practical, intelligent and an example of higher order thinking. It is from this position that they articulate that the separation of knowledge is an artificial construct and therefore the rigid separation of tertiary and vocational education is neither warranted nor useful. Germany's tertiary education practice, for example, does not separate vocational orientation and higher education. According to Winch (2009), Germany utilises a framework where "the underlying concept is the theory of 'complete action', that includes planning, executing, controlling as opposed to just executing" (p. 100). A model such as this blends both the '[knowing how' and the 'knowing that' into a more holistic approach to tertiary education. The blended approaches described by Winch (2009), and advocated by Pardy and Seddon (2011), provide an important reference point for the case study discussed in this chapter, in the context of outdoor education practice.

THE CONTEXT OF THE STUDY

In order to understand the significance of this study and its implications for future practice, a case study approach was utilised. Van Maanen (1995, 1996, 1999) has written extensively on voice and representation, and the role of the case study in ethnographic research. He highlighted the role and relevance of experiential

learning in practise because it can bridge the gap between the theoretical ('knowing that') and real world ('knowing how') by portraying real people and their perceptions of their experiences. Added to this Cohen, Manion and Morrison (2011) maintained that case studies are useful in allowing us to see things from different perspectives, and hence consider "different ways of seeing as new ways of knowing" (p. 290). Just as the French philosophy Proust wrote in the 19th century that discovery is about seeing things with new eyes, it is the viewing of new perspectives of education delivery that is important for this research.

During the winter of 2013, students undertaking their third and final year of a Bachelor of Outdoor Education at Latrobe University, Bendigo Australia, participated in a subject where both a vocational and a higher education curriculum were concurrently used throughout the semester. In this study there were seven participants, comprising four males and three females aged between 21 and 30. All student names have been changed. The depth and richness of responses that can be gained from this case study approach compensates somewhat for the small sample size.

The aim of the subject is to critically examine the recreational, cultural and environmental features of the winter environments at Kosciuszko National Park in the context of outdoor education and nature tourism. The subject examines use and management of the National Park particularly in winter and the relationships with the various stakeholders and lease holders operating in the Park as it relates to the snow skiing industry. The aim of the ten day field trip is to integrate the readings and theory with practical experiences where the students can see the interplay of relationships between the various stakeholders by exploring three different uses of the winter alpine environment through cross country skiing in the National Park.
The university subject in which the students participated, consists of several parts:
– Four one-hour lectures.
– A ten day trip with two phases. The first phase is a four-day self-supported cross-country ski tour in Kosciuszko National Park. This higher education phase of the subject involved a ski tour, which students carry all of their equipment, tent, stove, sleeping bag, food etc and demonstrate that they can be independent and self-reliant in a winter alpine environment for the duration of the tour. The second phase consists of a competency-based programme, where La Trobe University staff, under a licence agreement with the Australian Professional Snowsports Instructor (APSI) Scheme delivers the three-day APSI Level 1 Nordic Ski Instructor qualification during the field trip in Kosciuszko National Park. APSI is Australia's peak body for all aspects of snow sport instruction and assessment, including alpine, nordic and telemark skiing, and snowboarding.
– Assessment. This includes an assignment, a class presentation, submission of lesson plans and a one day APSI on-snow assessment of teaching and skiing skills.

During the semester one 2013 offering of the subject, students were invited to be research partners in a collaborative effort with their lecturer. This strategy parallels Steinberg and Kincheloe's (1998) view, that engaging students as researchers enhances deeper learning as they participate in the discovery of new knowledge.

Students cease being consumers of knowledge and, instead, become observers of their own learning. Asking questions of what they observe then assists them in the process of constructing knowledge. As new researchers the students have started on the journey of reflective practice, which is a key component to become intentional in an individual's practice of the craft and vocation. To highlight this critical observation role, focus groups were utilised before, during and after the field trips in order to draw out the students' ways of seeing and knowing. Students kept a reflective journal in which they were asked to comment on their experiences during both the focus groups and the practical trips. The students' journals were collected after the practical trips. As a means of supporting the students' learning and participation in this process, a number of readings related to contemporary issues of workplace training, and vocational and higher education, were made available. The readings (Hager 2000; Hager & Laurent, 1990; Maclean & Pavlova, 2011; Symes, 2000; Pardy & Seddon, 2011) were chosen in part to facilitate student knowledge and engagement in the observation and reflection aspects of the study. Structured questions were distributed in order to guide student reflection on their learning experiences. The questions were:

1. Why is it useful/not useful to have a vocational learning model in this subject?
2. We tend to use a prescriptive learning model, 'follow these steps and you will get your qualification'. How did this influence your learning? Positive and/or negative?
3. How does this vocational training experience help to develop your instructional practice?
4. In what ways is this combination of vocational training and higher education different to other subjects you have studied at university?
5. How is the Australian Professional Snowsport Instructor scheme trying to shape you as an instructor?
6. How has this course increased (or not) your capacity to be work ready upon graduation?
7. Hager (2000) states that there is an educational approach to learning that states "the application of knowledge is necessary for proper understanding: 'it was only in doing it that I really understood it" (p. 51). How does or does not this statement of Hager apply to you?

ANALYSING STUDENT RESPONSES

Symes (2000) has proposed that there are four common historical positions, or discourses on the issues of vocationalisation of universities. They are:
– Higher education must maintain its liberal education model.
– Higher education should be pragmatic and outcomes driven.
– The workplace and higher education provide a connection of learning.
– Vocational and higher education are interwoven.
Each of the above four discourses will be briefly outlined and then used as a method to categorise and to draw meaning from student responses.

1. Higher Education Must Maintain Its Liberal Education Model.

According to Symes (2000), this position emphasises the role of higher education in providing a liberal education and courses that have intrinsic worth. An education that cultivates and encourages scholarly application, self and moral improvement is seen as ideal for higher education in this position. Symes (2000) maintained that this discourse questions the validity of vocational training and argues that an education that is instrumental in its intent makes for a compliant and easily manipulated workforce. Furthermore, in this model, the workplace and government demands for outcomes are not the driving force for accountability and/or the curriculum process. The following excerpt from Nadine's journal illustrates a view that values a broad liberal based education:

> I feel like my university study has taught me to be an educator, rather than just a guide. It has developed my critical thinking skills and provided an exposure to a range of different ideas and thoughts on what outdoor education could and should be. Whilst I may not take on all the ideas that university has taught me in my own practice, I think the awareness of other alternatives and possibilities of outdoor education is a positive thing and still has value for use beyond my time at university. I feel, despite the university's traditional liberal focus, they're still providing a solid grounding of skills to be used in the workplace. (Nadine)

Nadine reflects on the value of her liberal education and the benefits of a generalist education. She sees that the capabilities and skills she has learnt in her higher education can help her to think critically and that there is a certain currency in such, when she enters the work force.

2. Higher Education Should Be Pragmatic and Outcome Driven

Symes (2000) contends that this position rejects the liberal education ideal in favour of instrumental and pragmatic education. This discourse has its origins in the Scottish Enlightenment, and argues that education should be useful to a country's economic development by driving forward workplace utility and employability. Jack articulates how he values such a utilitarian approach:

> As a student, I appreciated the competency based training approach to the subject, as it was concerned more with skills and technique rather than theory and abstract thought. (Jack)

Another student described their pragmatic and instrumental view of the education delivered in the subject:

> The direct emphasis on skill development is brilliant and the positive results can be seen immediately on our three-day ski tour where these skills were applied. Travelling over snow cover, which ranged from freshly fallen powder snow to bullet proof ice required the use of a multitude of skiing

skills. The direct application of these skills made the tour safer and more manageable in what was already very trying conditions. (Mark)

Joe reflects on his vocational learning through this subject, comparing it to the more liberal traditions of his Outdoor Education degree:

> The vocational experience with the Australian Professional Snowsports Instructor Scheme (APSI) was completely skills and teaching focused, with the concept of only one way of learning to ski. Very different to outdoor education at La Trobe University. APSI sets a strong routine and simple steps to follow for beginner instructors to follow. (Joe)

While Joe could clearly perceive the value of a step-by-step process of learning a skill, Larry was frustrated with being told what to teach and how to teach it. He described the vocational training phase of the subject as prescriptive and highly structured, maintaining it limited his ability to learn and apply the learning to broader circumstances:

> It felt as though all there is to teaching skiing, is to complete the teaching recipe that has been taught to us. (Larry)

Nadine describes the tension she perceives between acquiring skills and safety in her higher education context:

> The irony of La Trobe's huge emphasis on safety, is that the university de-emphasis [sic] the personal physical skills that are required of outdoor instructors. It appears to me that these two areas of knowledge go hand in hand in outdoor education. For example, as was evident whilst ski touring, efficient and effective cross country skiing skills was a safety issue. Our group didn't have solid skiing skills, we as a group where too slow to cover the distance planned and rather than camping in a sheltered valley, spent the night on an exposed ridge line at 1980m above sea level in a blizzard instead. It is for the reason above that it is important to have quality hard skills in the outdoor pursuits, that you are guiding in. (Nadine)

One student's evaluation of the vocational training phase was that it was narrow and limiting.

> Without the assistance from my prior learning from my time at university I would feel disempowered by the Australian Professional Snowsport Instructor course. The course alone is limited in what it can offer for the environment and adapting to new pedagogical paradigms. (Glenda)

It would seem that the APSI course with its pragmatic approach to teaching and learning, did not actually assist Glenda in reaching her goal to be able to instruct nordic skiing. Glenda reports that she felt disempowered and frustrated with the vocational approach taken.

3. The Workplace and Higher Education Provide a Connection of Learning.

In this position there is a nexus between education and the workplace. According to Symes (2000), this discourse positions schools and higher education institutions as part of the system that supplies educated people for the workforce. In this way, work, workplace learning and education are not disparate. Hence, practice and concepts of the workplace as a place of learning stem from this discourse. Symes (2000) maintained that underpinning this position is a different view of learning, labour and work, that "overturns the distinction between mental and servile labour" (p. 34). Similarly, Beckett and Hager (2002) argued that links between theory and practice are integral, and theory empowers practice and gives it a framework within which to work. Reflecting on her experience, Nadine observes how learning in higher education has assisted her to be work ready:

> Vocational courses are effective at teaching base level skills required of outdoor leaders. These skills are relatively easy to teach and easy to assess. In the case of the Australian Professional Snowsport Instructor course, when it came to teaching skiing, having a simple framework to remember was a reliable fall back position when things became difficult or challenging. However, La Trobe provided an exposure to ideas and options for outdoor education, developed environmental knowledge and helped to teach us to become educators. This being said, having this broader set of knowledge is only truly valuable if the graduate also has that solid grounding of outdoor skills, necessary when working in the field. (Nadine)

Nadine's perspective is that a work ready graduate requires the combination of both vocational and higher education. Grubb and Lazerson (2005) argued that the goal of higher education is to ensure graduates are work ready. They advocate for a closer relationship between theory and practice, and observe that professional associations often critise universities as being too research orientated and separate from the real business world, and consequently resulting in poorly prepared graduates. Jack also subscribes to the view that there should be a closer connection between theory and practice, leading to work ready graduates:

> The higher education model is based in a generalist and broader framework and whilst it may prepare a graduate for entry into a profession, it does not render them competent. The inclusion of vocational training in an outdoor education degree programme may go some way to developing more complete, work-ready graduates. (Jack)

Glenda relays her experience of higher education and sense of being work ready:

> Questions of competence are expressed as La Trobe students focus less on 'hard skills' and more on the theory behind the activity, the theories of learning, and the place in which the activity is held. Therefore, hard skills learned at La Trobe may not always be up to the expectations of the workforce, as the minimal amount of skill may not be present in order to meet the standards of the workplace. (Glenda)

Through their reflective journals students have articulated that the vocational orientated course has better prepared them to be 'work ready'. At the same time, the higher education content has enabled students to think more broadly about the issues of educational theory and content; which employers have identified is one of the key advantages of employing university graduates (Munge, 2009).

4. Vocational and Higher Education Are Interwoven

In Symes' (2000) view, this position argues that both a liberal and an instrumental education can be delivered through a balanced and integrated approach. He maintains that all education must be a blended delivery of both vocational content, and the critical and reflective approaches. Beckett and Hager (2002) contend that together, vocational and higher education are complementary, each building on the other's strengths, and allowing previous dualistic approaches to education and knowledge to be rejected. Advocates of this position reject hierarchies of knowledge between the practical ('knowing how') and intellectual ('knowing that'). In this discourse, according to Symes (2000), the separation of knowledge is groundless and "vocational education is not an oxymoron" (p. 34).

A useful example of this form of blended delivery is provided by Joe as he explores the connection between knowledge and ways of teaching. The following excerpt demonstrates how using both a competency based training model of learning combined with a higher education approach enables Joe to solve a learning problem encountered by one of his students:

> The Australian Professional Snowsport Instructor (APSI) scheme has given me a background of knowing and a basis to teach from. My time in higher education has allowed me to adapt the APSI into a teaching style that will work with multiple clients and situations. The principles I have learnt from the APSI course, I can transfer to teaching in other environments, therefore I can say the APSI course has given me the best insight into teaching skills. For example in a university subject, Teaching River Environments were |I was teaching white water skills to first year university students I came across students that were finding it hard to hold the edges of their kayak. I found it difficult to communicate the skill and for them to grasp it. I decided to drop everything I had previously tried and followed a teaching strategy I had learnt from the APSI ski instructors' course. I modified the approach to allow for a different skill set (kayaking). This worked extremely well and they picked up the new skill quickly and easily. As I was doing this one of the my lecturers was watching and afterwards commented about the approach saying, that it worked well and he had not seen it before. This shows to me the teaching platform used in the vocational experience of the APSI is not just specific to skiing and can be used in many other skill teaching in outdoor education. (Joe)

This vignette illustrates Hager's (2000) point that, "there is a body of educational thought that maintains the application of knowledge is necessary for proper

understanding, 'it was only in doing it that I really understood it'" (p. 51). It was while Joe was teaching, and consciously applying his learning from a competency based training experience to an immediate learning problem, that his understanding and teaching became integrated at a deeper level – it was by 'doing it' that he really got 'it'. This gets to the crux of a dilemma of skill learning and demonstrates how the artificial separation of practical and intellectual learning is unhelpful in seeking to understand the learning process. It was in both the doing (practical) and the thinking/applying/analysing that the learning challenge as described above was overcome.

In another example, Mark makes the link between skills and critical outdoor education as advocated by Martin (2008). Mark reflects on his experience of how a higher level of skill competence (in this case, cross country skiing) enables him to be more invested in his practice as a critical outdoor educator.

> A competent outdoor educator may have developed abilities, skills and attributes that become intuitive over time. When able to complete these tasks in an unconscious manner, 'things just get done', this allows the outdoor educator to operate with a calmer state of mind. It allows them to utilise and put into action those broader cognitive skills as required. This allows the leader to respond to other cues whilst giving little to no thought as to how to perform the skill. The outdoor educator can then focus on other areas of the curriculum other then the skills. Ten days devoted to skill development allowed me to feel confident that I can fully apply myself to providing a better standard of critical outdoor education – the ultimate aim of the La Trobe degree. (Mark)

Mark's observation that having an approach to learning which brings vocational training and higher education together enables graduates to be more effective in the workplace. This illustrates the concept of a working knowledge viewed by Symes (2000) as the bridge between theory and practice, vocational and higher education. Elsewhere Mark offers an interesting insight that reflects Grubb and Lazerson's (2005) criticisms of graduate workplace competency described earlier.

> None of my outdoor activity electives at university demanded of me to be able to prove that I have the necessary occupational skills, so as to adequately perform in the workplace. The university just wanted to know if I could operate in a safe manner. La Trobe University emphasised the mind/head knowledge, the theory of why go outside into the outdoors as it places the theory of knowing above and beyond the physical skill sets. The question I have as a student and learner is: does higher education create a lesser graduate than it potentially could by focusing so much on the mind/head knowledge, the theory? (Mark)

Mark's question is one that deserves consideration. Another student, Cathy, makes an observation that may offer at least a partial response while reflecting on the practical nature of the vocational training phase:

> Without these new vocational skills (how to teach skiing), I consider that I may not have been as confident in teaching and leading others in cross country skiing. I also believe teaching others how to ski would have been more difficult as I wouldn't have had a distinct set of instructing skills. I feel as though when I was stuck on what to teach I could fall back onto my newly acquired instructional skills, it was in the doing of teaching that I came to finally understanding it. (Cathy)

The vocational training phase clearly gave Cathy the skills for both the craft of skiing and the ability to teach skiing to her students while on placement. For Cathy the embedding of vocational training into higher education seems to address both the criticisms of Grubb and Lazerson (2005) and go some way to answering Mark's question.

Interestingly, when Cathy writes about learning vocational skills, she is referring to 'the learning of how to teach'. By implication then, the question might be asked, is doing a Diploma of Education an example of vocational training or of higher education? Perhaps the only difference is cultural and/or political, as suggested by Symes (2000) and Maclean and Pavlova (2011). Symes (2000) asserted that the "distinction between a liberal or vocational education is largely a spurious one . . . for all education is vocational and, in the end, it is simply a matter of to what degree" (p. 42).

DISCUSSION

According to Maclean and Pavlova (2011), "on the epistemological level there is a basis for developing close relationships between higher education and vocational education" (p. 325). At the launch of the Bradley Review of Higher Education, the then Deputy Prime Minister of Australia, Julia Gillard, called for a bridge between the two sectors of vocational and higher education (Gillard, 2009). Likewise, Hager (2000) and Pardy and Seddon (2011) has advocated for a more inclusive higher education sector, increased recognition of the value of vocational training, and links between both sectors. Jack articulates some of these issues when he writes:

> The arbitrary separation of vocational education and higher education is difficult in outdoor education because there are components that are inherently vocational. (Jack)

In this chapter I have described the trial of such a bridge from a student perspective. I embedded a recognised vocational training course within a higher education subject and worked in partnership with students as they observed and reflected on their learning. Student reflections indicated a positive view overall of such a combination of vocational and higher education. Jack comments on the strength of the collaborative approach to his learning at La Trobe University:

> The vocational style of learning in the activity/outdoor skill subjects at La
> Trobe demonstrates a marriage between the capabilities of an outdoor leader
> and the knowledge of the teacher. (Jack)

Students reported that the learning of skills necessary to teach skiing lead to a
sense of wellbeing and confidence in their employability. They also felt
empowered to undertake leadership of the activity and felt an increased capacity
to mange groups safely while also delivering educational outcomes. This
confidence enabled one student to become more critical in his education as he
became more aware of the teaching opportunities that presented themselves,
subsequently enhancing his delivery of both outdoor and environmental education.
Mark wrote:

> Knowing that I can move easily and safely, as well as impart this knowledge
> to my students allows me to share my observations and provides more than
> just a trip to the Snowy Mountains. (Mark)

Students reported feeling better prepared and more ready to enter the work force,
with both a theoretical knowledge and a knowledge of practice. Without exception
students reported that the integration of a vocational course had increased their
work readiness and confidence to become outdoor educators. Students articulated
that they valued the balanced and integrated approach taken in this subject.
Interestingly, Hager and Gonczi (1996) referred to this approach almost 20 years
ago as an 'integrated competence' where the higher education preference for the
development of intellectual attributes meets the task focussed style of vocational
education. The intersection of a 'knowing how and a 'knowing that' approach,
results in a richer learning experience for students. Skills (both of teaching and
demonstration) will assist a graduate to be workplace ready and capabilities such as
problem solving and reasoning form part of the quality critical outdoor education
students received.

IN CONCLUSION

In this chapter I have described an investigation into the intersection of vocational
training and higher education using outdoor education as a lens. During this
process I worked collaboratively with students as they observed and reflected on
their learning. Three themes emerged:
1. Students report that the balanced approach of blending vocational and higher
   education taken in this subject enhanced their learning.
2. An integrated delivery increased the students' perception of work readiness.
3. Student reflections support Hager and Laurent's (1990) view that the separation
   of vocational training and higher education is arbitrary and does not support
   learners becoming experts or masterful in their practice as educators.
These themes emerged from student reflections and responses to a specific
teaching and learning experience in Kosciuszko National Park. The case study of
student experiences and perceptions contains strengths and limitations. This was a

unique experience for the seven students involved, and as such, it would be inappropriate to attempt to generalise from this case study to the international debate about the vocationalisation of higher education. Among the strengths of this study are that the themes that have emerged are supported by much of the literature, giving additional weight to the students' reflections. The implications for outdoor education at the tertiary level at least, are that an integrated approach of vocational and higher education has value and should be considered. Learning that brings together both 'knowing that' and 'knowing how' will almost certainly produce better graduates able to apply their craft in the workplace. The collaborative approach I have taken in this case study demonstrates the potential for a richer and deeper learning experience for the students, which will assist them to be more work ready. As Jack concludes his journal:

> My overall goal in attending university is to get a vocation and thus essentially universities are vocational in that sense, preparing students to work in their chosen vocation. (Jack)

ACKNOWLEDGEMENTS

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Peter Holmes
School of Outdoor and Environmental Studies
La Trobe University
Australia

ERIC PO KEUNG TSANG

18. REALISING SUSTAINABILITY LEADERSHIP

The Role of Green Non-Government Organisations in
Outdoor Environmental Education in Hong Kong

INTRODUCTION

The Roles of Green Non-Government Organisations (GNGOs) in Outdoor
Environmental Education: A Hong Kong Context

In the last few decades, the Asia Pacific region has faced unprecedented social, economic, political and environmental challenges. These in turn have prompted the necessity for partnerships on order to realise sustainable development in the region. Apart from schools and government agencies, different forms of collaboration and partnerships, such as the active involvement of non-governmental organizations (NGOs), business organizations and international associations, have been established to promote education for sustainable development (ESD). The term "non-governmental organization" (NGO) has been coined as being non-profit making organisations with interests in issues such as social justice and/or environmental protection (McCoy & McCully, 1993; Haigh, 2006). Internationally, UNESCO views NGOs as one of the major stakeholders in environmental education. Due to their independent nature and freedom they are as Palmer states "well placed to act outside traditional politics and national government" (2003, p. 448) and become "leading players in environment and development issues, including education and awareness-raising" (p. 450). As Palmer further states: "They are the structures in which NGOs have a clearly identified role in partnership with other elements of the non-institutional sector, government ministries and local government. An individual NGO can be at the heart of this success" (p. 459). An advantage of NGOs is their local orientation; that is, the chance to involve people in environmental initiatives which 'are their own'. NGOs projects are usually originated from Agenda 21 groups, with the majority carried out in partnership with schools. It seems clear that schools appreciate the competencies that NGOs bring. NGO campaigns also draw people's attention to environmental issues. The efforts are directed to whole communities. For example, in the context of in-service activities the events can take place both in non-formal and formal education settings (Fien, Scott, & Tilbury, 2001). NGOs' work also supports environmental actions as well as education. Outdoor Education is an important element of environmental education through its role in linking education with the environment. With their expertise and independence, NGOs are well placed to conduct outdoor education in environmental education. In Hong Kong,

GNGOs have also taken on the role as transformative and collaborative sustainability leaders, mainly through their contribution in various forms of educational activities. This chapter will review and explore the role of NGOs in the implementation of outdoor environmental education particularly on their supplementary role to the formal, informal and non-formal learning curriculum in the role of sustainability leaders with reference to the case in Hong Kong.

GNGOS AS SUSTAINABILITY LEADERS, THEORY AND PRACTICE

There is wide academic discussion on sustainability leadership particularly on the range of qualities and skills of leaders who engage in sustainability endeavours. By way of reporting this diversity the initial purpose of this section is on the three sustainability leadership domains; namely values and worldviews; competencies; and behaviors. This is followed by an account on how the GNGOs concerned through its activities embrace the concept of sustainability leadership. Ferdig (2007) decribes a sustainability leader as:

> … anyone who takes responsibility for understanding and acting on sustainability challenges…whether or not they hold formal leadership positions. Sustainability leaders take conscious actions, individually and collectively, leading to outcomes that nurture, support, and sustain healthy economic, environmental and social systems. (p. 32)

Sustainability leadership as in other types of leadership relies on change, as it always includes varying levels of uncertainty (Kotter, 1996). The leadership for change literature, then, can be a major reference. According to McCallum and O'Connell (2009), change leadership can mainly be classified into four types with some common features among them. Each of these general categories is relevant for sustainability. Transformational or vision-driven leadership brings participants s together with a deep meaning, such as addressing societal issues (Bass & Avolio, 1990; Bass & Riggio, 2006; Burns, 2003). Timely and transformative leadership facilitates the development of advanced human and organizational capacities that can accelerates the process towards sustainability (Torbert, 2004). Adaptive leadership concentrates on how to engage complexity in issues to achieve the aims. Finally, it is the collaborative leadership which stresses the partnership between various stakeholders. Common to all four forms of leadership, there are three areas in the literature that are most useful for understanding how leaders behave. First is the area on the *values and worldviews* of sustainability leaders. This provides insight into the psychological foundation underlying any leadership action. The second domain concerns sustainability leadership *competencies*, which address a leader's knowledge, skills, abilities and personal attributes. The final domain inquires into the *actions* necessary for sustainability leadership. Our group's work is based very much on the concept of collaborative sustainability leadership which is discussed in the next section.

COLLABORATION AND COLLABORATIVE LEADERSHIP FOR SUSTAINABILITY

Sustainability as an integrated concept requires a specific form of leadership and contributions from stakeholders from industry, citizens, nongovernment organizations (NGOs) and other stakeholders. Partnership in sustainability initiatives (Schot, Brand, & Fischer, 1997) requires that *collaboration* as being crucial to partnerships. Gray (1989, p. 5) defines collaboration as "a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible". Since environmental stakeholders have particular and varying interests and views, so one would expect collaboration would make this to happen. Chrislip (1994) introduced the notion of collaborative leadership as essential for successful partnership. We adopted this notion for sustainability here by describing collaborative leadership as the process to start, facilitate and sustain collaborative initiatives for addressing issues related to environmental sustainability. Collaborative leaders do not necessarily have to be professional or sustainability experts. In a lot of cases, these leaders can just be individuals and organisations with the ability and creative ideas to unite the appropriate stakeholders together Chrislip (1994) argues that collaborative leaders must set eyes on processes rather than outcomes. In other words, leaders must design and implement collaborative initiatives that are sustained through credibility, openness, trust and transparency Among environmental NGOs, Stafford (1998) argue that the culture of environmental groups is moving from one of protest to realistic solutions, as shown by the collaborative leadership with industry/private sector that is being launched by such groups. NGOs including GNGOs are constantly struggling to establish a model under which they can either work with (partnership) or confront with the business sector to achieve sustainability . The corporate vision of sustainability, the triple bottom line satisfying shareholders's thirst for profit while improving environmental performance and technological innovations, also looking after community interest. There is an observed change in NGO strategies to work with rather than taking drastic and hostile actions towards the corporate. The aim being to engage them to set the sustainability agenda. This strategy now is widely employed by GNGOs in Hong Kong and the section below describes some of the successful projects of this kind. A major challenge to NGO-private collaboration is diffusion because the private sector sometimes finds it hard to identify the benefits of working with NGOs on setting the sustainability agenda. The rationale of business-government collaboration is much clearer than that of business-NGO collaboration.

CONTRIBUTION OF GNGOS AS SUSTAINABILITY LEADERS IN OUTDOOR ENVIRONMENTAL EDUCATION: MAJOR INITIATIVES AND A REVIEW

Hong Kong's GNGOs have traditionally played an important role in environmental education and advocacy in the form of campaigns to protect the environment. This section provides examples of selected contributions from a GNGO Green Power

Hong Kong on outdoor environmental education in Hong Kong. As GNGOs in Hong Kong as in other parts of the world are not funded by the local government so they would have to work in partnership with the private sector on a collaborative leadership model to promote sustainability in the community.

About Green Power

Green Power was founded in 1988 by a group of dedicated volunteers who were concerned about local environmental problems. Since our formation, we have been promoting environmental education, as we believe education is the ultimate means of transforming our thinking and behaviour. We focus on local ecological conservation and global environmental issues – ranging from those affecting species, to entire habitats, and the world's environment.

– Species – We have projects focusing on butterflies, and on trees. These include species surveys, guided tours, educational promotions, publication of educational materials, tree planting, and establishing Butterfly Gardens and Tree Trails in the community and schools. We study and conserve species diversity.
– Habitats – All species need good habitats. We focus on butterfly hotspots and natural woods in Hong Kong. "River" is another focus: over 160 species of fish and 110 species of dragonflies can be found in local rivers. Rivers are also the cornerstone of society, culture and economic development. We promote river conservation through highlighting one river each year.
– Global warming – Global warming is the world's most pressing environmental issue. Carbon emissions caused by human activity are the culprit. As an advanced city, Hong Kong's per capita daily carbon emissions are 50% higher than the world average. As Hong Kong citizens, we have responsibility for mitigating global warming. We are committed to promoting low carbon living, and working together to slow the warming of our planet.

Green Power is a charitable institution. Our work is supported solely by donations, corporate sponsorship and fund-raising.[i]

Pedagogical and Learning Approaches Used in the Outdoor Programs

The approach adopted by the Green Power team was based on those widely adopted internationally. These were in turn in line with the goals of EE and ESD. Essentially these are guided by that coined in the Tbilisi Declaration (UNESCO-UNEP, 1977, pp. 2–3) the International Implementation Scheme (UNESCO, 2005, pp. 30–31). In particular an interdisciplinarity; and integration of social, environmental and economic dimensions. We also stress the use of a repertoire of pedagogical techniques that focus on participatory learning; first-hand learning and development of problem solving and critical thinking. EE/ESD according to Stevenson "requires a radical, 'transformative' pedagogy, focused on the process of learning to 'live within ecological limits without human suffering" (Stevenson, 2006, p. 287), while also 'uncovering the ideologies and power relationships that underlie the discourses of SD'". The next sections describe the various activities which have adopted this approach.

1. The Exploring the Rivers Project by Green Power Hong Kong

Rivers have an intimate relationship with mankind and our lives, and are vital for social and economic development. Rivers also contain rich natural resources. Over 160 species of fish and 110 species of dragonflies are found in the local rivers. However, rivers are often neglected in Hong Kong. Some have been channelised, or totally transformed by the development. The original appearances and ecology of such rivers have devastated. This project starts with education, monitoring, and other viewpoints. With one theme river each year, we educate people regarding the concept of a river as a whole. From various aspects including ecology, culture, society, economic and environment, the functions and values of rivers are discussed. In addition, we provide comments to the relevant authorities on the river projects.

Activities

– "Rivers Reviving" Educational Program: Following the "Come from Rivers" educational program, the same "one theme river a year" approach is adopted. In addition to ecology, culture, social, economic and environmental values of the theme river, a "river restoration" element is added. We aim to explore the ways to restore the natural appearances and functions of rivers.
– "Come from Rivers" Educational Program: The concept of a river as a whole is explored through three major local rivers – Lam Tsuen River, Kam Tin River and Tung Chung River – including their upper, middle and lower courses and estuaries. A comprehensive analysis of the geology, hydrology, land use, environmental threats and conservation profiles of the basins of the three theme rivers is conducted.

2. Butterfly Conservation

Although Hong Kong is small, it is home to more than 260 butterfly species, which is one-tenth the total for China. Considering the ratio of species to land area, Hong Kong has a high diversity of butterflies, and can be described as a "butterfly paradise". Butterflies are important biological indicators, which helps assess the ecological value of a place; changes in diversity and population of butterflies also reflect local environmental changes. Butterflies catch people's attention with their varied colours and elegant poses, and are commonly seen in urban and country parks. They are the most beautiful guides in nature, leading people to an appreciation of the magnificent natural world. We lead the public to explore nature by using butterfly as a starting point. From appreciating the beauty of butterflies, people will then care for butterflies, as well as conserving butterfly habitats. Starting from concern for individual species, people will learn how to protect and cherish the natural environment. Since 2004, we have organised a range of educational activities, with butterflies as the theme. We hope to promote butterfly watching and enrich the public's knowledge of butterflies. We also focus on

promoting butterfly conservation in schools. We published educational kits for primary schools and secondary schools, and have set up Butterfly Monitoring Teams. Since 2008, we have expanded our promotion of butterfly conservation in the community. We invited members of the public to participate in butterfly conservation, and established the first team of Butterfly Surveyors formed by the general public, in order to monitor different butterfly hotspots in Hong Kong. Up to 2013, more than 1.14 million people have participated in our education and community activities.

Activities

– Butterfly Surveyors Training Scheme
– Butterfly Gardens: We build butterfly gardens in different communities, so that everyone can have watch butterflies. This is one of the important components of our work on promoting butterfly watching. To date, we have built 20 butterfly gardens.

3. Tree Conservation

Hong Kong is sub-tropical climate, with a warm, humid climate and a diverse natural environment that includes mountain ridges, coastal areas, rivers and lowlands, favouring plant growth. Though tiny, Hong Kong nurtures more than 700 tree species, representing 30 percent of all tree species in China. Trees are important to the environment, ecology and our lives. Trees purify air, help regulate the climate, and provide food and shelter for animals. Also, they supply fuels as well as raw materials for human livelihoods. Trees look still, but in reality they change with the seasons: flowers blossom and wither, and trees bear fruits or grow new leaves. Trees are long-lived, witnessing changes to our society, environment and community. We encourage people to learn more about trees by adopting a sentimental approach.

Activities

– I DO LOVE TREE "Fun" Journey: Have you thought about observing trees with more than your eyes? How about also using your hands, ears and nose! We have specifically designed some "four senses" tree observing games, so that you can use your senses of vision, hearing, smell and touch to observe and appreciate trees. It makes learning about trees a lot of fun! We have designed a Tree Appreciation Trail. The trail is 1.5 kilometres long and introduces you to 14 tree species that are commonly seen in the urban areas of Hong Kong. You will also learn how trees and people can live together in harmony, by following the rules for tree planting in urban areas with a lot of people and traffic. We have also published the "I DO LOVE TREE Handbook". Following the map and instructions in the book, you can visit the Tree Appreciation Trail at your own

pace and experience the fun games. You can become an expert on trees at your leisure!

EFFECTIVENESS OF THE PROJECTS

In this section, the effectiveness of the rivers project in the eyes of participants is reported. We have engaged a mixed method evaluation that includes a quantitative survey with questionnaire and a qualitative study through face to face interviews. Evaluation forms an important part of our individual projects as it informs us on how the participants in particular see the project and this information can then be used for modification of the project if necessary. A good framework which was used is based on the Kirkpatrick's (1994) model of evaluation of training programs which essentially constitute the following four steps.

1. Reaction – what participants thought and felt about the training (satisfaction)
2. Learning – the resulting increase in knowledge and/or skills, and change in attitudes. This evaluation occurs during the training in the form of either demonstration of knowledge or a test.
3. Behaviour – transfer of knowledge, skills, and/or attitudes from the classroom to the job (change in job behavior due to training program). This evaluation occurs a few months post training while the trainee is performing the job. Evaluation usually occurs through observation.
4. Results – the final results that occurred because of attendance and participation in a training program (can be performance-based).

Project Title: Exploring the Rivers Project, the Field Education Program

Questionnaire survey: Shan Pui River – 2009–2010

Post-evaluation

Evaluations were completed after the outdoor teachers' trainings. The overall feedback from the participants has been encouraging. It suggests that Rivers Reviving has received a good reputation from the teacher participants.

Evaluation findings

– 91.0% of teachers found the training blends well with the current curriculum
– 94.0% of teachers found the training comprehensive, and helpful in promoting and implementing cross-boundary education
– 94.0% of teachers found the training helpful in promoting and implementing Liberal Studies on sustainable development
– 95.5% of teachers agreed that visiting the upper and lower course of Shan Pui River well illustrated the picture of "a complete river course"
– 92.5% of teachers agreed that discussions on river restoration help in-depth understanding of rivers.

– 89.6% of teachers agreed that the route and arrangement of the training are creative and innovative
– 89.6% of teachers found the outdoor training worthy to be introduced to students
– 100% of teachers said they will join our river programs in the future

Qualitative Study

Responses to selected open-ended questions in the questionnaire used

Question 9: Did you have any topics which are about river or water resources that would like to discuss during activities?

Participants suggested that the following topics can be discussed in the field and follow-up studies:
– Contradictions between economic development and river conservation
– Coastal conservation, ecology
– The participation of residents on river conservation (public engagement models)
– Air pollution, global warming, contribution from local actions
– The criteria for the river renewal
– Sewage treatment and its effect on river water quality
– Water quality checking technique

Question 10: Except Geography, humanities, ecology, land use and watercourse repair, is there anything you think that should be included in the activity?

Is there anything you think that should be included in the activity?
– Site experiment
– Coastal
– Geomancy
– The effects of pollutants to the ecology
– Water quality immediate check e.g.PH value Turbidity etc.

Question 12: In your opinion, if there are the same kind of activities which are free of charge, will there be more interested participants?
– Urban development of greeneries
– How schools promote the idea of environmental protection
– Recycling
– Coordination of subject curriculum
– Fanling North (development and conservation)
– Marine conservation
– Coastal
– Food pollution
– Organisms in river
– Field Trip

– Geology, coastal
– Stony field trip/hillside
– Ecology/grove system
– Local agriculture
– Urban development field trip
– Hill
– Woodland, coast, Ind
– Waste management

WAY FORWARD AND CONCLUDING REMARKS

Based on the effectiveness of our group's work in the last ten years or so, we are quietly confident that there is still enormous potential in GNGO's work in Outdoor Education. It is logical now to analyse our work based on the three praxis domains in the literature that are most relevant to understanding how leaders act. First, the *values and worldviews* of sustainability leaders. As a GNGO, our core value to conserve the environment through advocacy and education as such, we are well placed in this aspect to act as sustainability leaders. The second domain concerns sustainability leadership *competencies*, which address a leader's knowledge, skills, abilities and personal attributes. The final domain inquires into the *actions* necessary for sustainability leadership. Again, GNGOs are well placed to implement sustainability leadership. As to the form of SL that can be adopted, our past experience has proved that collaborative leadership would be the most effective model. As mentioned before GNGOs now have moved away from confrontative tactics to collaborative ones as far as their attitude towards the corporate sector is concerned. In the past decade or so, we have shown that this can be achieved to the best benefit of the environment. Feedback from the education sector has also indicated that GNGOs are well positioned to fill the gap that exists in the formal/non-formal curriculum in schools. This is in fact a win-win situation for all stakeholders concerned.

NOTE

i   See http://www.greenpower.org.hk

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Eric Tsang
Hong Kong Institute of Education
Hong Kong

NOEL GOUGH

19. REWORDING THE WORLD

Narrative and Nature after Poststructuralism

> I can only answer the question 'What am I to do?' if I can answer the prior
> question 'Of what story or stories do I find myself a part?' … Mythology, in
> its original sense, is at the heart of things. (MacIntyre 1984, p. 216)

In this essay I address the question, 'What am I to do?' as an outdoor and
environmental educator with some responsibilities for facilitating learners'
experiences of the outdoors, by exploring some of the stories in which my
colleagues and I find ourselves a part. I do this by critically examining some of the
stories about experiencing the outdoors that outdoor and environmental educators
tell to each other and to learners. Narrative and poststructuralist theorising inform
my critique. Narrative theorising invites us to think of all discourse as taking the
form of a story and poststructuralist theorising invites us to think of all discourse as
taking the form of a text. As Knoespel (1991) suggests, these different but
complementary theoretical positions challenge scholars in a number of disciplines:

> Narrative theory has challenged literary critics to recognize not only the
> various strategies used to configure particular texts within the literary canon,
> but to realize how forms of discourse in the natural and human sciences are
> themselves ordered as narratives. In effect narrative theory invites us to think
> of all discourse as taking the form of a story. (pp. 100–101)

I acknowledge that many outdoor and environmental educators are suspicious of
poststructuralism and deconstruction, and will examine in some detail the claims of
writers who assert that these are anti-realist positions and, as such, have little to
contribute to our understanding of the 'real' and/or 'natural' world. Structuralists
and poststructuralists share the view that the objects, elements and meanings that
constitute our perceptions and conceptions of ~~reality~~ and ~~nature~~ are social
constructions[i] – that they cannot be presumed to exist independently of human
agency and activity (see Gough, 2008, 2010). Poststructuralist criticism is
concerned with the extent to which analyses of narrative constructions are caught
up in the processes and mechanisms they are analysing, and is therefore critical of
the view that anyone can get 'outside' a cultural discourse or practice to describe
its rules and norms. As Cherryholmes (1988) writes, structuralist thought seeks
'rationality, linearity, progress and control by discovering, developing, and
inventing metanarratives … that define rationality, linearity, progress and control'

whereas poststructuralist thought is 'skeptical and incredulous about the possibility of such metanarratives' (p. 11).

POSTSTRUCTURALISM, DECONSTRUCTION AND THE 'REAL'[ii]

Many environmental philosophers, advocates, and educators are antagonistic to, and/or dismissive of, poststructuralism and deconstruction (or anything they associate with postmodernism). Some are downright vicious, including Salleh (1997) who sees postmodernism as a 'castrated academic philosophy' (p. xi). Others, like Merchant (2003), are more politely suspicious: 'Although deconstruction is an important analytical tool, I argue that realism … is an important counter, or other, to deconstruction's focus on language' (p. 201). Somewhere between these positions, Spretnak (1999) offers the following caricature of 'post' scholarship:

> The critical orientation known as 'deconstructive postmodernism,' 'constructionism,' or 'constructivism' asserts that there is nothing but 'social construction' (of concepts such as language, knowledge systems, and culture) in human experience … The philosophical core of deconstructive postmodernism is the rejection of any sense of the 'Real'. (pp. 64–65)

Spretnak (1999) discusses 'postmodern developments' in academia during the 1980s and contrasts what she calls 'the deconstructionist variety (also called "constructionism", "constructivism", and "poststructuralism")' with another perspective that (she asserts) 'lacks a widely accepted umbrella term, but is sometimes called "constructive", "reconstructive", or "restructive" postmodernism' (p. 223). In these passages, Spretnak uses at least four rhetorical strategies to distort the views of those she discredits.

Firstly, by asserting that the 'deconstructionist' position is 'also called' 'constructionism', 'constructivism' and 'poststructuralism', Spretnak infers that all three of these terms are synonymous with each other and with 'deconstruction'. But I know of no reputable scholars who identify themselves with these positions and agree that they can be conflated to this extent. The positions that these terms signify have very clear affinities with one another but they are certainly not coterminous. As already noted, structuralists and poststructuralists agree that our perceptions and conceptions of 'reality' are social constructions; incredulity towards structuralist metanarratives is variously imputed to postmodernism or poststructuralism, which may be conflated with each other and with deconstruction. Lather (1992) offers a way to distinguish between postmodernism and poststructuralism that resists fixing the meanings of either concept: postmodernism is 'the code name for the crisis of confidence in western conceptual systems … borne out of our sense of the limits of Enlightenment rationality', whereas poststructuralism is 'the working out of academic theory within the culture of postmodernism' (p. 90), although she also admits to using these terms interchangeably. The word 'constructivism' is used in a variety of ways, including the assumption that mathematical concepts are 'real' only if a mathematical proof

can be given (see Antony Flew, 1984) and the view that learning is an active process of constructing rather than acquiring knowledge (see Piaget, 1977). The latter position has expanded to include the idea that people do not construct knowledge in a vacuum but, rather, that construction of meaning is a socio-cultural process (see, e.g., Vygotsky, 1978).

Secondly, Spretnak (1999) compounds the problem of equating 'deconstruction', 'constructionism', 'constructivism' and 'poststructuralism' with one another by applying a single homogenising label to them all. But in my experience the critical orientation that she calls 'deconstructive postmodernism' is not widely 'known' by this name among a majority of scholars who identify themselves with poststructuralism and/or deconstruction.

Thirdly, by setting up 'constructive' and 'reconstructive' postmodernism in opposition to poststructuralism and deconstruction Spretnak implies that the latter positions are not 'constructive'. The invented term 'restructive' clearly is intended to suggest that deconstruction is destructive but, as Derrida (1972), who coined the term, insists deconstruction 'has nothing to do with destruction … it is simply a question of (…) being alert to the implications, to the historical sedimentation of the language we use' (p. 271). Deconstruction names a process of laying bare the structure of a discourse – of showing how a discursive system works and what it includes and excludes (see also Gough, 2008).

Fourthly, Spretnak's insinuation that poststructuralism and deconstruction rejects any sense of the 'Real' distorts the positions of many philosophers – structuralists *and* poststructuralists, constructionists *and* deconstructionists – who share the view that the objects and meanings that constitute our existential ~~reality~~ are social constructions. As a poststructuralist, I do not question *belief* in the real but *confidence in its representation*. As Rorty (1979) puts it, 'to deny the power to "describe" reality is not to deny reality' (p. 375) and 'the world is out there, but descriptions of the world are not' (Rorty, 1989, p. 5). Representations of the world are products, artefacts or effects of particular sets of historical and linguistic practices.

My concern is not so much that well-intentioned environmental philosophers have 'got it wrong' when it comes to poststructuralism and deconstruction, although I believe that many of them misrepresent and/or oversimplify the issues. Rather, I worry about the potentially deleterious effects of these rhetorical positions circulating within the discourses of outdoor and environmental education and research. I also worry that interminable arguments about the absence and/or presence of the real in poststructuralism and deconstruction distract us from more important concerns.

Until relatively recently, poststructuralist thought has remained something of a 'blind spot' (Gough, 2002) in environmental education research. For example, in their otherwise comprehensive and commendable appraisal of key issues in sustainable development and learning, Scott and Gough (2004) very largely ignore the possibilities and potentials afforded by poststructuralism and deconstruction for thinking imaginatively and creatively about socio-environmental problems. Indeed, they completely ignore deconstruction and make only two cursory references to

poststructuralism, firstly in a section on 'Language and understanding; language and action' in which they conflate 'post-modern' and 'post-structuralist' (p. 26), and secondly in a section titled 'Literacies: the environment as text' in which they uncritically reproduce an assertion they attribute to Stables (1996): 'As structuralists and post-structuralists have pointed out, one way of looking at the world is to say that *everything* is a text' (p. 29; authors' emphasis).[iii] This appears to be an extension (and possibly a misinterpretation) of Jacques Derrida's often-quoted assertion that 'there is nothing outside the text', which is in turn a misleading translation of *'Il n'y a pas de hors-texte'* (literally, 'there is no outside-text'). Derrida was not, as some critics insist, denying the existence of anything outside of what they (the critics) understood as texts; his claim was not that *'il n'y a rien hors du texte'* – that the only reality is that of things that are inside of texts. Rather, his point was that texts are not the sorts of things that are bounded by an inside and an outside, or *'hors-texte'*: 'nothing is ever outside text since nothing is ever outside language, and hence incapable of being represented in a text' (Derrida, 1976, p. 35).[iv]

Elsewhere (see, e.g., Gough, 1993a, 1999, 2004, 2006, 2009), I deploy narrative theory, poststructuralism and deconstruction to question how the discourses of environmental education and science education are configured as stories, and query the adequacy of the narrative strategies most commonly deployed in these fields. Different storytelling practices incorporate particular selections of narrative strategies and conventions, the implicit or explicit knowledge of which influences the author's craft, the reader's expectations and the meanings they mutually construct. My inquiries suggest that many of the values and purposes attributed to environmental education and science education are ill served by the dominant narrative conventions of teacher-talk and textbooks in these fields. I have thus been curious to explore alternative textual practices, such as those exemplified by various forms of literary fiction and popular media.

For most of its relatively short history, environmental education has privileged modernist scientific discourses that claim to represent the way things 'really' are. These discourses assume that it is meaningful to distinguish between 'fact' or 'reality' on the one hand and 'fiction' or 'illusion' on the other. The narratives of environmental education typically include strategically positioned representations of the material world ('reality'), such as interpretations of the environmental conditions that give it educational legitimacy. For example, the need for education about global climate change usually is justified by reference to scientific research on trends in the atmospheric composition of greenhouse gases, on causal explanations for these trends, and extrapolations of their environmental and social effects. Much climate change education assumes that people need to understand environmental circumstances 'objectively' before they can be expected to respond appropriately to greenhouse issues. In short, the dominant storytelling practices of environmental education reflect what Harding (1986) calls 'the longing for "one true story" that has been the psychic motor for Western science' (p. 193).

Longing for 'one true story' drives the construction of narrative strategies in which fact and fiction are mutually exclusive categories: facts are equated with

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'truth' (and fiction with lies), and 'scientific facts', especially, are privileged representations of a 'reality' that in principle is independent of human subjectivity and agency. But fact and fiction are culturally and linguistically closer than these narrative strategies imply. A fiction, from the Latin *fictio*, is something fashioned by a human agent. 'Fact' also refers to human action: a fact is the thing done, 'that which actually happened', the Latin *factum* being the neuter past participle of *facere*, do. Thus, both fact and fiction refer to human experience, but 'fiction' is an active form – the act of fashioning – whereas 'fact' descends from a past participle, which disguises the generative act. In Haraway's (1989) words: 'To treat a science as narrative is not to be dismissive … But neither is it to be mystified and worshipful in the face of a past participle' (p. 5). Facts are testimonies to experience. Scientific facts are testimonies to the experiences of scientists as they actively *produce* facts with their specialised technologies of data generation and inscription, their rule-governed practices of interpretation, and their characteristic traditions of social relationships and organisation. The opposition of fact and fiction in modern science is itself a fiction – a story fashioned to rationalise the strategies used by scientists to produce facts.

There is little doubt that particular fictions of modern science have convinced us of the alarming extent of many environmental problems, an influential example being Carson's (1962) synthesis of the testimonies of numerous ecologists, physiologists, biochemists and geneticists to their experiences of monitoring the effects of insecticides. But a case can also be made for asserting that these same problems have resulted from modern science's construction of stories in which the storyteller is 'detached' from the earth, in which subject and object, 'culture' and 'nature', are categorically distinct, and in which the relationship of the earth to humans is instrumental. This narrative detachment of human culture from the earth that sustains it is manifested by stories that construct the 'cultivated' subject – the 'educated' person – as an individual consciousness 'dislocated' from nature. As Fry and Willis (1989) write:

> The cultivator, as artist or critic, like the scientist, has so often regarded nature as low, as threat, as transcended origin and therefore in need of conquest and domination. The cultivated subject is seen to be the mind grown above nature and in command of it, totally separate from the baseness of body.

> This discourse has self-evidently failed. Humanity has damaged its own ecosystem, its collective and interdependent body, through the alienation of self from a nature that is external, other. An ecology of survival extols neither a rationalist command of nature nor a romantic return to it – nature never went away – but a major reassessment of social and economic actions according to their effects on wellbeing within the biological and social ecology. If humanity is to survive, we must recognise that there is no 'outside' from which to speak or act; we must gain a new normative matrix

for the conception and production of the world. Survival is the one universal value that transcends the proclamation of difference. (pp. 230–231)

Fry and Willis make two points with which I must take issue. Firstly, I am deeply suspicious of approaches to problem resolution predicated on 'universal' or transcendental values. Secondly, even if 'survival' *is* a 'universal value', the possibility that it might transcend 'the proclamation of difference' is unlikely to affect the survival prospects of most of the world's endangered organisms and habitats. The 'proclamation of difference' to which Fry and Willis refer is a relatively recent and predominantly Western invention. For example, the cultures represented among the world's one billion rural poor, whose survival is unequivocally threatened (see Jazairy, Alamgir, & Panuccio, 1992), have not necessarily positioned themselves outside 'a nature that is external, other'. The precarious existence of people whom we patronizingly locate in 'developing' countries is less a consequence of *their* 'alienation' from nature than of *our* alienation from otherness. When we think of survival, we cannot speak of a unitary 'humanity', since it is not so much that 'humanity has damaged its own ecosystem' but that *some* humans have damaged *all others'* ecosystems.

These reservations notwithstanding, Fry and Willis provide a serviceable framework within which to consider alternatives to the 'failed' discourse of 'the mind grown above nature'. One alternative that they identify – and peremptorily dismiss – is the discourse of a 'romantic return' to nature. But this discourse is mobilised too frequently in education and popular media to be dismissed lightly. For example, a number of outdoor environmental educators valorise the 'direct experience' of nature by reference to metaphors drawn from the language of romantic love. In what follows, I will demonstrate that romanticising human contacts with the natural world can involve indefensible representations of human relationships with one another.

'DIRECT EXPERIENCE', INTERTEXTUALITY, AND READING THE WORLD-AS-TEXT

The world is a text that is read, and our interpretation of our world is a function of our reading of texts. (Stoicheff, 1991, p. 95)

My purpose here is to pose some questions about the educational merits of texts that exhort a 'romantic return to nature'. I offer a critical reading of one popular text that is explicitly designed to supplement learning experiences in outdoor settings, paying particular attention to intertextual readings of both this text and the world-as-text. The significance of intertextuality in this context can be demonstrated by considering two readings of nature by, respectively, Shakespeare and Gibson (a contemporary author of science fiction):

And this our life … finds tongues in trees, books in the running brooks, sermons in stones … (Shakespeare, As You Like It, 2.1.15–17)

> The sky above the port was the color of television, tuned to a dead channel.
> (Gibson, 1984, p. 3)

Despite differences between the languages of Elizabethan theatre and late-twentieth century science fiction, these quotations are similar in one important respect. In each case, meaning is ascribed to experience by coding aspects of the 'natural' world (trees, brooks, stones, sky) in metaphors drawn from the textual and technological worlds that humans have constructed, including language itself ('tongues'), ritual forms of speech ('sermons'), and print and electronic media ('books,' 'television'). Both passages exemplify ways in which texts mediate *and construct* experience: we not only *read* 'sermons in stones', but also *write* them there. The particular signs that Shakespeare and Gibson inscribe on nature are chosen from different repertoires, and each writer follows historically specific cultural patterns of constituting meaningful experience in them. For example, by construing nature as a text in which to read God's purposes, Shakespeare continues a narrative tradition stretching back at least to the Christian Middle Ages, whereas Gibson's television sky adds to a long line of mechanistic metaphors for nature that remain a lasting lexical legacy of Newtonian physics (note too, that the TV sky is a 'dead channel': no message, no God).

Both Shakespeare and Gibson encode their readings of the world in signs that reflect their readings of other texts (such as sermons and television). This mutual interreferencing of the world-as-text and other texts invites us to be critical of assuming the merits – and indeed the *possibility* – of a 'return' to nature enabled by 'direct' (unmediated) experience of it. For example, in a rationale for including experiences of solitude in the Institute for Earth Education's programs, Van Matre (1990) recommends providing opportunities for participants to 'sharpen their *nonverbal* skills … to be out there in touch with nature, one on one, in direct contact with the elements of life… unchanneled, unfiltered, unmolded by man [sic]' (pp. 69–70; emphasis in original). But it is naïve to assume that solitude precludes the mediation of experience by the signs and symbols with which we have learned to invest experience with meaning. The mere absence of opportunities to interact with other people or with verbal and visual media does not compel us to relinquish the meanings we have already constructed – we can leave textbooks and televisions behind, but not intertextuality. Even if we are alone in a remote wilderness, we will still *make* sense of our sensations by encoding scenery in the 'signery' we carry with us.

Recognising the intertextual mediation of experience is significant for outdoor and environmental educators because they influence the intertextual 'scaffolding' that supports the production of meaning by learners by privileging some texts and ignoring or diminishing others. Consider, for example, the frequency with which North American environmental educators refer to the texts that the editors of *The Earth Speaks* (Van Matre & Weiler, 1983) call 'the writings of naturalists and natives, poets and philosophers' (p. v). These include the oft-quoted impressions and aphorisms of authors such as Wendell Berry, Aldo Leopold, John Muir, Sigurd Olson, Gary Snyder, Henry David Thoreau and speeches spuriously attributed to

the Native American Chief Seattle (see Gough, 1991). I do not dispute the beauty, poetry, wisdom or virtue attributed to such texts, but we also need to consider critically how these and other texts *work* intertextually when they 'play' into the meaning systems of outdoor and environmental education.

For example, we can ask if some intertextual readings of the world are better or worse than others in predisposing readers to act in environmentally responsible ways. Are our transactions with the earth likely to be more or less sustainable if we read stones as sermons or the sky as television? Does reading 'sermons in stones' inspire reverence for nature by positioning them as evidence of the hand of God? Does visualizing the sky as 'the color of television, tuned to a dead channel' devalue nature by positing technology as the ground upon which to understand nature? Answers to such questions are not obvious. Although religious convictions provide many people with a deep sense of obligation for their stewardship of the earth, as an atheist I cannot comprehend nature in terms of supernatural agency, whereas I understand that reading nature as if it were continuous with technology explicitly connects it to the realm of human design and, therefore, human responsibility.[v]

But one does not need religious convictions to read (and write) 'sermons in stones'. In his editorial contributions to *The Earth Speaks*, Van Matre gives the earth a secular voice – a voice quite literally 'calling' for a 'romantic return to nature'. Given that his editorialising is intended to influence the reader's interpretations of the works anthologised in *The Earth Speaks*, and given also that the book is explicitly designed to support outdoor environmental education, a critical examination of its intertextual provenance is warranted. We cannot assume that the unambiguously romantic view of human relationships with the earth that Van Matre expresses in this text will work in benign or constructive ways.

Prior to the modern era, humans sustained a sense of interdependence with the earth through metaphors of kinship. For example, a recurring theme in the stories of Australian Aborigines is that 'earth just like mother and father and brother of you' (Neidjie, 1990, p. 3). Similarly, Native American mythologies are centred on honouring propriety in one's relationships with all of 'the supernaturals, spirit people, animal people of all varieties, the thunders, snows, rains, rivers, lakes, hills, mountains, fire, water, rock, and plants … perceived to be members of one's community' (Allen, 1989, pp. 10–11). Western agricultural societies reduced this broad sense of kinship to a more narrowly patriarchal concept of 'Mother Nature' – an all-giving, forgiving, ever-providing presence in the background (Plumwood, 1990, pp. 622–628). Then, as Merchant (1980) documents, people like Bacon, the 'father of modern science', produced further metaphorical transformations of nature:

> Bacon developed the power of language as political instrument in reducing female nature to a resource for economic production. Female imagery became a tool in adapting scientific knowledge and method to a new form of human power over nature. The 'controversy over women' and the inquisition of witches – both present in Bacon's social milieu – permeated his

description of nature and his metaphorical style and were instrumental in his transformation of the earth as a nurturing mother and womb of life into a source of secrets to be extracted for economic advance. (p. 165)

Metaphors matter, and as Jansen (1990) observes, 'people do not treat a "mother"…the same way they treat a "bride", "mistress", or "common harlot", the descriptive terms Bacon uses to name nature' (p. 239).[vi] Clearly the feminisation of nature by men in Western society cannot be seen as benevolent. The following passage from Van Matre's (1983) Introduction to *The Earth Speaks* must therefore be read with incredulity:

> Yes, the earth speaks, but only to those who can hear with their hearts. It speaks in a thousand, thousand small ways, but like our lovers and families and friends, it often sends its messages without words. For you see, the earth speaks in the language of love. Its voice is in the shape of a new leaf, the feel of a water-worn stone, the color of evening sky, the smell of summer rain, the sound of the night wind. The earth's whispers are everywhere, but only those who have slept with it can respond readily to its call.

> … falling in love with the earth is one of life's great adventures. It is an affair of the heart like no other; a rapturous experience that remains endlessly repeatable throughout life. This is no fleeting romance, it's an uncommon affair … (p. v)

About 75 items of prose and poetry are collected in *The Earth Speaks* – and all but four of the contributors are male. In his Introduction, Van Matre (1983) writes of choosing these particular passages 'because each in some way speaks for the earth' (p. vi). On this evidence, Van Matre's standpoint towards the earth is much like Bacon's, albeit with overtones of the new-age 'sensitive man'. Although not explicitly gendered, the earth is implicitly positioned by Van Matre as a loving sexual partner who 'speaks' through chiefly male interpreters – and whom the implied reader will thus assume to be passive and female.[vii] His stance is thus privileged, patronising and patriarchal.

I do not doubt Van Matre's good intentions or his commitment to living harmoniously with the earth. Nor am I criticising the other contributors to *The Earth Speaks* whose celebrations of the earth and the sense of wonder it inspires have an important place in education. Rather, I am pointing out ways that Van Matre's words *can* be read that are deeply contradictory to the ecocentric values and purposes that otherwise predominate in his writing. We cannot ignore the dangers of cultivating an anthropomorphic image of the earth as an object of romantic love and affection – especially when that image is implicitly given the form of women, who have historically been oppressed, exploited, and ignored. As educators, we need to be aware of these possibilities, with their potential pedagogical pitfalls and opportunities, provided by the 'play' of indeterminate meanings across the discursive space we share with learners.

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When we go 'out there in touch with nature', and invite learners to reflect on their experience, we are in effect inviting them to provide us with an intertextual reading of the world-as-text, because the ways in which they encode their interpretations of experience will reflect their prior readings of other texts. This raises important pedagogical questions for outdoor and environmental educators. What sorts of readings should we encourage or discourage? Which texts should we deliberately place in the intertextual milieu within which learners read the world-as-text? Shakespeare? The Bible? *The Earth Speaks? Neuromancer?* (Or perhaps more pertinently for screenage learners, the *Neuromancer* video game developed by Interplay Productions in 1988) Something else?[viii] My purpose here has been to demonstrate that answers to such questions should not be taken for granted.

NOTES

[i] I strike through 'reality' and 'nature' here to signify that I read such terms *sous rature* (under erasure), following Derrida's approach to reading deconstructed signifiers as if their meanings were clear and undeconstructable, but with the understanding that this is only a strategy (see Derrida, 1985).

[ii] I acknowledge that many of the arguments advanced in this section were initially formulated in a conference paper (Gough, 2003) and first published in the *Southern African Journal of Environmental Education* (Gough & Price, 2004).

[iii] Scott and Gough (2004) add three other citations to Stables' work to authorise this assertion.

[iv] I am especially grateful to Whitson (2006) for clarifying the implications of misleading translations of Derrida's (in)famous aphorism.

[v] cf. Baudrillard (1981), for whom 'everything belongs to design'; the 'designed' universe 'is what properly constitutes the environment (pp. 200–201).

[vi] Jansen also points out that the men of the Royal Society who were Bacon's intellectual heirs eventually 'killed' nature, via such ambiguous metaphors as Boyle's 'great pregnant automaton' and Newton's unambiguously lifeless 'world machine'.

[vii] Although other readings are possible, it is most likely that younger readers, especially, will interpret such terms as 'lovers', 'affair' and 'romance' in terms of heteronormative relationships. I should also emphasise here that the contributors to *The Earth Speaks* are not responsible for Van Matre's interpretations of their texts; indeed, I read them as speaking for themselves rather than 'for the earth'.

[viii] Elsewhere (Gough, 1993b) I argue what some readers might judge to be an extreme case, namely, that within the intertextual networks we construct in outdoor and environmental education, there may be reasons to prefer 'cyberpunk' science fiction, such as Gibson's *Neuromancer*, to the romantic nature poetry and prose of books like *The Earth Speaks*.

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Noel Gough
La Trobe University
Australia

RUTH LAWRENCE, MARGARET ROBERTSON
AND GREGORY HEATH

20. THE OUTDOORS AS A FLUID CONCEPT

Bringing this book to a close was cause for editorial reflection. The previous chapters bring diverse experiences together into a collection of views and visions related to the outdoor experience. The authors have extensive experience in the outdoors, either as practitioners or recreationalists, and have drawn on the depth of their personal experiences in their writings. Together they represent a rich compilation of strengths from individual writers at various stages in their academic lives. Casting forward what might we expect?

   Role models of how to live a good life as an academic, scholar, intellectual and humanitarian have lead us to the works of American geographer Carl O. Sauer (Williams et al., 2014). The son of German immigrants to the United States he was born in 1989 and lived a full and extremely productive life before passing away in 1975. In the words of another giant in the field of US born geographers, David Lowenthal, Sauer "married New World pragmatic know-how with Old World historical and scientific insights to become the acknowledged champion of a humanistic synthesis" (2014, p. vii). He obtained his PhD from the University of Chicago in 1915 and went on to be Professor of Geography at the University of California at Berkeley in 1925 where he remained until his retirement in 1957. His enduring legacy is reflected in current issues related to environmental degradation, sustainability and climate change. As one of his graduate students Lowenthal recalls, Sauer "embraced both scientific and humanistic insights … [he] took all knowledge as his province, and he propelled his students into every imaginable realm of thought and terrain" (2014, p. ix). His extraordinary qualities of self-discipline, hard work and constant curiosity to discover for himself and his students suggest an individual where second best was never a consideration. The voluminous works of Sauer are testimony to his productive life. Perhaps most recognised for his paper titled *The morphology of landscape* (1925) Sauer spent long periods in his early days engaged in field studies bringing together disciplines outside geography including anthropology, sociology, botany and geology. A whole of place experience seems to best capture his scholarship. In the twenty-first century, and some thirty years since his demise, contemporary environmental, social, political and cultural conflict does little credit to his extraordinary leadership in the twentieth century. In a modest way our book attempts to raise the status of some of the qualities that characterised the life of Carl Sauer and perhaps encourage students and scholars back into the traditions of valuing and discovering self and 'other' in outdoor spaces both real and imagined.

One of the key elements explored by several authors comes directly from direct and indirect experiencing the 'other'. The differences between Western and indigenous interactions with natural and cultural environments are featured in the chapters by Australian Genny Blades, Canadian Gregory Lowan-Trudeau and New Zealanders – Mike Brown and Sharyn Heaton. Blades takes us with her on a journey along an Aboriginal songline in north-western Australia where she contrasts white Anglo-Saxon and indigenous relationships to country in her quest to 'cultivate an attitude of attunement'. Lowan-Trudeau explores the tensions between his own indigenous and western cultural perspectives through personal journeys which include the need to regularly escape into the mountains whilst acknowledging the need to advocate for local environmental issues at two different Canadian locales. Brown and Heaton engage us in an instructive dialogue between themselves as they seek to identify the differences and similarities between Maori and white Anglo-Saxon relationship to place, activities, culture and language. Although not focusing on indigenous perspectives, Eric Mygind analyses and reflects on the cultural differences between his own Danish inter-relationship with the outdoors (friluftsliv) and those he experienced whilst paddling though the northern Canadian wilderness area of Nunavut. Each of these chapters exemplify not only the high ideal of mutual acceptance of cultural differences in attitudes towards the outdoors, but the richness of the experience gained by those who embed themselves in other cultural, especially indigenous, activities in the outdoors.

Elements of the past, or our heritage waiting to be recalled, are implicit in these experiences. Indigenous knowing, oral traditions, and elder leadership are all qualities we are urged to value and not lose in the context of social media, global consumerism and the commodification of knowledge. As the pressure on resources, space and place mounts the value of traditional knowledge as a source of enriching experience is only increased.

Subjectivity or first-hand experience of the outdoors projects a sense of wellbeing and expanded horizon, or added dimension that captures new and invigorating insights. A rich contribution is offered by Margaret Robertson as she gently but insightfully leads us from the simple pleasures of a morning walk to ontological reflections on the significance of the outdoor experience for wellbeing and finding our place in a hectic world. Our need to replenish our thinking as well as build physical strength shows a symbiotic connection or a philosophy for life that helps guide our mentoring and teaching of students. The latter is well illustrated in the chapters of Martin, Hodgson, Townsend and Lawrence, Hoad, Holmes, and Humberstone. Environmental knowing of school children and higher education students is a major issue and concern for outdoor and environmental education. Seeking strategies that can in part achieve the aims of great mentors like Carl Sauer can help. Hodgson uses music and songs around the campfire; Hoad adopts the pragmatist approach of utilising opportunity as is arises during the field learning experience; Holmes uses the discipline of journal writing to encourage students to develop their metacognitive powers and maximise the learning experience, and Humberstone draws us to nature and its powers for mental health

and wellbeing. In more abstract philosophical terms related theoretical dimensions of knowledge and knowing both conscious and sub-conscious are captured in the chapters by Heath and Gough.

An evocation of the spirit of adventure must surely be embedded in the philosophy of all of our contributing authors. However, there are some necessary precautions to follow as the scholarship of teaching and learning in the outdoors brings to the fore. Thomas and Munge as well as Bester in particular place strong emphasis on pedagogies for successful teaching in the outdoors. As Tsang's chapter on the role of non-government organisations shows authentic teaching and learning materials containing vivid imagery of outdoor spaces are an asset. Fieldwork is at the heart of these experiences and preparing for the unknown or instances that can occur by chance demands strategies of care and safety for all practitioners. Learning with responsible skills to manage self, others and the environment requires a balance between freedom, and observance of societal rules designed to protect individuals in the immediate and long term life experience plus avoid disruption in the ecological balance within our surrounding spaces and places.

Now it is spring time and we are ready to embrace all the freshness of new leaves, new growth and birds returning from the warmer parts of the globe. The outdoors beckons. We started this book in Chapter 1 with an emphasis on walking and 'being' in the outdoors. Our mission is not to inspire our own community of followers so much as to challenge young people to be involved in outdoor experiences. To be curious and to question what is in our surroundings can be a life ethic for wellness and happiness.

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AUTHOR BIOGRAPHIES

Paul Beedie is currently a Principal Lecturer in the Sociology of Adventure & Sport at the University of Bedfordshire, UK. He is a dedicated outdoor activist and he teaches across a range of undergraduate and post graduate courses. His research has been driven by an interest in adventure across its manifestations as education, recreation and tourism and is particularly focused on explorations of risk, identity and community. He is the author of *Mountain Based Adventure Tourism: Lifestyle Choice and Identity Formation* (2010).

Lucas Bester is a lecturer at La Trobe University in Outdoor and Environmental Education where he has a keen focus on outdoor pedagogies, place-based knowledge, ecological education and safety in the outdoors. Lucas previously taught at a Steiner school in Melbourne.

Genny Blades lectures in Outdoor and Environmental Education at La Trobe University. Her areas of teaching include sustainability education, environmental values, curriculum and pedagogy. Her current PhD research focus is walking, and exploring this from embodied experience that implicates both the outer and inner dimensions.

Mike Brown is a senior lecturer in the Faculty of Education, The University of Waikato, New Zealand. He is co-author of *A pedagogy of place: Outdoor Education for a changing world* (2011) and Editor of the *NZ Journal of Outdoor Education.* His research interests include outdoor education pedagogy, place, and human interactions with the sea.

Irene Nga-Yee Cheng is Assistant Professor of the Department of Science and Environmental Studies at the Hong Kong Institute of Education where her interdisciplinary teaching and curricula include Liberal Studies, General Studies and Environmental Studies. Irene was a recipient of the President's Award in Teaching Excellence in 2012–2013.

Noel Gough is Foundation Professor of Outdoor and Environmental Education at La Trobe University, Victoria, Australia. His scholarship focuses on research methodology and curriculum studies, with particular reference to environmental education, science education, internationalisation and globalisation. He is the author or editor of five books, including *Internationalisation and Globalisation in Mathematics and Science Education* (2007), and has published more than 140 book chapters and journal articles.

Gregory Heath is Adjunct Associate Professor in Education at La Trobe University. He is a Fellow of the Philosophy of Education Society of Australasia and formerly the Head of School of Education, Outdoor and Environmental Studies

at La Trobe University. Greg's particular areas of interest are education policy, the philosophy of learning and teaching and theories of communication.

Sharyn Heaton is of Kai Tahu, Muaūpoko, Te Arawa and Tainui/Waikato descent. As Senior Lecturer in the Faculty of Education, The University of Waikato, New Zealand she was the principal investigator for the writing of the Māori-medium learning area Health and Physical Education for Te Marautanga o Aotearoa (2008). She has worked extensively in the Māori-medium education sector.

Colin Hoad is an adjunct lecturer at La Trobe University and is currently investigating humour and engagement as the basis for his PhD research. Affordance theory provides the conceptual framework for the sociocultural analysis of the interactions in the outdoor context.

Lesley Hodgson is a lecturer in Outdoor Education and Environment at La Trobe University. Topics include: Environmental Studies, Interpretation, Heritage Studies, Sustainable Tourism and Education for Sustainability. Research interests include understanding learning in outdoor experiences and the role of interpretation.

Peter Holmes is an associate lecturer in Outdoor and Environmental Education at La Trobe University. He is currently working on his Education Doctorate, exploring the psychological aspects of how elite climbers think, feel, act and perceive themselves. He has taught cross country skiing for 20 years within the vocational and higher education sectors.

Barbara Humberstone is a Professor of Sociology of nature-based sport and the senses, wellbeing and outdoor pedagogies. Her long-term grounding concern is the interconnections in embodiment and social and environmental action/justice through outdoor pedagogies. Her most recent co-edited book is *Urban nature: inclusive learning through youth work and school work* (2014). She is managing editor of *Journal of Adventure Education and Outdoor Learning*.

Ruth Lawrence is Senior Lecturer in Environmental Studies at La Trobe University, Australia. Her research interests focus on environmental history, alpine landscapes, water resource management, and cave environments. Ruth seeks to facilitate effective student learning by integrating classroom teaching and field-based studies.

John Chi-Kin Lee is the Vice-President (Academic) and Chair Professor of Curriculum and Instruction at the Hong Kong Institute of Education. He has served as the Co-Director of the Centre for Education in Environmental Sustainability. He has been awarded as Changjiang Chair Professor to serve at Southwest University,

China. John Lee's research interests focus on curriculum and instruction, geographical and environmental education as well as school improvement.

Gregory Lowan-Trudeau is a Métis scholar and educator. Childhood journeys on the lakes, rivers, trails, mountains, coastal waters and beaches of western Canada, exposure to cultural teachings, and family stories inspired him to pursue a career as a land-based science and environmental educator. He is currently an Assistant Professor in the Werklund School of Education at the University of Calgary and an Adjunct Professor in the Department of First Nations Studies at the University of Northern British Columbia, Canada.

Peter Martin is Associate Professor and Head of the School of Health Sciences and Psychology at the Federation University, Australia. His career in outdoor education commenced in the late 1970s as a teacher in a secondary school and outdoor centre. He remains passionate about the role of outdoor education in providing direct personal contact with nature for young people

Marcus Morse is a lecturer within the School of Education and Outdoor and Environmental Studies at La Trobe University, Australia. Marcus' research interests are currently in the areas of meaning making, educational experience, phenomenology, wild pedagogies and people's experience of nature.

Brendon Munge is an Associate Lecturer in the Outdoor & Environmental Education Department at La Trobe University. His research interests include the professional development of outdoor educators and the role of fieldwork in university courses. He is an active member of the profession serving as the President of the Victorian Outdoor Education Association and board member Outdoor Education Australia.

Erik Mygind has administrated, planned and taught more than 120 Outdoor Education courses since 1982. Research interests focus on *udeskole* (teaching outside the classroom); physical activity, bodily movements, teaching and social relations among pupils in primary school (Danish Folkeskole).

Margaret Robertson is Professor of Education at La Trobe University. Teaching interests in geographical education and innovative pedagogy are reflected in long-standing research interests in youth studies and cross-cultural differences. Outreach interests include membership of the Steering Committee for the International Year of Global Understanding project which is an initiative of the International Geographical Union.

Glyn Thomas is a Senior Lecturer in Outdoor Environmental Education at the University of Sunshine Coast in Queensland. He has worked in a range of outdoor education settings for more than twenty years and has a keen interest in teaching

and learning. His research and writing has focused on facilitation, facilitator education, and pedagogies in outdoor education.

Chris Townsend is an associate lecturer in Outdoor and Environmental Education at Latrobe University. He has extensive experience in outdoor education program design and delivery across secondary school, college and university settings. His research and teaching interests are driven by a passion for river education and engaging people with the beautiful yet troubled river systems of the southern Murray Darling Basin in South Eastern Australia.

Eric Po Keung Tsang is an environmental scientist specialising in feasibility studies and environmental impact assessment studies. Within the Hong Kong Institute of Education he is an associate professor in the Department of Science and Environmental Studies, associate director of the UNESCO UNEVOC Centre (HK) and chairman of the Communicable Disease Prevention committee. Dr Tsang is a panel member of the International Year of Global Understanding, initiated by the International Geographical Union.

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