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Becoming-frog: a primary school place pedagogy

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Abstract

In *Becoming-frog* a university researcher and a school teacher/researcher will analyse the productions of primary school children who have participated in an integrated educational program involving a local wetlands. In one of these productions the children performed frogs to music made of frog calls in an apparently perfect example of Deleuze and Guattari's 'becoming-animal' (1987:274). In this paper we will explore the post-industrial origins of the wetlands, the origins of the integrated educational curricula associated with the wetlands, and the children's representations in response. These representations use digital technologies to link Morwell children with children in the US, using blogging and other web technologies. The paper will argue that the wetlands itself, the integrated program, and the children's representations, constitute a place pedagogy of the in-between, and generate a concept of place as both natural and constructed, rural and urban, cyber and real, global and local. Deleuze and Guattari's concepts of 'becoming-animal', 'assemblages' and 'practical geophilosophy' offer explanatory power in relation to these representations.

Introduction

This paper is part of a symposium about space and place in education and several papers in this symposium are part of an ARC Discovery project, *Enabling place pedagogies in rural and urban Australia*¹. The project uses the framework of place pedagogies to explore how we learn about place and form community, across the curriculum from early childhood, to primary and secondary school, and adult and community education. The focus of this paper is an integrated wetlands program in a primary school.

Commercial Rd Primary School, Morwell, is located in the heart of Latrobe Valley, a location you are probably more familiar than most of you are aware. When the problem of climate change is presented on the daily news, the iconic towers of the coal fired power stations of Latrobe Valley are flashed on your television screens. Long before climate change was elevated to the status of global crisis, however, Latrobe Valley was regarded as a problem. Stretching from Yallourn in the west of the Valley to Bairnsdale in east Gippsland, Australia's heel, lies a massive bed of fossilised forests laid down 500 millions years ago. These fossilised forests formed brown coal which has been burned to produce electricity since Yallourn power station was built in the 1920s. The 'Valley' is now home to three major power stations, each with its own huge open cut brown coal mine. Massive power lines, transformer stations and puffing chimneys of large and small power stations construct the landscape of the Valley.

Generating electricity from brown coal fired power stations is a dirty business. In the Valley air quality is poor, pollution levels high and when the wind blows from particular directions everything is covered in a gritty layer of brown coal dust. There used to be a heroic story of working class labour and honourable hardship but this story is now only available to a privileged few since the privatisation and automation of the power industry. The Valley is now characterised by unemployment and socio-economic disadvantage. The story I was most often told when I moved to the Valley a year ago was the Jaden Leskie story: 'Don't live in Moe', people told me, 'they are all mad there. They kill little children and throw pigs heads onto your front lawn'. It is a particular sort

¹ Somerville, M. Davies, B. Power, K. and Gannon, S. 2006-2008, *Enabling place pedagogies in rural and urban Australia*, ARC Discovery, DPxx.

of story of socio-economic disadvantage, a story of abjectification. Latrobe Valley supplies 85% of Melbourne's electricity. It is Melbourne's abject, it is what allows the metropolis to achieve the 'cultured', the clean and proper body. So, in this context of abjectification of people and environment, it was a surprise to come across an innovative and longstanding integrated wetlands program running in Commercial Rd Primary School, Morwell.

The Morwell River Wetlands Program

It was on a prac. visit that I entered the world of frogs. I had visited the crowded portable classroom earlier in the day and watched the children navigate desks, chairs, boxes, hanging artworks, and other objects that make up this decidedly classed school classroom. I thought about Lefebvre's contention that the whole of social space proceeds from the body (Lefebvre, 1991). The social space of this classroom is produced by these movements, bodies and objects, producing, in turn, the subjectivities of the children there. My attention was especially drawn to Mary, a child with Downes syndrome, moving awkwardly in this crowded space accompanied by an integration aide. When I returned after school the teacher and the integration aide, still working in the well-worn classroom, invited me to watch a short DVD of the rehearsal for the Christmas concert. There on the interactive screen, larger than lifesize, the children came to life as frogs, dancing their frog dance to music made entirely of frog calls. In the wetlands the children get to know the frogs from their calls. Each frog has its own distinctive call and each species of frog calls in unison to attract the female by the measure of their voice. The classroom, cleared of debris, becomes the space of the wetlands. Children dance to frog calls moving frog limbs, fingers splayed, jumping, leap frog, becoming-frog to frog music. Mary, in particular, loves the performance, moving freely in this frog collective, unaccompanied by her integration aide. In one brief sequence towards the end she smiles pure pleasure at the camera, her body liberated in her frog dance. I learn that this is just a very small part of an integrated program involving visits to the local Morwell River wetlands.

The Morwell River itself is an interesting phenomena. Over fifty years ago it was diverted into a pipe for the open cut coal mine. Aboriginal artefacts on display in the reception area of the power station tell another story of a time when people sang, danced, camped and ate by the river. The open cut will be extended again. In this move, reported in the local paper, we will have an 'improved river and an improved road', the river will once again be diverted to expand the coal mine. This time it will be liberated from its pipe and returned, according to the planning map, to a river's meandering curves. I learn that the Morwell River Wetlands is an artificial wetlands, constructed by International Power, the British Company who now own Hazelwood Power Station. The school has a special relationship to the wetlands and has plotted its evolution through the frogs, native trees, shrubs and grasses, and other creatures large and small who have come to inhabit this place.

Shortly after the wetlands was developed, three local schools applied for a science grant and received \$20,000 to set up a study of the wetlands and develop a curriculum model. Regular visits to the Morwell River wetlands are a key feature of this curriculum for Commercial Rd Primary School in Morwell. The Morwell River wetlands program is integrated across all grades in the school and across all subject areas. In the early grades the children study the needs and life cycles of frogs, rearing tadpoles in the classroom. The middle grades are involved in monitoring the wetlands through frogs and other animals that live there, and the upper grades conduct scientific analysis of the wetlands through monitoring water quality. The school draws on two key community resources to sustain this program: Waterwatch and Frog Census:

Waterwatch is one of the key things that will keep this project in focus in the long term. I see Waterwatch as the hub of the wheel, things revolve around them, because they've got their macro surveys, the Waterwatch lessons they do in schools ... Waterwatch gives focussed ongoing training for the skills, the bigger picture of things, what we do with the data, photopoint monitoring (Interview, Max Sargent, 2007).

The schools worked with the Amphibian Research Centre to develop the Frog Census program based on the belief that frogs are the gateway to understanding the wetlands. With the Amphibian Research Centre they developed family science nights:

He would come down for three days at a time and involve the communities and I think that's been one of the key factors in setting the scene, with each of the school communities, that wetlands are a good thing to preserve and frogs are the gateway to study the wetlands. ... he has his slide show and we do family science activities based on frogs and on those nights he trains the teachers, you have tea after school and he says here's the range of activities you'll be running tonight and he gives the background to each of those activities and the science behind those activities (Max Sargent, 2007).

These community education nights involved hundreds of families over the time of the grant: *'their response was so huge our multi purpose room was like a can of sardines, people outside the doors and windows'* and they now have an ongoing community Frog Census Program funded by a partnership between Yallourn Energy (the owner of another power station in Latrobe Valley) and the Amphibian Research Centre. Once a month children and their parents meet at the wetlands to record frog calls: *'I think of one particular girl, in her family there's about nine kids and she's getting towards the end of all the kids, but Dad still finds time to come with her every month'*. The night I visit the wetlands Kylie is there with her Dad taking photographs and cavorting with twin boys who are there with their mother.

It's just on dusk, mid Autumn when we drive into the site. A half full moon and cool wind blows over the Wetlands, the Freeway humming in front of us and the Hazelwood Power Station behind. Partly natural, partly artificial, the original river is somewhere nearby. Here in the wetlands the frog chorus begins. Frogs' skin is a permeable membrane between inside and out, so frogs are a good measure of a place. Ben and Jim, ten year old twins, run down the road to join us, followed by their mum, and then Kylie, one of nine children, with her Dad. Last month, because of the drought, there was no Community Frog Watch. Snakes hide in the giant open cracks, we were warned. Tonight, after recent rains, we make our way through frog calls, along softening cracked edges of the water, under the rising moon. Kids playfully using digital camera/recorders take photos and record the frog calls. We hear a whistling tree frog, and a common froglet, and on the ground we read the telltale signs of fox, wallaby and kangaroo.

The other significant element of this program is a web-based exchange set up by primary school teachers in Latrobe Valley to interact with primary schools in Oregon, US, who also have a program in relation to their local wetlands. The joint web-based program is called *Corroboree*:

The word corroboree is the aboriginal word for a gathering or meeting. The meaning is complex, including not just the idea of a physical bringing together of tribes, but a meeting of minds and philosophies, of gradual growth – a gathering of momentum as the tribes arrive.

This project will be implemented in the broadest spirit of corroboree. Initially teachers and learners from three Australian schools and three Oregon schools will be involved in the design and development of a secured web site where they will gather to exchange ideas and data on their school's science projects. (Corroboree 4-H Across the Seas, Accessed 2007)

This aspect of the wetlands program initially involved exchange visits between Oregon in the US and Morwell, Latrobe Valley, by participating teachers involved in the wetlands project. The website was then set up to facilitate ongoing exchange between teachers and learners from the US and teachers and learners from Australia. The web site is populated by the both teachers' and childrens' representations of the wetlands. They exchange digital photos, audio recording of frog

calls, graphs of water quality, drawings, stories and blogs. In this paper I will focus on analysing the representations of the wetlands on the web.

Methodology

I have used the qualitative methodology of case study, underpinned by the conceptual framework of place pedagogies (Somerville, forthcoming) to gather data in this project. The place pedagogy framework, described below, with its focus on the intertwined elements of body, story and contact zone, provides a structure for data collection and analysis. In this phase of the project I have visited Commercial Rd, Morwell Primary School on several occasions to observe the class and speak with the teacher, Max Sargent. On one of these visits we recorded a conversational interview about the origins and structure of the program that integrates the children's experiences of the Morwell River Wetlands across the curriculum. I have participated in school and community activities at the wetlands over a period of 12 months and I have introduced primary teacher education students to the integrated wetlands program and Waterwatch personnel. to provide an introduction to their activities and resources for primary teacher education students. I have been provided with resource material developed from wetlands visits by the teacher and have 'visited' the Morwell River Wetlands websites several times. In this paper I will use only representations that are in the public domain on the website. The school is identified on this site so I have not sought to make the school anonymous. Children's names have been changed. In this paper I am interested in analysing the relationship between the place, the integrated program, the website, and particularly the children's representations, in order to understand this as a pedagogy of place.

Conceptual and theoretical framework and methodology

I have written previously about the framework of place, and the elements of a place-based pedagogy (Somerville, 2006; 2007), but I will summarise them briefly here in relation to the new theoretical work I want to do in this paper.

Place

In taking up the concept of place, I have used the question *what does (the concept of) place do, or what does place enable*, in order to illuminate the contribution a framework of place might make to developing a place-based pedagogy. First and foremost, because of the evolution of my work in collaboration with Australian Indigenous people, place is a site for the intersection of indigenous knowledges and western knowledge systems. Even within western knowledge systems, however, place is fundamentally interdisciplinary. In curriculum terms it enables a bringing together of many different disciplinary approaches from the creative arts through to the social sciences and physical sciences. Place is productive as a framework because it creates a space between grounded physical reality (landscape or terrain) and the metaphysical (language, stories and other representations of place). In my work with archaeologists, for example, the shared physical place of our research enabled conversations between an epistemology from archaeology based on a belief in direct access to physical reality and an epistemology from oral history based in reality as accessible through representation (Beck and Somerville, 2005). This bridging of physical reality and representation has the potential to bring positivist paradigms from the physical sciences into conversation with post positivist research in arts and social sciences in the emerging field of 'ecological humanities' (Rose, 2004). Ecological humanities is an attempt to bring ecology, usually considered the domain of physical sciences, into conversation with the arts and social sciences.

Elements of a place pedagogy

Moreover, according to David Gruenewald (2003), place is fundamentally pedagogical. It is the pedagogical aspects of place that led to my articulation of the elements of a place pedagogy. Gruenewald suggests 'decolonisation' and 're-inhabitation' as the two broad and interrelated objectives for a critical place-based pedagogy. Decolonisation involves developing the ability to

recognise ways of thinking ‘that injure and exploit other people and place’ (Gruenewald, 2003a, 9). Reinhabitation is defined as ‘identifying, affirming, conserving, and creating those forms of cultural knowledge that nurture and protect people and ecosystems’ (Gruenewald, 2003a, 9). I have taken up these objectives of a critical place based pedagogy and developed them within a feminist poststructural and postcolonial epistemology. This process resulted in identifying three simultaneous elements or principles for such a place pedagogy: *our relationship to place is constituted in stories (and other representations)*; *the body is at the centre of our experience of place*; and *place is a contact zone of cultural contact* (Somerville, 2005). Of the three elements of a place pedagogy, the focus on the body is the most radical, transformative, and challenging. In many strands of place research, the subject/object binary is regarded as the problematic basis of the separation on which environmental exploitation is founded. I regard the mind/body binary as primary, and foundational to Western language and thought. In *Volatile Bodies*, feminist philosopher Liz Grosz proposed to interrogate philosophy by ‘putting the body at the centre of our notion of subjectivity’ (Grosz, 1994, 5). It is Grosz’s particular lens in relation to Deleuze and Guattari that I will use here in analysing the Morwell River Wetlands program as a pedagogy of place.

Becomings and assemblages

While Grosz summarises widespread feminist criticisms of Deleuze and Guattari, she suggests their work shares a feminist concern to overcome the binary dualisms pervasive in Western thought. She believes they offer ‘an altogether different way of understanding the body in its connections with other bodies, both human and non-human, animate and inanimate, linking organs and biological processes to material objects and social practices’ (Grosz, 1994, 164-165). There are two key and interrelated ideas that I want to take up in this analysis – ‘becomings’ and ‘assemblages’. Becomings focuses on the body-in-process, a dynamic – conception of the body that includes ‘the transformations and becomings it undergoes, and the machinic connections it forms with other bodies, what it can link with’ (Grosz, 1994, 165). It is a body that is itself dynamically constituted as part of other bodies, human and non-human, animate and inanimate. I find this particularly useful when thinking of the human body’s relationship with landscapes, weather, rocks and mountains, as well as other non-human animate beings. These aspects have been disregarded in Western thought, and therefore in research processes and pedagogies. The process of becoming, whereby the links between humans, and animate and inanimate others are formed, is conceived as a ‘production’ of ‘assemblages’:

Subject and object are a series of flows, energies, movements, strata, segments, organs, intensities – fragments capable of being linked together or severed in potentially infinite ways other than those which congeal them into identities. Production consists of those processes which create linkages between fragments, fragments of bodies and fragments of objects. Assemblages or machines are heterogeneous, disparate, discontinuous alignments or linkages brought together in conjunctions (Grosz, 1994, 167).

In this thinking human bodies, as corporeal entities, then, are continuous with human and non human others but also with artefacts such as pens, paper, paints, computers, fabric, metal and machines, that they are linked with through production, and with the productions themselves. In other words, the representations we produce are conceived as part of our bodies. Assemblages, then, are a way of understanding both process and product. Through the processes of assemblage, linkages are created between fragments, but an assemblage can also be seen as the product of this process, a pause in a continuous and iterative process of representation (Somerville, 2007). One of the outcomes of such thinking is to disrupt the usual binaries through which we understand our identities in places – such as the binaries of nature/culture and material/spiritual, but also more recently cyber/real

It is interesting to note here that these ideas have many similarities to interconnected concepts of

place, subjectivity, and representation in Australian Indigenous enactments of place, also based on a non-binary ontology and epistemology. For example, in ritual ceremony, place, human bodies, song, dance, music, performance, and animal intersect momentarily in the creation of all that is (Somerville, 1999). This understanding of 'ecological connectivity' (Rose, 2004, 1) permeates an Indigenous ontology and epistemology. The translations, however, from such Indigenous understandings are both intellectually and politically complex and are the focus of other writing. It is important to ask what Western theorists offer in terms of these ideas as Grosz (1994) does in her project to interrogate western philosophy from the perspective of the body. For these reasons, in this paper I take up Deleuze and Guattari's playful thinking to ask, 'What is made visible by thinking about bodies in this way?'

Human bodies have typically been conceived in Western thought from an anthropocentric, enlightenment perspective as discrete, rational, autonomous entities whose most important function is to house the soul, or more recently, consciousness. Bodily knowledge is regarded as base, to be erased, or subverted to the more important mind, or intellectual knowledge. Deleuze and Guattari's concept of bodies, becomings and assemblages with their focus on process and productions, promise useful insights for a pedagogical practice of place that understands place as both material and metaphysical, constructed and natural, cyber and real.

Analysing Data from the Morwell River Wetlands Program

Entering into the Morwell River Wetlands on the web is a playful experience, in itself reminiscent of Deleuze and Guattari's 'practical geophilosophy' and 'rhizomes' (Gough, 2006). It is a visual cartographic experience of mapping knowledge in a non-linear way. The purpose of Deleuze and Guattari's practical 'geophilosophy' is 'to describe the relations between particular spatial configurations and locations and the philosophical formations that arise therein' (Gough, 2006, 265). It is with this stance that I approach the website. Gough suggests that we should become nomadic in theorising science education' and, quoting from Deleuze and Guattari, that '[r]hizomes affirm what is excluded from Western thought and reintroduce reality as dynamic, heterogeneous, and non-dichotomous' (Deleuze and Guattari, in Gough, 2006, 628). Deleuze and Guattari offer the rhizome as an alternative to the tree, the tree as a structure of patriarchal, authoritative knowledge.

When I type Morwell River Wetlands into Google, there are three immediately relevant sites and because I do not know the precise location of the student work on the web I visit all three. I navigate my way around these linked sites, in rhizomatic ways, until I decide to systematically investigate the material for this paper. I do this by using a combination of looking at the web, downloading some material directly onto my laptop for later analysis, and writing with pencil and paper, some headings and sequences so I can understand layout and structure and the relationship between the different sites. In my head, and in my body, I have images and embodied experiences of the physical place itself through which I interpret its meanings. I move between these sensory images and memories of the physical place and the representations on the web.

In this sense the analysis itself is a map; part of the analysis is recognising the map of linked information and sites. There is also a sense however, that unlike navigating in geographical space, there are no recognisable landmarks and I can become irretrievably lost. I recognise this being lost as 'Abandoning one's previous frameworks, getting lost, unsettling what was previously secure and clear', part of this process of rhizomatic thinking. According to Grosz, Deleuze and Guattari 'represent one of the more innovative and thoroughgoing upheavals of thought-politics-desire' (Grosz, 1994, 166). I cannot, for example, re-locate some of the items that I have printed during my wandering on the web, nor can I re-find some places I have been. There is a conflict between the logical demands of analysis and rhizomatic thought. I respond to this through writing the analysis in layers. The first layer responds rhizomatically, making connections poetically rather than logically,

to what I experience. Later layers organise the writing more systematically into the logical requirements of scientific analysis. Traces of earlier layers are maintained, however, in a process of palimpsest, so the final imaginary is a layered map where previous layers are partly visible.

There is a large amount of information about the Morwell River Wetlands. The overall storyline is the history of its construction by Hazelwood Power, now International Power, 'as a replacement for another wetland which will be dug up to access coal in the future' (Morwell Wetlands Project, 2007). Another site tells me that:

Before European settlement, the Morwell River provided a major floodplain tributary of the Latrobe River and the Gippsland Lakes. A major wetland extended from the confluence with the LaTrobe River, as far upstream as Boolarra. Over time, the wetlands associated with the river have been eaten away by land development and river diversions. (Morwell River Wetlands, 2007)

This story of a bioregion gives time depth to my imaginings. I can also view a contemporary satellite map of the area, showing the location of the current Morwell River wetlands in relation to the freeway, the railway line, and the Morwell River itself whose dark curvy line disappears abruptly, I presume into the pipe in the ground. I cannot see the open cut coal mine which I know is nearby and which appears as a massive red sore on google earth. The open cut is usually concealed from public view. I can see photos of the development of the wetlands over time until I recognise the place of my recent visit, deeply changed by the effects of severe drought. In this place described as 'the carbon capital of Australia' (Mitchell, 2007) I read the deep cracks in the ground as a local sign of the global effects of carbon emissions on the earth's climate. I remember that the first Frog Census visit to the wetlands was cancelled due to the danger of snakes hiding in these deep cracks. I am aware of the minute and material effects of the global on the local. From these sites I gain a layered understanding of the place and its relationship to landscapes that have been dramatically altered by human habitation but continue to evolve in an ecological manner.

One site hopefully tells me that the 'opportunity now exists to coordinate several projects along the Morwell River. The result could see wetlands re-established similar to those which existed prior to European habitation' (Morwell River Wetlands, 2007). A pedagogy of hope has been noted elsewhere as important in relation to climate change (Mitchell, 2007), but while I admire the sentiment, I am sceptical. Here the most hopeful thing for me is the link to an educational discourse: '[a]s part of their responsibility to the community they have included scope for educational opportunities in their plans' (Morwell Wetlands Project, 2006). International Power has followed through on this projection and maintains active connections with the primary school and their wetlands program.

The activities of Commercial Road Primary School are described and represented on a website headed *Science in Schools*, (2007), that also appears when I Google Morwell River wetlands. It is on this site that I can observe how the children from the Valley have engaged with a pedagogy of place. The site contains graphs of Waterwatch activities which measure the health of the water at different times; photos taken by children of the wetlands in different seasons and stages of its development; Frog Census data, a measure of the inhabitation of the wetlands; interviews the children have recorded with local knowledge holders; and information about the Corroboree Club; and Teachers' Resources. I navigate this populated and complex site along pathways of desire. I listen to the calls of many different frogs and match their calls with a photo and common and scientific names. My greatest excitement, however, is when I find the photos and audio-recordings that I witnessed on that night when we visited and watched the children playfully using their Pentax Optio digital cameras and taking photos and audio recordings of the place. The photos are here now: Dragon fly, Yabby hole, Kangaroo prints, Kangaroo scats, Brown tree frog, and Common

froglet. Yes, we were here. Then there is Kylie's brief voice recording:

Quarter to seven pm
29 th of March 2007
Morwell River Wetlands
A half moon
getting bigger
it's pretty dark,
about to record
some frogs

And then the sound of frog songs.

When I listen to the frog calls I am returned again to that autumn night in the wetlands, a cool breeze, a half full moon, just on dusk as the frogs begin to sing. There are two things that strike me about these oral words. One is that the words are so precise, so of the moment, so spare and simple as to be poetic, a poem made of the moment in voice sounds and frog calls, the precise conjunction of time and place. The second is the significance of that moment being communicated globally on a website dispersed through time and space. The moment itself is so significant in a pedagogy of place because it is about knowing place in all its intimate detail as a place of inhabitation, a place where we dwell with other creatures. It is only knowing place through thousands of such intimate moments in its ever changing forms that we can read a place, that we can know how a place is going, how well it is. It is only through knowing a place in those thousands of intimate moments that we can learn to love a place and have the knowledge to be able to take care of it. The other thing that struck me is that if Kylie and I had not been there together in that physical place this would mean so much less. However much can be learned from the web in terms of information, for me it is the fact that it is referential to a physical place and to physical bodies interacting with that place that gives it meaning. To the extent that the qualities of that place can be expressed and communicated through digital recordings, the information can be shared but even then, it will be in reference to some other physical place of our memories through which it can be understood as embodied knowledge.

Unlike most local information in Latrobe Valley there is also a marked Indigenous presence on the Commercial Rd Primary school site. Doris Paton, a Gunai/Kurnai Elder, speaks to the primary school children at the wetlands about the local Indigenous relationship to wetlands and I can see her photo and hear her talk. I can travel through hyperlinks to the story of *The Port Albert Frog*:

Once long ago there was a big frog, Tidda-lick. He was sick and got full of water. He could not get rid of this water and did not know what to do. One day he was walking where Port Albert is now, where he saw a sand eel dancing on his tail, on a mud flat by the sea. It made him laugh so much that he burst and all the water ran out. There was a great flood and all the blackfellows were drowned except two or three men and a woman, who got on a mud flat island.

While they were there, a pelican came by in his canoe. He took off the men, one at a time, but left the woman till last, he wanted her for himself. She was frightened and so she put a log in her possum rug, like a person asleep and swam to shore. When the pelican returned, he called her to come. No answer. Then he got very angry and went off to paint himself with pipeclay to go out and look for a fight with the blackfellows.

Before that time pelicans were all black. When he was partly painted with Marloo (clay) another pelican came by, and not liking the look of him, hit him with his beak and killed him. That is the reason that pelicans are partly black and partly white to this day.

There was a time when the first Kurnai, who was Borun the pelican, came down from the mountains of the north west, and reached the level country. He crossed the Latrobe River near Sale, and continued his journey to Port Albert. He was alone and carrying a bark canoe on his head.

As he was walking he heard a constant tapping sound, but look as he may he could not find the source of it. At last he reached the deep water of the inlets and put his canoe down. Much to his surprise, he saw a woman sitting in it. She was Tuk. The musk duck. He was very pleased to see her and she became his wife and mother of all the Kurnai.

This very embodied story is replete with bodies and bodily events and the materiality of places. It has a number of human and non-human characters, materials and artifacts, in a journey through country. Because of my familiarity with Indigenous place stories I can read something of the body/place codes embedded here, of human-becoming-animal re-enacted through ceremony in place. Even in such a simple account of a creation story it is possible to discern a storyline of connections between special story places across a vast geographic region where the physical shapes and contours of the landscape, the creatures that inhabit it, and the epic journeys of the ancestral beings are intertwined. These are the creatures of the wetlands, the pelican, the duck and the frog, and the interconnected story places are specific local wetland sites. The story tells of the interchangeability of pelican-human and duck-human, in this case, notably, beginning with pelican and duck, rather than human. The story also creates an assemblage, linking material/geographical places, human and non-human bodies and artifacts. The white clay used to paint bodies for ceremony, the possum skin coat and the canoe are noteworthy in a story that is sparse with reference to cultural artifacts. The becomings and assemblages in this story itself illustrate my earlier point that there are close similarities between the Deleuze and Guattari theorizing in this paper and the underpinning Indigenous ontology and epistemology told through story. I have a memory image that connects this story to place as enacted in ceremony where song, dance, music, sound, place and bodies are simultaneously created and re-created in place (Somerville, 1999), but it is only the echo of that performance that I sense here.

By the end of the story I have traveled on a journey through time and space from the Morwell River wetlands to Sale in east Gippsland and down to Port Albert on the coast. While there I imagine the sand islands in the estuarine flats where this event takes place. Because I have traveled through these physical places I can imagine them marked with these stories and events, a new transformed landscape. This story, in turn, is part of the Bataluk Cultural trail, hyperlinked to six other cultural sites to which I can journey on the web to find out about Gunai/Kurnai story places from massacres to missions. The web represents the songline, traversing the landscape and mapping the possibility of a postcolonial a pedagogy of place for 'global contemporaneity' (Carter, 2006). I connect to this storyline and make meaning of it from my intimate embodied knowledge of the Morwell River Wetlands.

Moving out of the website and my journey I wonder if primary school children access this information and how they make sense of it, but this is another project. I remember in the primary school classroom Max Sargent drew my attention to one child's book-making project. This child had recently discovered his Indigenous heritage and made a book using powerpoint software based on an interview with his grandfather. I looked at his stories of language, and of loss and discovery of places. Pedagogically it confirms the significance of the category of 'contact zone' in any place pedagogy. The contact zone opens up alternative and invisible place stories and practices to generate a broader and more inclusive understanding of places. These stories of the contact zone have been present for the children in their classroom and in the wetlands so maybe they will have some basis, for moving out from the wetlands as home, to these more distant places and imaginations of otherness.

Discussion

The enormous complexity for me of living in LaTrobe Valley is mirrored in the complexity of analysing the place pedagogy of the Morwell River Wetlands project as an integrated curriculum at Commercial Rd, Morwell, Primary School. Through the application of the framework of place, asking the question *what does place do*, and analysing the elements of a place pedagogy, it is possible to gain some insight into the operation of a place responsive pedagogy in a primary school. The particular focus on web based representations and Deleuzian concepts of becomings and assemblages serves to unsettle 'what was previously secure and clear', what might have been 'congealed into a fixed identity' in this research process. It was however, a rhizomatic process of research emergence through which the digital DVD made visible and significant the performance of becoming-frog and called forth a Deleuzian response.

The storylines of the wetlands resonate with the remarkable tension between the technologies and operations of a power station and open cut coal mine and the story of a system of wetlands extending from the confluence of LaTrobe River to the Gippsland Lakes prior to European intervention. The Morwell River wetlands, as place, sits in the space between these two storylines. Neither entirely natural, nor entirely artificial, it can in no way be regarded as a wilderness site for a romantic notion of places. It is a truly postmodern place of the in-between, both natural and constructed, rural and industrial, cyber and real, global and local. In answer to the question then, what does place do, it illuminates the way in which a specific site such as the Morwell River wetlands can make available such complex understandings of place. The question of the extent to which individual children understand this level of complexity would require further research. However, having experienced these multiple practices as a pedagogy of place, it is unlikely that these children, growing up in the heart of Latrobe Valley, will have the same understandings of place as their parents and grandparents did. The Morwell River wetlands makes complex understandings essential and offers the opportunity for a postmodern engagement with the place and its multiple and contested stories. These stories certainly 'reintroduce reality as dynamic, heterogeneous, and non-dichotomous' and confirm the purpose of rhizomatic thought.

The children's engagement with the wetlands is most evident in the activities on the website, that are framed in terms of science, Waterwatch and Frog Census, for example. There are other forms of engagement, however, such as interviews with knowledge holders, talks from Aboriginal Elders, and samples of children's drawings, and stories. There are strong enough traces of the embodied experiences of place in the web based representations of the March 2007 community frog census to make some analytical comments about bodies as becomings and assemblages. Kylie engages with the wetlands as a social experience with her father, other children and their parents and her one time teacher, and other occasional adults. She uses the digital camera-recorder with ease and simplicity, as an extension of the expression of self, reproduced in photos, voice, and frog sounds, on the web. These elements - her body, the place as material/geographical terrain - water, mud, plants, wind, the light of a half full moon, frog sounds and camera/recorder are linked in that moment of becoming. To analyse these activities through Deleuzian notions of becoming and assemblage offers new iterative understandings of a postmodern pedagogy of place.

I return now to the nature and meaning of the frog dance, which seems to me to be a production of a different order. When I watch the DVD I can feel in my body the extension of self-into-other required to perform frog. How does a frog move? What do its limbs do? How can your fingers be frog fingers, how does your body move to frog music? In this sense it is not mimicry that is required, but a becoming. And yet, this becoming is still underpinned by that intimate knowledge of place and its creatures that refers to that which is beyond the self. The frog calls, for example, enter

the body in this performance in a way that is evident and undeniable. The performance itself transforms the space of the classroom. The classroom-becoming-wetlands in the production of frogs and children's bodies transformed through a different body/place knowledge. This human-becoming-other, body/place knowledge is underpinned by a primary relationship with the material/geographic place and its relationship to other places, both real and imaginary.

Finally I ask myself whether this complex theorising is completely divorced from the practices and meanings this activity has for the teachers and learners. I position myself as a learner/participant in this process as a newcomer to both Latrobe Valley and the primary school classroom. I am, however, also an outsider and my task is to understand it theoretically. In pondering this question in the writing of this paper I remembered an email exchange with Max about the April visit to the wetlands when I was unable to participate. He told me that there were no frogs calling so the children engaged in other wetlands activities. I asked him '*why the frogs were not singing at the wetlands?*' He responded:

Well I can't answer it for sure but if I try to think like a frog I would not want to be about tonight as the moonlight was strong making me more visible, the ground was very dry when I need to keep my skin moist. Perhaps the males said it was no point expending energy croaking for a mate, one who wouldn't want to travel any distance in these conditions. (Email, Max Sargent, May, 2007)

Max's response is as Deleuzian as my analysis in his understanding of the pedagogical power of becoming-frog.

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