Plexus: an investigation of site in relation to form

Sandra Margaret Burgess
BA (VA), Grad. Dip. Art, M. Art

An exegesis submitted in support of an exhibition of works of art for the degree of Doctor of Philosophy, The University of Newcastle, August 2013.
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Signed: S. Burgess
Dedication

for my teacher Scott Gregory with gratitude
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Map showing the Australian Agricultural Company land grants, from The Australian Agricultural Company 1824-1875, by Jesse Gregory, Angus and Robertson, 1907.
Research Question

Current ecological discourse in the arts often refers to general states of the environment rather than specific sites. My focus is, however, on a particular place. The issue then becomes how do I use art to demonstrate the interconnectedness and layering of time over this land?

I will explore, using multi-layered historical, socio-cultural, scientific, land and environmental lenses, the interconnectedness of people and land. Through this study I hope to show how greater understanding of these layers, seen through art, can engender more ethical management of our often abused and neglected environment.

Through this unique case study of a place to which I feel intimately connected, a methodology will be developed which provides a model for similar investigations into place.

The damage that the notion of ‘nature as an inanimate resource’ has done to the earth and its people is evident. Art can be used to reveal a view of nature that is more cognizant of the fragility, beauty and sacredness of the natural world; one that demonstrates the interconnectedness between all of life and the need to sustain it.
Abstract

This exegesis is titled *Plexus*, which means matting or plaiting, to emphasize the concept of interconnection. The history of a place, memories, the journeys to and from it, the connections to the environment and each other shape our experience of it. Looking closely at a particular place gives an awareness of the way that history, natural surroundings and society combine to produce a distinctive location.

Applying the model of the rhizome developed by Deleuze and Guattari, and the Buddhist philosophy regarding interconnection, this project explores the interconnectedness of geological/topographical configurations, and social and material history of Hanging Rock, near Nundle NSW, and the region surrounding it.

After examining the impact of colonialism on the Aboriginal people of the region and the differences between the ways in which both groups perceive the environment, it is apparent that the subsequent degradation of Hanging Rock, once an unspoiled wilderness, was a direct result of these differences.

The microscopic organisms, the less noticeable or seemingly unimportant plant life and the layering of other plant material in the environment are investigated and given equal status with the more noticeable so as to make clear the need to value each entity equally, all play a part in the health of the environment.

In this particular case study of Hanging Rock I will explore how art can critique the human domination of nature. I will do this through an auto-ethnographic framework, along with theories of place, and with reference to the ideas promoted in ecofeminism, the possibility of an ethical commitment to the environment.

The role of collecting, both in the methodology I have adopted and that of other artists, plays a part in the investigation of Hanging Rock.

During this study I will produce artworks which will highlight the concerns I have in relation to the impact of human intervention on the Hanging Rock environment; in doing so I intend to communicate the fragility of this beautiful and changing place to a wider audience through a visual interpretation.
Prologue

Threads Webs and Portals

There are places that deeply affect us because of their beauty. They have a profound influence, enabling us to transcend our mundane existence and experience the natural world in a way that affirms our connection to all living organisms and systems in the universe. For me Hanging Rock is such a place.

Our experience of the qualities of places and times is obviously shaped by our own emotions and preoccupations, by our personal memories and our biological, cultural, and religious heritage. But it is also influenced by the places and times themselves. Lived experiences involve a combination of all these factors.¹

The Journey

I have been visiting Hanging Rock and the nearby town of Nundle for over 30 years. The journey from my home to Hanging Rock takes two and three quarter hours and passes through some of the most magnificent country to be seen anywhere. The trip by road to Hanging Rock, along the Bucketts Way is an enjoyable one. The country around Stroud and Gloucester is picturesque; the rolling hills are covered by rich pasture on well-tended cattle properties.

After driving through Gloucester, a left turn connects with Thunderbolt’s Way which soon passes through the village of Barrington. Shortly after this, a right hand turn leads along an increasingly steep winding road to Nowendoc, a small village set amidst

sheep and cattle properties on a high plateau some 70 kilometres from Barrington. In winter the plateau is blanketed by low cloud, mist and sometimes snow.

![Fig. 2 Nowendoc photograph by S. Burgess 19/8/2007](image)

Tree ferns and dense bush cover the rocky terrain leading to Nowendoc. Occasionally it is possible to see spectacular views of what appear to be endless mountain ranges, part of the Great Dividing Range. In the rugged country which the road traverses, clear mountain streams wind their way through gullies and wildlife is abundant.

![Fig. 3 Great Dividing Range from Carson’s Lookout photograph by S. Burgess 19/8/2007](image)

From Nowendoc to Hanging Rock is a distance of approximately seventy five kilometres. Topdale Road passes through open grazing country that bears little resemblance to the original environment which would have been heavily timbered and rich in native animals.
Further along, the Forest Way road becomes enclosed by forests of pine giving a fairy tale atmosphere to this part of the journey. The dense pine growth is reminiscent of Europe. It is nevertheless populated by some native animals such as echidnas, wombats and kangaroos though many are killed by vehicles on this section of the road.

![Pine Trees on Forest Way](image)

Fig.4 Pine Trees on Forest Way photograph by S. Burgess 19/5/2007

Finally the road passes the historic Hanging Rock cemetery, containing the remains of some of the early pioneers. Here it is possible to identify them and connect to their stories. Visitors to Hanging Rock can often be seen walking in the cemetery searching for clues about its history. Unfortunately the cemetery was bulldozed in the nineteen sixties when pine plantations were established nearby; one more example of a lack of respect towards this unique place. It is only through the efforts of concerned local residents and a local historian that there is anything to mark the passing of those buried there.

![Historic Cemetery at Hanging Rock](image)

Fig.5 Historic Cemetery at Hanging Rock photograph by S. Burgess 28/7/2009

When visiting the cemetery I often ponder the harsh lives those pioneer people must have endured. Hanging Rock cemetery sits in a quiet natural setting which invites contemplation. Lucy Lippard makes an interesting observation about the effect these
small, quiet, country cemeteries produce when she says that ‘the intimate scale pulls visitors into intimate recall’.\(^2\) When writing about ruins (and cemeteries contain the ruins of lives) she says they ‘function as generalized mnemonic devices that urge us to remember what we never experienced and can never know.’\(^3\) The inevitability of the death of all things is starkly apparent when graves lie untended because there is no one left to care. There is a melancholy beauty in these places which makes all life seem even more precious.

**Hanging Rock**

The cemetery marks almost the end of our long journey; a left turn onto Barry Road leads us past the site of the school, first established over one hundred years ago. There is now a more modern building on the site, which serves as a community centre, sitting amongst the huge black pines planted around the original school grounds. Barry Road passes the quarry where many black cockatoos congregate in the evenings, their loud squawking echoes across the landscape as they fly overhead. A glance to the right allows an uninterrupted view of the mountain ranges to the south east of Hanging Rock, giving a sense of timelessness and freedom.

Hanging Rock itself is a small country settlement situated at an elevation of 1194 metres in the Great Dividing Range. It is 60 kilometres south east of Tamworth NSW.

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\(^3\) ibid, p.104.
Currently the population numbers less than 200 people. Those who live there and those visitors who keep returning to the place are able to make a connection to a unique environment which should be valued simply for what it is rather than for economic gain.

Over the years that I have visited its magnificent, rugged environment I have developed a deep personal connection to Hanging Rock together with a concern for the degradation of the land since European settlement.

Early in 2004 a small block of land on Barry Road was offered for sale at a very low price. I was fortunate to be able to buy it. My husband and I extended a garden shed on the property into a small cabin with a bedroom, kitchen and bathroom, very rudimentary but quite cosy until the winter arrives. At times it snows at Hanging Rock.

Our four wheel drive vehicle enables us to access the more out of the way places on rough bush tracks leading to old mines and sites of early European settlement. Because we have spent so much time at Hanging Rock we have learned a lot about the history and the environment of the area. This taking of time has allowed a deeper understanding of and connection to place.
Rationale: pulling the threads, making the webs.

The art of pure inquiry is an open interface between the pure subject-all that is out there and the pure potential of the individual perceiver - all that is in here... 4

Robert Irwin is a sculptor who makes very insightful work about place. In the quote above he expresses beautifully the eclectic approach I have taken to researching at Hanging Rock. I not only focus on the obvious, such as landscape or abandoned mining equipment, but also look for inspiration in less accessible places such as those sites where earth and vegetation overlay evidence of early settlement. Specimens from the environment have also been collected for microscopic examination.

My beliefs and life experiences have shaped the method and interpretation of this research. I am a Buddhist. The concept of interconnectedness is central to Buddhist philosophy as is the belief that all life should be valued. There are a vast number of profound teachings on the subject of interconnectedness but perhaps it can be simply put as 'to have a happier future for oneself, you have to take care of everything that is related to you'. 5

Attitudes about environment and its function are unique to each of us. What a farmer, miner or forester see as making a profit from the land, an environmentalist may regard as destruction of habitat. I am a Buddhist artist who cares deeply about the environment. I perceive Hanging Rock from a different perspective to many people who go there. There are times when I am so full of joy and awe at the beauty to be found at Hanging Rock that I can hardly contain it. At other times I am saddened by the way in which parts of the area have been degraded, particularly by logging. I feel the destruction of the environment intensely, almost as if I have been wounded.

If the self is expanded to include the natural world, behaviour leading to destruction of this world will be experienced as self-destruction. 6

The above comment was generated in 1990 by eco-psychologists at the conclusion of a conference which discussed how the separation from nature can result in psychological damage to urban dwellers. They argue that 'for true mental health we must challenge the norm and take into account the interrelatedness of people and all

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other life forms'. It is interesting to note how closely modern eco-psychologists’ conclusions mirror ancient Buddhist philosophy.

Through my art practice I hope to convey the importance of valuing all of life and to show the fragility and beauty in those life forms. Also, by using the remnants of previous human endeavour, such as shards of ceramic and metal objects as inspiration for some of the work, I hope to emphasize that everything breaks down over time and how futile it is to cling to material objects.

Buddhism’s capacity to embody values of compassion through its view of the interdependence of beings with each other and within nature … seems compelling for our times. Material doesn’t only break down, it is gathered together. For example, to make a simple object such as a ceramic plate the clay used has to weather over aeons, it is then sourced by a potter, prepared for use, formed by hand, decorated and fired. In every stage the potter relies on material from the earth such as the clay for the bricks, the fuel source, the minerals and the oxygen which help the fuel to burn. The knowledge about how to produce the object is passed from teacher to student over generations. Because ceramic objects are slow to disintegrate, archaeologists have been able to learn much about earlier civilizations by studying shards of pottery from all over the world. Through a simple material such as clay, connections are made to people who lived thousands of years ago, demonstrating the Buddhist concept of interdependence.

Essential Elements

As a potter I am aware of what happens when the chemical elements are combined to formulate a variety of glazes and clay bodies. This has been a constant source of wonder to me. When I first learned about wood ash glazes I remember being thrilled when told that ashes in a glaze give varying results depending on the type of wood burned to create the ash. The place where the tree grows and the time of year the wood is harvested also affect the outcome. The trees take up the available minerals

7 ibid, p.179.
from the earth and the resulting glaze reflects the soil conditions at a particular place and time.

Clay is formed from weathered rock. Over time it is carried away from the parent rock, collecting organic matter which breaks down and becomes part of the clay. I enjoy using a material that is likely to contain organisms such as diatoms, leaf litter and lichens that I am using as inspiration.

Everything in the universe is made of the same matter. The elements in our bodies are present in the earth and all that grows and lives on it. The same minerals that formed the stars form us. After death the body decomposes and breaks down into dust to begin the cycle again. In our bodies and in the environment these elements are the building blocks for life. No matter who or what we are, all are made of the same stuff.

I have held this awareness of my place in the order of things for a very long time. It is part of who I am and therefore informs everything I do. Because of this viewpoint, I wanted to investigate Hanging Rock by searching through the layers of the past so that I could understand the present. I am searching for inspiration in the often overlooked material to be found in the environment, such as fragments of ceramic and metal objects discarded by previous generations of settlers. These objects were made of materials sourced from the earth some distance from Hanging Rock, manufactured and transported to Hanging Rock, used, broken, and thrown away. After more than a century I have discovered fragments and am able to have some sense of how the people of the time lived. The objects I have used in my research may seem insignificant to some but to me a shard of pottery, found on a site after heavy rain has washed away the covering soil, or a beautiful rock, bone or feather is as valuable as treasure may be to others. These objects all have a history and through contemplation of how they came to be, the connections to the earth and each other become clearer.

There is a desire to use my unique sensibility as an artist to reveal a different way of seeing Hanging Rock. Part of achieving this aim is to look at the microscopic organisms which support life there. Diatoms are of particular interest. They are single celled microalgae which are found in abundance in healthy aquatic environments. Diatoms are used to assess the health of water systems. As well, they make up a large
part of the bio-mass of the planet. The forms of diatoms are varied and delicate. They invite imaginative interpretation so therefore appeal to me as an artist.

This investigation focuses partly on the multi layered historical aspect of the location but my main concern is to show the mystery and wonder of the natural world which has, throughout time, supported human endeavour at Hanging Rock. By making artworks based on this beautiful place I hope to share the sense of awe that I experience each time I visit and, hopefully, I can encourage in others an appreciation of the fragility of the web of life that connects us all.

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Chapter 1   Introduction

Imagine a pattern. This pattern is stable, but not fixed. Think of it in as many dimensions as you like – but it has more than three. This pattern has many threads of many colours, and every thread is connected to, and has a relationship with, all of the others. The individual threads are every shape of life. Some—like human, kangaroo, paper bark—are known to western science as ‘alive’; others like rock, would be called ‘non-living,’ but rock is there, just the same. Human is there too, though it is neither the most or the least important thread - it is one among many; equal with the others. The pattern made by the whole is in each thread, and all the threads together make the whole. Stand close to the pattern and you can focus on a single thread; stand a little further back and you can see how that thread connects to others; stand further back still and you can see it all – and it is only once you see it all that you can recognize the pattern of the whole in every individual thread. The whole is more than its parts and the whole is in all its parts. This is the pattern that the ancestors made. It is life, creation spirit, and it exists in country. (Kwaymullina 2005)\(^{10}\)

The story of Hanging Rock is part of the multi-layered history of Australia. After the arrival of the British in 1788, the Aboriginal people were steadily driven from their lands and the population was decimated by introduced diseases. As the settlers moved further away from Sydney and deeper into the Aboriginal lands, the pattern was repeated until many of the Aboriginal people were reduced to living at the fringes of European settlement, often sick, many addicted to alcohol and reliant on the settler’s beneficence for food and work. In many instances they worked for pastoralists on their own traditional country.\(^{11}\)

The country surrounding Hanging Rock is rugged and wild in places. The Indigenous people used the country for hunting and gathering during the warmer periods but moved away during the inhospitable winters; when snowfalls were not uncommon.\(^{12}\) It

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www.2.brandon.ca/library/cjns/28.2.07Greives.pdf

\(^{11}\) Kunderong station (near Walcha) employed Aboriginal workers, many of the stock routes were superimposed over ancient pathways used by local Aboriginal people.  

\(^{12}\) The harsh weather at Hanging Rock is mentioned several times in historical references. In May 1853 Ashton’s Circus performed at Hanging Rock; three weeks later it snowed. (Bayley and Lobsey) It still snows there at times (see fig. p12). While there is no written Aboriginal history from the time it is reasonable to assume that pre European settlement, conditions were the same.
was shared country. Groups from the Gamilaroi, Dunghutti, Geageawel, Aniwan and Birripi\textsuperscript{13} people would have accessed it at various times when travelling overland for trade and large ceremonial gatherings.

After settlement, claims were staked for gold mines, fences were erected to keep stock in, and land was divided into lots and claimed by the newcomers. The original people became increasingly alienated from their country. The Aboriginal people of the region suffered great losses after contact with Europeans. Diseases such as smallpox, measles, influenza and venereal diseases, to which the Aboriginal people had no immunity, caused many deaths. Traditional life was disrupted and the Aboriginal people were eventually reduced to living on the fringes of white settlement. The spread of European settlement was slower to reach the Hanging Rock region but the outcome was the same. In a very short time the traditional lives of the Gamilaroi people had changed so much that by 1853 Mongo Mongo, an Aboriginal youth from Tamworth area, was performing in Ashton’s Circus at Hanging Rock.\textsuperscript{14}

Gold was found at Hanging Rock in 1851 and a gold rush ensued that changed the topography and the way in which the place developed. In a century and a half, it went from a beautiful rugged landscape to a booming mining town and finally to a small, quiet settlement perched high on Hanging Rock, surrounded by forest and overlooking the valleys below.

The environment at Hanging Rock was damaged after European settlement in the region. Gold mining left scars on the land and these are still visible today. Agriculture and stock grazing also made a mark. Introduced weeds such as prickly pear,

\textsuperscript{13} These groups are the ones named in many of the documents relating to the area and by Amaroo Land Council, Walcha, who represent the Dunghutti people.
\textsuperscript{14} Boileau, Joanna, \textit{Thematic History of Nundle, Manilla and Barraba}, Tamworth Regional Council Community Based Heritage Study, February 2007, p.p.67,68.

There is not a great deal written about the specific Aboriginal history of Hanging Rock. Several documents have been written for the Tamworth City Council; these give a good overview of the early history of the region. In 2007 Joanna Boileau wrote a \textit{Thematic History of Nundle, Manilla and Barraba} for the Tamworth Regional Council. It is a thoroughly researched document which involved community consultation; there is a section on the Aboriginal people before contact with Europeans. I was aware at the beginning of this project that little was available from an Aboriginal viewpoint, much of what was written after contact was negative; the Aboriginal people were marginalized in their own land. There are several mentions of crimes committed by Aboriginal people against miners and settlers in the Nundle and Hanging Rock area. Most of the information gathered has been from regional perspectives that mention Nundle which is close to Hanging Rock. Forestry and National Parks and Wildlife publications have been useful as have New South Wales Government environmental management plans. Tom McCelland has compiled several publications about Nundle and Hanging Rock; these are worthwhile as reference material for the period of the gold rush at Hanging Rock and beyond. Newspaper articles from the mid-1800s are relevant as well.
blackberries and scotch thistle took hold once the land was cleared. Native forest was destroyed to accommodate swaths of plantation pine.\textsuperscript{15} The ground beneath the pines is heavily carpeted with pine needles and weeds surround the edges of the forests.

The quote by Kwaymullina,\textsuperscript{16} an Aboriginal lawyer from the Pilbara in Western Australia, at the beginning of this chapter shows how important it is for Aboriginal people to be connected to each other, to land and everything else that is present. This view of life as connected by individual threads which make up a whole pattern resonates with the way the exegesis is structured. Threads are connected and matted to produce a whole. The story of the Aboriginal people in the region surrounding Hanging Rock is now entwined with that of the settlers. The thread that weaves their story into the whole is a sorrowful one but it cannot be undone.

The concept of both threads and interconnectedness is not only present in Aboriginal creation stories. In Buddhist philosophy, the metaphor of a spider’s web to which drops of water are attached is used to illustrate the interdependence of all things.\textsuperscript{17} In Greek mythology Ariadne gives Theseus a thread to enable him to escape the Labyrinth\textsuperscript{18} and in the Navajo Indian myth, Spider Grandmother creates the world as she weaves and re-weaves her web from the fine filaments she extrudes from her belly.\textsuperscript{19} Writers of fairy tales and poets have also used the metaphor and it is said that the craft of weaving was created by observing the gossamer threads of spiders. The notion of threads or lines is also present in the writings of philosophers, Deleuze and Guattari specifically, in \textit{A Thousand Plateaus} written in 1987.\textsuperscript{20}

Deleuze and Guattari experimented with a method of writing based on the rhizome, using what they term plateaus or layers of multiplicity. Instead of retaining what they term the ‘hierarchical tap root structure’ used in Classical writing, what they called a ‘root-book’, they postulate that, unlike a tree which has branches, a trunk and is anchored to the ground, a rhizome is more representative of the way writing really is,

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\textsuperscript{15} ‘Foresters have belatedly recognized that tree plantations of fast growing strains of commercially valued species lack the resilience of wild forests when pests, fire and other perturbations occur’ Suzuki David, \textit{The Sacred Balance} Allen and Unwin Crows Nest NSW 1997 p134

\textsuperscript{16} Kwaymullina is an Indigenous lawyer from the Bailgu and Njamal people of the Pilbara, Western Australia

\textsuperscript{17} Sagiba, Nev, \textit{The Parable of Indra’s Net} blog.aikidojournal.com/2011/10/06/the-parable-of-intras-net/, [accessed 11am 30/11/2012]

\textsuperscript{18} Ariadne’s Thread (logic), en.wikipedia.org/wiki/Ariadne’s_thread_(logic) [accessed 11.05am 21/1/2013]

\textsuperscript{19} Cultural Depictions of Spiders, en.wikipedia.org/wiki/cultural_depirctions_of_spiders#In_philosophy,[accessed 11.30am 21/1/2013]

an assemblage. They say ‘there are no points or positions in a rhizome…there are only lines…these lines always tie back to one another.’

Their concept of rhizomes is not only applicable to writing. It can also be applied to music: 'music has always sent out lines of flight…that is why musical form…is comparable to a weed, a rhizome.' A colony of ants and of rats are said to operate as a rhizome. Burrows are rhizomes as are streams of water. Neurologists and physiologists are cited as likening short term memory to the structure of rhizomes whereas long term memory is 'arborescent' or centralised.

According to Delueze and Guatarri a map can be likened to a rhizome because it can be entered at any point. It fosters connections between fields, can be torn, viewed from any angle, can be drawn on a wall and reworked. The method of research for this exegesis is similar to the description of the map as rhizome, connecting seemingly disparate objects, fragments of times and places, with imaginary lines or threads. There is also a burrowing through layers to understand the whole through multiplicity. It is partly a multi layered historical examination of place, an effort to make sense of the few fragments that remain in the landscape and in memories. It also draws threads between events, people and places. Apparently random events and objects coalesce. It is part archaeology, digging for information that is buried in time, part a sharing of experience of the present and part a plea to value what is left of a once wild and beautiful environment.

At the beginning of this project I visualised Hanging Rock as if from far above, amongst the stars. I then imagined getting closer, seeing the mountain ranges, passing through clouds until I was in the sky directly above Hanging Rock. I could see the tops of trees, fly with the birds and feel the wind. Descending further, the richness of the plant and animal life was evident. Entering the leaf litter I was conscious of the beetles, centipedes, snakes, spiders and ever smaller organisms living there. The lichen growing on the rocks and the mosses near the water were visible; small but not insignificant. This strange journey did not end on the surface of the land but broke through the crust of the earth and into the water, until the microscopic organisms were visible. It was a journey firstly from the viewpoint of a strong telescope which revealed

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21 ibid, p.9.
22 ibid p.12, 13.
23 ibid pp6,7,9
24 ibid pp15.16
25 ibid, p.12.
the cosmos; then of a powerful microscope which exposed the world of invisible creatures.

Sometimes I would see planes far up in the sky above Hanging Rock, leaving a vapour trail as they moved silently across the firmament. As I watched them I thought about all of the people on board; how fate had placed them together in a winged capsule high above the earth. I wondered where they had come from and where they were going, who they had left behind and who they might meet at the end of their journey. I then thought of all of the people who had travelled to Australia by boat in the eighteenth and nineteenth centuries, arduous journeys from which many never returned. This led to thoughts of how many travellers had found their way to Hanging Rock; I visualised these journeys as threads leading from countless directions to an axis at Hanging Rock. The threads were overlain on the land throughout time, beginning with the First People of Australia.

This contemplation led to the methodology for the project, titled Plexus, meaning matting or plaiting; the illusory intersecting threads matt over the landscape which is in turn layered with physical matter rotting back into the earth to support life. History is layered as well; lives being spent in a particular area leave traces that may be detected many years later by those who care to search. I am cutting through the layers to find meaning which will be communicated through both the exegesis and the studio work. This concept will be discussed in more detail in chapter four.

At Hanging Rock the geology has played an important part in making place, miners burrowed deep into the earth to places devoid of light; dangerous places which could swallow those who risked too much. Rupert Sheldrake explores this concept. In his book *The Rebirth of Nature*; he writes of the way that ‘miners once practiced purification rites before entering the womb of the cave or the mine; they were entering a sacred region, a domain that did not rightfully belong to man.’

Sheldrake has been a significant source of information. He is a biologist whose ideas about the sacredness of nature are inspiring; few scientists are prepared to risk ridicule by their more orthodox peers. Sheldrake is also known for his work on Morphic Resonance. He hypothesizes that places have *genius loci* or ‘spirit of the place’ which are experienced as a particular atmosphere, character or soul. He says that the causes of the different atmospheres may be found in the varying morphic fields to be found in each place (morphic fields are self- organizing systems found in nature). The concept

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is far more complex than can be explained here; nonetheless the relevance to Hanging Rock is that Sheldrake postulates that places have inherent memory.\textsuperscript{27} What has occurred there remains part of the place. I have referred to Sheldrake throughout the exegesis.

Anyone who has been obsessed knows a project can consume almost every waking moment. Ideas tumble around demanding attention. When I read the following quote by Lucy Lippard I knew I was not alone. In her book \textit{The Lure of the Local} Lucy Lippard wrote;

\begin{quote}
\textit{In the summer of 1993 I intended to start this book, but got lured by the local and spent three months in historical and archaeological delirium wandering shores, wading marshes, bushwhacking woods, and participating in my first archaeological dig.}\textsuperscript{28}
\end{quote}

I also have experienced a kind of delirium during which I have haunted museums and libraries, visited and revisited sites at Hanging Rock and driven many kilometres in an effort to get the story of Hanging Rock into context. Instead of being the one to connect the threads, I have sometimes felt more like the mummified fly in the spider’s web.

Lucy Lippard’s book \textit{The Lure of the Local} has been particularly useful. She examines and questions the role of artists in place making, giving insightful comment on methodology that other artists have used. Lippard writes that ‘we live fragmented lives… no one knows us as a whole. The incomplete self longs for the fragments to be brought together. This can’t be done without a context, a place.’\textsuperscript{29} Artists can facilitate the process of re-connecting the fragments by asking questions of themselves and others which link the environment with the human inhabitants from past and present; questions such as ‘Which native peoples first inhabited this place? What is the history of the land use around it? How does it fit into the history of the area?’\textsuperscript{30} Lippard writes that ‘such investigations constitute an archaeological rather than historical process, moving from the present down through layers of culture and history, back to the sources…’\textsuperscript{31} The method used in my research about Hanging Rock began with questions such as those mentioned by Lippard; leading to a sense that I was burrowing through layers of time as well as the physical layering of the environment in an effort to understand more completely what made Hanging Rock what it is today.

\begin{footnotes}
\item ibid, p.p. 174, 175,176.
\item Lippard, Lucy, R., \textit{The Lure of the Local}, New Press, New York, 1997, p16
\item ibid, p.25.
\item ibid.
\item ibid.
\item ibid.
\end{footnotes}
Lynn Gamwell is another author whose work has been fundamental to my research. In her book *Exploring the Invisible: art, science and the spiritual*, she has made connections to early natural historians, particularly Ernst Haeckel and linked the development of microscopy and the telescope to art. She also writes about spirituality and art. These are all themes that have previously informed my art practice and have been developed further in this study.

Ernst Haeckel has been an important influence for my work since discovering his book *Art Forms in Nature* in the late 1970s. He is a philosopher as well as a natural scientist and artist. Haeckel supported the experimental psychology that was emerging in the latter part of the nineteenth century; earlier that century the founder of experimental psychology, Gustav Fechner, formulated the idea that consciousness permeates matter. Haeckel also promoted the Darwinian theory of evolution along with the concept that human consciousness was evolving in a similar way to the corporeal. As a result of his ideas and his images of microscopic organisms, Haeckel influenced many artists of his time and continues to do so to this day.

Microscopy is an important facet of my work both as inspiration and as access to the organisms found at Hanging Rock. Therefore a section on microscopy is included, as is a section on artists who work in the art/science field.

Throughout the text are photographs that were taken on my many visits to Hanging Rock and surrounding areas and of places of interest along the way. They illustrate places and objects that are important to the story of Hanging Rock and also serve as a visual diary. Since late 2007 I have taken at least a thousand images and consequently feel intimately connected with the landscape. The journeys to the area experienced by myself in the present and others in the past have been incorporated.

The exegesis examines place, both in regard to Hanging Rock and in the area surrounding it. The Aboriginal people, the European history and ecology are discussed as is my connection to Hanging Rock and the reasons why I have conducted the study in this way. Place is also viewed in more general terms; connections, spirituality, and the response of artists to place. Most of the contemporary artists selected for

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consideration are concerned either with issues about ecology, microscopy, and taxonomy or have a particular sensitivity towards mystical aspects of place.

Duleuze and Guattari’s rhizome philosophy has been applied to the exegesis to connect what may at first appear disparate themes. For example, colonial artist Conrad Martens drew sketches at Apsley Falls in April 1852, the same falls that, twenty years earlier, were the scene of a horrific massacre of Aboriginal people by settlers from the Walcha area. At around the same time (1852) a group of English adventurers made their way to Hanging Rock to search for gold. The brothers, Alexander and Frederic C Terry and a friend, Captain Pitt had a difficult trek and no luck at Hanging Rock, but the diary kept by Alexander is a significant first-hand account of the times. When retracing Terry’s journey, I have layered my contemporary experiences and images of the places he mentions over his. Other historical information has also been woven throughout the section as necessary.

This project is not the first I have worked on in which place has been the focus. In 1998 I was commissioned to design bollards to be placed in Wheeler Place, Newcastle, as part of a bi-centennial project. I researched the background of that site by searching for information about the Aboriginal, colonial, industrial and social history connected to that site. The final design was based on a boat shape with a time line marking the relevant dates. The bollards were fabricated in metal and placed along Hunter Street at Wheeler Place. When writing about that project I perceive the embryonic methodology utilized for Plexus in that events are layered over time.

This exegesis looks at Hanging Rock and the region surrounding it from the perspective of an artist who has a deep connection to that place. The layers of history are explored and uncovered both in the exegesis and in the environment. The way that the history has impacted place has also been examined. Environmental concerns have been raised and discussed as have disquietude about the way the Aboriginal people were treated by the British invaders, and the impact that had on the lives of the people.

Theorists Lucy Lippard, Lynn Gamwell and biologist Rupert Sheldrake have been important sources for research as have philosophers Deleuze and Guattari and their concept of the rhizome. Ernst Haeckel has been influential because he was the catalyst for my investigation into science and microscopy which is significant in my work. Hanging Rock is revealed to consist of many layers as it sits majestically above the surrounding country.
Chapter 2 My Work

This chapter does not encompass all of the work made for the exhibition. The 1867 map of Hanging Rock and my reasons for using it are outlined; the shadow boxes and process of collecting are discussed. The sites where samples were collected were photographed as were images of fungus; moss and lichen, some of which are to be used in a group of images to supplement the shadow boxes in bringing Hanging Rock to the gallery. Scanning Electron Microscope images of some of the samples taken from sites at Hanging Rock are included here along with images of works inspired by microscopic organisms.

Throughout the exegesis are included sections about the artworks made in response to research contained in those chapters.

Maps

There are maps of the sea and land, maps of the body and the cosmos, mud maps, maps that lead us through the maze of our lives, artists’ maps which are not necessarily to scale but are eccentric, colourful and fun,35 ancient petroglyphs and even early three dimensional wooden maps carved by those who navigated the inlets along the coast of Greenland.36 Maps record journeys to uncharted lands and document what happens along the way.

Cartographers create maps that are not only practical but skilfully drawn. Maps are a way that an expedition can be interpreted by others and retraced. Old maps are often quite beautiful as well as informative. They are a way of accessing not only the geography, but the history of a place and the people who lived there. The layout of a map and the text are indicative of the period when it was first drawn, allowing a glimpse backwards in time.

A coloured copy of an early map of Hanging Rock was printed onto linen. The map will be placed on the gallery wall, accompanied by several shadow boxes containing objects relevant to Hanging Rock. The map documents the early history of Hanging Rock; it shows the location of sites such as the first post office, school of arts, cemetery and several inns in the area at the time. It is possible to see the location of various creeks and the rocky outcrop that dominates the landscape after which the settlement was named. I selected this particular map because it demonstrates how quickly Hanging Rock was changed by colonization. In 1848, known as Hanging Rock Run, it was leased by Nathan Burrows for cattle and potato farming. By 1867, only nineteen years later, it was sectioned into lots and marked in pink (as were British colonies the world over). When the map was no longer relevant it was crossed out with a blood red cross, nullified, just as the Aboriginal people had been.

Mapping and documentation of the country was carried out by colonists wherever they moved into Aboriginal country. Surveys, such as the one at Hanging Rock and Walcha in 1852, by Reverend W. B. Clarke37 were embarked on and sketches and paintings were made of the landscape.

37 Clarke, Reverend W. B., Report to Colonial Secretary, 28/12/1852, *Maitland Mercury*, 25/5/1853.
Shadow Boxes

At various sites around Hanging Rock I have collected evidence of the past in the form of small shards of ceramic and glass. It is clear that these archaeological finds are from the nineteenth and early twentieth centuries as they are from areas that have been bereft of human habitation since that time. There were, for example, clusters of broken crockery found near where there was a blacksmith’s house and workshop in the early days. As well as ceramic, metal objects such as nails and the vestiges of tools have been found. I wonder as I hold these objects whose hands held them when they were useful; and what is the history behind each piece?

Frederika Shulman writes: ‘objects have the ability to serve as living testaments to the liminal spaces of time, culture and personal and social identities.’\(^{38}\) Objects can also serve as the catalyst for memory and bring the past into the present. The objects I have gathered act as markers to place and history. The fact that most of the material collected is of little monetary worth does not detract from their importance to the story of Hanging Rock. Most of the larger objects in the landscape were gathered long ago and are either in the Nundle museum or in private collections. All that remain are small fragments or large metal objects which are too difficult to remove.

Natural objects such as rocks bark and bones displayed in the boxes will give a sense of the physical environment at Hanging Rock. In her book *Voyage into Substance*, Barbara Maria Stafford writes ‘even a fragment, a small tangible piece of the work of nature has the power to open up a new universe, to give concrete form to a whole material world that would otherwise be lost’.\(^{39}\)

By displaying the actual found objects from Hanging Rock in shadow boxes in the gallery I hope to trigger a similar response in the viewer to that which I have when I detect these items; a sense of wonder at the beauty and diversity of the natural world and curiosity about the people who used the objects.


\(^{39}\) Stafford, Barbara Maria, *Voyage into Substance*, Halliday Lithograph, USA, 1984, p.306.
In the Nundle Museum I discovered a plate which has similar decoration to the shards from that period that I found at Hanging Rock. Some fragments are comparable to storage jars from the nineteenth and early twentieth century.

When collecting material at Hanging Rock, I tend to daydream as I immerse myself in the place. The following text was written shortly after I had been collecting at the quarry near the main road and in the pine forest beyond the cemetery.

**The Quarry**

**Figs11,12. Quarry and detail of a rock from the area, photographs by S. Burgess 5/8/08**
It is a clear, crisp autumn day and the air is pure and fresh. Life seems full of potential and, as usual when I am here, my creative juices are flowing and ideas tumble around inside my head vying for attention. What is it about this place that stimulates this reaction? For some reason I feel free of all the mundane matters that too often consume my life and my spirit soars.

As I search amongst the seemingly endless variety of rocks in the quarry, variations on a theme as they are from one parent rock, I am excited by what I find. Massive rocks have been broken into ever smaller pieces yet each piece is unique. A car drives by; a cursory glance by a passing tourist can never perceive what I find fascinating about this site. There are small sections of iron in some rocks and the colors range from green to grey. Each one has its own character so, with an artist’s eye, I select those that appeal and leave others.

I think about the way that human beings assign value to some things and devalue others. Unfortunately that is a trait that can lead to much suffering both for human beings and other living organisms in the environment. Finding equability, not valuing one thing above another, is something I aspire to but fall sadly short of attaining. My magpie eye still prefers the beautiful, or that which appears more interesting.

As I go deeper into the quarry my presence disturbs a flock of wood ducks swimming in deep water at the bottom of the excavation. They fly off, in their peculiar stiff way, towards the cemetery, the direction I will be taking on the second part of my gathering expedition.
Beyond the Cemetery

There is a place in the forest, along the rough bush road that passes the cemetery, where early gold miners burrowed into the earth searching for treasure. Their lives must have been very hard and many of them would have been disappointed when their experiences didn’t match their dreams.

I am mining for different treasures in this place; now densely planted with pines, pitted with old mineshafts and bulging with the discarded soil and rock that once filled the shafts. Over some of these scars on the land there lies a deep, soft covering of pine needles. Mosses and lichens cover parts of the forest floor.

This is an intimate space filled with memories. I listen as the wind rustles through the pines, planted in the past fifty years, a sound that the pioneers would not have experienced here. I imagine the sound of shovels and picks hitting rock and earth, wood chopping, cursing and shouting, laughter and singing, frantic activity in a place now so quiet.

I came here to find quartz rocks to place in shadow boxes. As I search, I pick up and examine many rocks, thinking perhaps prospectors from the past may have touched the same rocks in their quest for gold. I find red quartz, dog tooth quartz and other varieties common to this area. Under a tree is a cache of discarded rusty nails, iron bearing rocks and spent bullet casings. Clearly someone with a metal detector was unimpressed with these finds; I gather them up and add them to my collection.
Shadow boxes containing various found objects from sites at HR will be displayed horizontally along one wall of the gallery. The boxes contain natural materials, shards of ceramic, glass and metal objects; they are a reference to the drawers in cabinets of curiosity and also intended to bring Hanging Rock into the gallery; all of the material was sourced there.

There will be several long narrow shadowboxes arranged vertically on the wall. These contain more found material and images, as well as some excerpts from historic documents transferred which have been transferred onto porcelain fragments. The way I have found information about Hanging Rock has been by discovering fragments of material from many different sources. It has sometimes been difficult to find. The collection boxes are visual representations of the eclectic nature of the process. They have also been useful as a unifying means for displaying the disparate objects.

There is a quote from Lucy Lippard’s book *The Lure of the Local* that articulates what I feel about the procedure of making sense of the whole by using fragments found in the environment and joining imaginary threads to link the story of place. Cherokee Indian artist, Phil Young, is cited. When speaking of gathering fragments of ancient Indian pottery as he walks through the landscape he says, ‘It’s a little fragment, but it’s speaking of something that’s whole… I’m trying to weave broken threads back together… I am attempting to reconnect the cord, searching for “home”.’

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40 Lippard, L., *The Lure of the Local*, New Press NY, 1997, p.120.
In 2007 I participated in Green, a group exhibition at John Paynter Gallery. Its focus was on environmental concerns. I exhibited an installation of ceramic forms representing microscopic organisms. Being aware of the importance of these unseen life forms in the ecological balance of the planet I wanted to focus attention on them. I had been researching for my PhD since the previous year and was looking at many images of microscopic organisms and the work of artists who worked in art and science. This field was not new to me. Since discovering the book Art Forms in Nature by Ernst Haeckel over thirty years ago, I have been fascinated by microscopy and the unseen universe that surrounds us. The installation for Green will be reconfigured for Plexus, the exhibition in the University Gallery in 2013.
A frieze of paper cuts of diatom/microscopic organisms covers the width of the eastern wall of the gallery. These forms are very varied both in size and design. Although some of the forms are similar to those found at Hanging Rock they are mainly abstractions of the many images of microscopic organisms I have seen during the time I have been researching the subject. There are thousands of different diatom forms but many of them share common characteristics. I have taken these characteristics and developed a visual language that I believe expresses the fragile qualities to be perceived in the organisms. The living organisms, when viewed through a microscope, are usually green-brown in color. Some move through the water with the aid of filaments at their edges. Although this stage of the life cycle has its unique beauty, I am more interested in the siliceous exo-skeleton which remains after the organism dies. These hard white forms are usually pierced by holes that are arranged in many diverse and intricate patterns.

**Ceramic Diatom Forms**

A series of diatom forms were made from Southern Ice Porcelain paper-clay. Not having used porcelain clay previously, it took a little while to get used to. This clay is much less plastic that ones used before. After a short while I began to enjoy the way the clay could be torn, pierced and cut to replicate diatoms. Spiked additions could be formed and attached even after the objects were dry provided that the sections to be joined were equally moist. The quality of translucent whiteness when the unglazed clay is fired to 1260 degrees Celsius is similar to the silica exo-skeleton of the diatoms.
Diatoms are found in both freshwater and marine environments. They can be detected in flowing streams, mud and in the slimy brown material that clings to rocks. Ditches sometimes contain diatoms as well because water lies in the ditches for some time after rain. There are still many diatoms that have not been classified. I collected samples from three different sites; a roadside ditch, a pond and a running stream. Photographs of each site were taken as documentation.

**Field Work**

Diatoms are found in both freshwater and marine environments. They can be detected in flowing streams, mud and in the slimy brown material that clings to rocks. Ditches sometimes contain diatoms as well because water lies in the ditches for some time after rain. There are still many diatoms that have not been classified. I collected samples from three different sites; a roadside ditch, a pond and a running stream. Photographs of each site were taken as documentation.
The samples collected from various sites at Hanging Rock were taken to the Scanning Electron Microscope at the University of Newcastle (UoN). The images below were taken by Professional Officer Dave Phelan. I watched him prepare the samples and sat beside him as the samples were placed under the microscope. It was an incredible sight to see the detail that can be obtained with the Scanning Electron Microscope.
Many of the images shown here are to be framed and exhibited along with large bottles containing samples of material from two of the sites.
Mosses and Fungi

Found amongst the leaf litter at Hanging Rock are several varieties of fungi and mosses. In the time I have been visiting Hanging Rock I have become enthralled by
these and also by the lichens to be found there. I have taken photographs which are to be exhibited in the gallery in an endeavour to show what can be seen at Hanging Rock if time is taken to look closely.

**Lichens**

The lichens at Hanging Rock are quite beautiful, flowering in winter. The first time I found one of the flowering lichens I was amazed at how delicate the blooms were. In the Hanging Rock cemetery there are many different varieties of lichens within a relatively small area. The picture below was taken in the cemetery, where the lichen was growing on a rock.

![Lichen in Bloom](HR-Cemetery-22/7/2007)

Lichens are found almost everywhere. Like algae, they are an important indicator of the health of the environment. These seemingly inconsequential organisms often go unnoticed.

Lichens are small, slow growing eco-systems. They usually consist of a fungus and a partner plant containing chlorophyll. They survive in the freezing tundra and in deserts. Lichens are important for trapping moisture, consuming carbon dioxide and preventing soils from drying out. They are a food source for both large and minute invertebrates.
Birds use them for nest building and they grow on trees, rocks, soil and mosses. They are often seen growing on metal objects and gravestones.\textsuperscript{41}

Lichens have been used to date both the retreat of glaciers and ancient monuments, some alpine lichens may live for close to one thousand years.\textsuperscript{42} Some are used in the manufacture of perfumes, dyes and also in the pharmaceutical industry.\textsuperscript{43} They were used to identify metal ore deposits in Roman times because certain plants grew on ore bearing rocks. The color of the lichen intensifies when ore is present. \textsuperscript{44}

\textsuperscript{42} Purvis, William, \textit{Lichens}, p.91.
\textsuperscript{43}ibid, p.94.
\textsuperscript{44}ibid, p.88.
The lichens at Hanging Rock are not necessarily rare but they are an important part of the ecology; as such they ought to be valued as contributors to the health of the environment. Besides studying the historical aspects and larger ecological picture I wanted to investigate the small world that supports life at Hanging Rock, the microbes in the soil, the organisms in the leaf litter, the algae in the water, the fungi and lichen so often overlooked. There is beauty in the small things that frequently go unnoticed. These organisms play an important role in the health of any environment. Without them eco-systems break down and eventually cannot sustain life.
Chapter 3  Social History

Social History of Hanging Rock from 1825 to 2013

There were rapid changes in the Walcha, Hanging Rock and Nundle area after 1825. Explorers John Oxley and Henry Dangar conducted expeditions between 1817 and 1825. They travelled over country inhabited by the Gamilaroi and Dunghutti people. On the river flats, rich pastures were discovered to serve the fledgling sheep and cattle industry. Aboriginal land, through careful land management, had supported people for millennia and was stolen from them. The resulting destruction of their way of life; which nourished both the physical and spiritual needs of the people, was devastating. The invaders seemed to care little about the impact on the Aboriginal people, they fenced off waterholes and pasture that had been valuable food resources, eventually disease and sorrow took their toll on a proud people. The images at the beginning of this chapter illustrate more clearly than words what happened to the life of the indigenous people. The first image depicts a group of Aboriginal people hunting and enjoying themselves. The second is of two Europeans, looking completely out of place in the landscape. The man is pointing to a mound grave and carved trees belonging to the Gamilaroi people. The trees in the background are dead; it seems as if the spirits have vanished from the land. This image is disturbing; it clearly shows the difference between how the two groups relate to country. The invaders appear to see an important gravesite as a curiosity. One wonders if they had any idea of the significance of what they were witnessing.⁴⁵

⁴⁵ Gamilaroi people marked trees close to the grave with totemic designs as pathways for the spirits between the sky and earth…notable headmen or medicine-men or women were honored in this way after death.
The discovery of gold in the area in 1851 impacted even more on the land. The difference in attitudes to land between the Aboriginal people and the newcomers was marked. Instead of seeing land as sacred as the Indigenous people did, it was viewed by the invaders as a resource and valued for what could be gained from it.

Deleuze and Guattari postulated that "there is not a history or single line of development, but overlaid strata or plateaus: the history of inhuman and inorganic life, as well as differing histories within the human." This is clearly the case when the history of Hanging Rock is examined.

At the peak of the gold rush at Hanging Rock and surrounds there were thousands of people living there, most of them in temporary accommodation such as tents and bark or slab huts. The hills were riddled with holes and littered with mullock heaps, evidence of the frantic search for gold. Some made their fortunes and others failed miserably. Some died there and lie buried in unmarked bush graves on the diggings. From the early days sly grog shops and hotels proliferated as did suppliers of food, services and equipment for the miners and their families.

As in any frontier town, from the beginning of the gold rush, fights, stealing and drunkenness were common. The newspaper illustration below shows the dissolute life of the gold fields. For example a woman tries to pull a drunken man up by the arm, two men escort another man who appears inebriated, a woman (the proprietor?) holds what looks like a small cask, two Aboriginal men in European garb smoke and drink with a couple of diggers and one man is passed out by a log. This is not a pastoral idyll, but shows a temporary camp in a land valued as a potential source of wealth, not for its own unique qualities.


There were those who aspired to higher things. The first religious service was held at Hanging Rock in June 1852 by the Vicar of Tamworth, Rev. E. Williams who, as did many other clerics at that time, travelled to small communities in his parish to perform services. In October 1852 the first Anglican Bishop of Newcastle, Rt. Rev. William Tyrell held a service on the veranda of Mr Gibbons’ Golden Nugget Inn.\textsuperscript{48}

The country was then, as now, very beautiful but also harsh. It is a high rainfall area and in winter sleet and snow are sometimes seen. At times the wind blows strongly across the exposed spaces and cuts through the warmest clothing. It must have been miserable for those pioneers who were often poor or ill prepared for the conditions in the high country at Hanging Rock. Perhaps they were comforted by the visits of the clerics.

The gold at Hanging Rock was almost depleted by the early twentieth century. In our time fossickers can be seen panning in the creeks and digging the earth, still looking for gold there. The population today is less than two hundred, very different to when the place was home to thousands of people at the height of the gold rush. On 24 August 1872 the Sydney Mail newspaper reported;

The Hanging Rock is now a mere relic of its departed greatness, and viewed from the height where I stood, where all the old workings could be seen, it seemed like a monster basin…surrounded by hills from top to base, turned over and re-turned…Two public houses and a few old hands remain.

People from many places made their way to the goldfields. There were British, American, Chinese, Jamaicans and Danish to name a few. Some of these came to the area for a short time and others stayed. They eventually settled in the district establishing businesses and farms. Some of the local residents from Hanging Rock and Nundle are descendants of the first influx of people who travelled to the district.

**The Celestials**

Chinese were brought to Australia because of labour shortages. The government, at the behest of the squatters, had sent ships to China to collect men to be hired as labourers and shepherds on the farms. The Chinese were considered lazy and dishonest by the settlers. The Aboriginals believed them to be devils and attacked them and killed them whenever possible.

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49 McClelland, T., Mines Shafts and Reefs, Published by Tom McClelland, Introduction.
50 Bayley W., Lobsey I., Hills of Gold , p.66.
51 ibid, p.10.
52 The Schofield family originally came from Denmark to Nundle. They opened the Peel Inn which is still operated by the family today. The McClelland family is a pioneer family from Ireland, still living in the area.
Chinese workers had made their way to the diggings around Hanging Rock and were very much resented by the other miners because they actually worked hard, often finding gold in the waste discarded by others. On 4th July 1852 at Bowling Alley Point, there was a serious confrontation between some of the Californian miners and the Chinese workers. The Californians had gone to celebrate Independence Day and left their claim unattended. Upon their return they discovered that a group of Chinese men were working there. The fight became so heated that knives were drawn.\(^4\)

The Chinese were mentioned at Uralla Police Court in 1863; they had attempted to incite a riot with Europeans at Rocky River by attacking them with long handled shovels. Mr Addison, the Justice of the Peace stated that the Chinese were ‘behaving themselves so unseemly and arrogantly that even those persons who look upon their cause sympathetically begin to stand aloof from their cause altogether.’ He goes on to say that he has just heard of a riot at Hanging Rock between the Chinese over the rights to a water race. Two were taken to Nundle lock up and many were ‘more or less injured in the fight; instead of getting Captain Douglas to decide the matter, the celestials chose to fight it out.’\(^5\)

There is now scant physical evidence of the Chinese presence at Hanging Rock. In the Nundle Museum is a dilapidated sieve and in 1988, when ploughing a paddock, a farmer found a headstone with an inscription in Chinese which reads:

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\(^5\) The Sydney Morning Herald (NSW:1842-1954) Uralla Police Court April 1863  
Chueng Yuk Hong, Born in the village of Lam Ling Shang-on District
Province of Guan Dong Died on 27th day of the 8th Moon of the 13th
year of the reign of Emperor Tung Chi  

This is a poignant reminder of a life lost far from home in the search for gold. The Chinese likened this search to ‘trying to find the moon at the bottom of the ocean,’ a saying used in the game of Mah Jhong.

**Pioneers**

The following three people are significant in the story of Hanging Rock. They are mentioned in most of the documentation about the area. Nathan Burrows had the first lease on the Hanging Rock Run as it was then known and the first gold was found on his lease. There is now a creek named Burrows Creek. William Telfer accompanied his father and others on a trek from Tamworth to Hanging Rock at the start of the gold rush. Late in life he wrote a memoir called the *Wallabadah Manuscript* which tells a lot of the early history of the area where he lived for most of his life. Yankee Jack is a legend because of his reclusive lifestyle; he lived alone in a humpy near Quackanaca Creek for most of his life, from the beginning of the bonanza until well after the gold rush had ended.

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57 Golden Threads- Exhibition-Work- Gold and Tin  
http://hosting.collectionsaustralia.net/goldenthreads/exhibition/goldtin...  [accessed:10.30am 20/1/2012]  
p.1.
Nathan Burrows: first European settler at Hanging Rock

Nathan Burrows was a potter in Derby, England. He was convicted of stealing cheese and was sentenced to seven years transportation. In 1827 he arrived in NSW on the convict ship Florentia; in 1828 he was assigned to the AA Co. at Port Stephens as a convict labourer and by 1832 he had been given a ticket of leave.  

In the 1841 Census he was listed as living at Muswellbrook and in 1848 he made a claim to lease 15,360 acres of Crown Land at Hanging Rock (known as Hanging Rock Run). This would have been wild country, steep, heavily timbered and very rocky. Burrows persevered. Besides running stock there, he cultivated potatoes, which he transported to market down a rough bush track by bullock dray to the Tamworth district thirty six miles away. 

The image below is of an old potato spade in the Nundle Museum. Perhaps Nathan Burrows would have used a similar one to dig his potatoes out of the ground in the mid-1800s.

Fig.70 Early Potato Spade, Nundle Museum

photograph by S. Burgess 17/7/2011

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59 The fertile country in parts of Hanging Rock have been used to grow potatoes ever since. In the early 20th Century, potatoes were transported down the steep road, by bullock dray, for sale in Nundle. In 1953 the Dept. of Agriculture grew trials of new varieties of potato such as the Adina and Sebago, among others, on the Two Mile Hanging Rock Property of A. Ajani.


In August 1851 gold was found by a prospector on Burrows’ lease at Swamp Creek. Burrows, who happened to be riding by at the time, was shown the gold. Soon afterwards Burrows informed William Cohen, a storekeeper at Tamworth, and the gold rush began.  

Nathan Burrows was integral to the story of Hanging Rock at the time of the early gold rush. Nevertheless he doesn’t seem to have ended his life at Hanging Rock as a rich or happy man. He left Hanging Rock in 1857 and died in an asylum in Sydney in 1881 at the age of 78.

On 24\textsuperscript{th} January 1852 the Maitland Mercury announced that gold had been discovered at ‘the Hanging Rock’ and more prospectors flocked to the location, numbers growing daily. Shortly afterwards gold was found at the Peel River near Nundle, and also at Bowling Alley Point. In all of the valleys where the miners congregated, living in tents and bark shelters stores and inns were quickly established to serve the needs of the people prospecting there. Many of the first miners gravitated towards Oakenville Creek which runs at the base of the Hanging Rock cliff face. The source of the creek is located in a gully between Mount Sheba and Mount Pleasant. Some of the miners and their families made rudimentary homes along Oakenville Creek and at Mount Pleasant and lived there for some time. These areas have yielded evidence of that period in the form of broken pottery and metal objects as well as larger sections of metal pipe from the mining past. I collected some of the pottery shards and have taken photographs of the metal pipes as inspiration.

\textbf{My Work}

In the country below Hanging Rock, to the south west and 3 kilometers away, lie the remains of some gold mining equipment. I discovered this one day when searching the area for signs of human habitation from the gold rush days. I was actually looking for shards of pottery or glass as I knew there was a lot of activity in the area close to Oakenville Creek where the earliest prospectors congregated. Later the diggings expanded in all directions. As I wandered to the edge of the clearing I noticed a cutting dropping off to the left and decided to investigate. What I found was a large piece of pipe, mangled and left to rust in the cutting. There had been a race in the area, carrying

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\textsuperscript{64} ibid, p.15.
water from Sheba Dams in the 1880s to these diggings some four or five kilometers away; the pipe may have been part of that system. I was enthralled by the way the metal was being consumed, over time, by the natural environment. At times it was difficult to differentiate between metal and weathered timber. As I peered closer I found lichen covered sections which were beautifully weather worn and showed clearly the way they were constructed. Screws and bolts held these sections together. The mangled metal pieces, strewn over a large area, were the inspiration for a series of small porcelain vessels.

Figs. 71, 72, 73  Mangled Pipes at Mt Pleasant, Hanging Rock  photographs by S. Burgess 18/7/2011

Figs. 74, 75, 76  Porcelain Vessels  photographs by S. Burgess 16/8/2011

William Telfer Jr: author of the Wallabadah Manuscript

As a young boy of eleven, William Telfer Jr. accompanied his father and a party of men from Tamworth to the newly discovered goldfields at Hanging Rock. The experience must have been significant; late in his life Telfer recalls it clearly. He describes the steep track up the mountain and the struggle to get the horses and cart to the summit. He describes the beautiful scenery, the clear streams, the abundance of wildlife and vegetation as well as the spectacular views from the top of the rocky outcrop after which the place is named. He also writes of Oakenville Creek to the left and two thousand feet below and Mount Misery, an extinct volcano comprising part of the Great Dividing Range.65

William Telfer Jr. (born in 1841) was the son of one of the Australian Agricultural Company's (A.A. Co.) original employees. In 1836 William Telfer Senior drove the first consignment of sheep overland from the A.A. Co. land at Port Stephens to the Peel River pioneering the route between the coast and the inland holdings.\textsuperscript{66} As an adult, William Telfer Jr. settled at Wallabadah, not far from Nundle and lived there for most of his life. Like the young William Telfer Jr. and many since, I was captivated by the views from the summit of Hanging Rock. One clear late afternoon I quietly watched as day morphed into twilight. The artworks I made in response attempt to capture the atmosphere.

My Work

From the Hanging Rock lookout, particularly in the hour or so before sunset, it is magical to watch the play of light as the sun highlights the landscape. Edges are more clearly defined against the softening colors of the sky. Single trees are contrasted against pink and orange blushed clouds. The colors of the distant mountains change rapidly. There is a sense that the valleys and hills, gently descending until they reach the valley floor, are cradled in an enormous vessel, held lovingly in the arms of mother earth.

The torn slabs inside the vessels can be interpreted as the darkening folds of the hills, the watercourses, micro environment and secret places. The interior is suggestive of fungus, burnt wood, bark that has collected in hollows of trees and of termite nests. The vessels are not fully enclosed, enabling glimpses through them. They form interesting shadows when lighted from above. These fissures are representative of natural land formations and also the many mines that are dotted all over the landscape at Hanging Rock; portals into the body of the earth.

\textsuperscript{66} Boileau Joanna, \textit{Thematic History of Nundle, Manilla and Barraba}, Tamworth Regional Council Community Based Heritage Study, February 2007, p.9.
There is an endless variety of color to be found in nature. I have used sprayed under glazes on the vessels in a subdued palette of grey, gold, orange and green. As the colors are sprayed and overlapped they mix softly together. I want the surfaces to appear to blend, as the colors in nature often do, without any harshness.

With this work I hope to convey the sense of peace which many of us experience in the natural environment, as well as a sense of the power and complexity of the natural world at Hanging Rock.

Jack Wright: the old man of the mountain

Jack Wright was one of many prospectors at Hanging Rock early in 1852. He was tenacious, mining for most of his life. Although a young man at the time he arrived at Hanging Rock, he made his home there until he died in the first quarter of the twentieth century.

Jack Wright was born in London. He went to New Zealand at the age of thirteen and worked as a timber cutter. Searching for gold, he eventually settled at Hanging Rock where he became something of a folk hero. He is known as Yankee Jack and the Old Man of the Mountain. Jack was very reclusive; he established a mine on the north western side of the goldfields which he worked until late in life. He remained unmarried, a solitary man living in a timber shack beside Quackanacka Creek. He wore clothes fashioned from flour bags. Once a month he made an arduous trip by foot up and across the ridge of the mountain, more than ten miles each way, to Nundle for supplies. The ridge at Hanging Rock where he used to walk is now called Jack Wright’s Spur. He died as he lived, alone. Ever since he died people have speculated about where he hid his gold.

One Christmas Day, shortly before his death, reporters from Tamworth went to his shack. After some time he emerged and allowed them to take a photograph. That image shows a gentle man described by the reporters as having large blue eyes and long white hair, a dreamer.67

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67 Seventy Years on the Goldfields, The Daily Observer, 3/1/1921.
Jack Wright was at Hanging Rock in 1851 when the first gold was found and died there in about 1925 at the age of 86. His mine was said to be a marvel; he had worked alone and formed a network of tunnels in all directions under the mountain. He followed the quartz veins wherever they led, to expose the treasure contained within. On his shoulders, he had carried tons of earth which was worked at the stamper half a mile away as he searched for gold.

The places where Jack worked and lived are mostly still and quiet now. Quackanacka Creek carries his memory as it meanders by his old mine; many birds, descendants of those Jack would have encountered, call through the trees. Like much of the history at Hanging Rock, all that survives are memories and some discarded artefacts from the past. The hut where Jack made his life is gone. Visitors speculate about its precise location; if anyone knows exactly where it was, it remains a secret.

My Work

In the bush around Hanging Rock and in the Nundle Museum are many metal items which appeal to me as sculptural objects and also have historical significance. Close to Quackanacka Creek, in the gullies where Jack Wright (Yankee Jack) lived as a recluse for most of his life, are some remains of a boiler which was used to help miners extract gold from the creek. The rusted metal has

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68 ibid.
69 ibid.
been colored in places by lichen and moss. It is being engulfed by nature and softened by time. The nuts, bolts and screws give interesting textures and the ventilation holes remind me of some of the images of diatoms I have seen. These forms, and other metal fragments that I have collected from HR, are the inspiration for a body of work made of Southern Ice Porcelain clay. Elements based on sections of metal are assembled in an abstract way.

![Fig.80 Old Boiler at Quackanacka Creek Hanging Rock](image1)

Fig.80 Old Boiler at Quackanacka Creek Hanging Rock  photograph by L. Burgess 23/8/2009

![Fig.81 Old Boiler at Quackanacka Creek Hanging Rock](image2)

Fig.81 Old Boiler at Quackanacka Creek Hanging Rock  photograph by L. Burgess 23/8/2009

The people who coalesced at Hanging Rock in the mid-1800s came from diverse cultures and locations at different times. Their journeys could be visualised as threads, each knotted with experiences both good and bad. I think of the Chinese who came to Australia to earn riches to take back to their families; I think of the convicts who were transported from England then made their way to the goldfields; of adventurers like Jack Wright who came as a young man from England via New Zealand; of the Telfers who trekked from Tamworth but were of British origin. Beneath all of these later
journeys are the threads representing the movement over the land for millennia by the Aboriginal people of Australia, the First People.

The relatively brief period of interaction in between the British and the Aboriginal people of the Northern Tablelands caused rapid changes.

Ashton’s Circus and Hanging Rock: entertainment or exploitation?

Mongo Mongo, a young Aboriginal from Tamworth, was trained by Jimmy Ashton and performed in the circus as a star equestrian for several years until he died. Ashton’s circus had a troupe of young Aboriginal performers when the circus performed at Hanging Rock in 1854. Aborigines in the circus were considered ‘exotic’ at the time. Many of these juvenile performers were of mixed blood, the product of liaisons between white men and Aboriginal women and as such were often outcasts, accepted by neither group. Circus proprietors often got underprivileged juveniles as ‘apprentices’ to perform because they were more compliant than other groups. During the 1850s circuses travelled all over the diggings and isolated settlements to entertain people.

The Jimmy Ashton’s Royal Olympic Circus held its first Australian performance at Hanging Rock in May 1853. They stayed for fourteen performances, having transported everything up the steep climb to Hanging Rock by bullock wagon and one hundred pack horses. At that time, a year after his first wife Mary’s death, Jimmy Ashton married Elizabeth Critchley, a local girl from Hanging Rock. The circus performed at Hanging Rock annually for a number of years to entertain the goldminers.

James Ashton first visited the Hanging Rock settlement in August 1852. He was accompanied by his pregnant wife Mary. While they were there, Mary gave birth to a baby daughter who was christened Mary Anne. Mary, aged nineteen, died ten days later and was buried at Maitland. The child survived only two months longer and was also buried in Maitland. In 1998 a memorial headstone was placed in the cemetery to mark the connection between the Ashton family and Hanging Rock.

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70 Sydney Illustrated News, article, 6/5/1854. 
71 Boileau Joanna, Thematic History of Nundle, Manilla and Barraba, p.p.67, 68.
73 ibid, citing King 1989, unpublished transcript of interview, p.65.
74 Boileau Joanna, Thematic History of Nundle, Manilla and Barraba, p.68.
75 Bayley, W., and Lobsey, I., Hills of Gold, p.15.
When Ashton’s Circus returned to Hanging Rock in November 1998 to celebrate the 150th anniversary of Hanging Rock, the truck carrying the elephants was unable to make the steep climb up the slope. The elephants were unloaded and walked to their destination at the old cricket ground where the circus performed. The site where they originally performed is now part of a pine plantation. At the time of Ashton’s visit the memorial to Mary was unveiled by a representative of the circus.\footnote{\textit{Northern Daily Leader}, October 31, 1998, p.8.}

Sadly the cemetery was bulldozed in the 1960s so it is difficult to locate graves. For the anniversary celebrations in 1998, large memorial stones were placed at the front of the cemetery with brass plates attached detailing the names of some of those who are
buried, both in the cemetery and on the goldfields, along with stories of some of the pioneers. Tom McClelland (local historian) donated the memorial. McClelland has written several publications about Hanging Rock. He lived there for much of his life but now lives at nearby Nundle.

The following description is of a performance by Ashton’s Circus at Hanging Rock in the booming 1850s from an article in the *Maitland Mercury* at the time.

*The golden roaring fifties, when red shirted, sun baked diggers, ‘lucky diggers’, lounged in the dress circle, smoked their pipes, called out to their acquaintances in other parts of the house, pelted their favourites on the stage with gold nuggets and drank champagne at fabulous prices, ate and drank, and sang and danced as if the good times were never to come to an end.*

As the gold became scarce, fewer people were at Hanging Rock and those good times did come to an end. A visitor to the place today would find it hard to imagine how it was in its heyday.

**My Work**

I have taken plaster impressions from the Hanging Rock cemetery where Mary Ashton’s memorial sits. Fragments of porcelain were pressed into the moulds, fired and placed in some of the shadow boxes. There are also images of the miners and the circus performers, and quotes from various sources; these have been transferred onto small clay fragments and displayed in the boxes. Suitable quotes and images from the Aboriginal history are also used with permission. As well, fragments of objects from the past, and bones from a fox (an introduced species), rocks and plant material that I found interesting have been included. This work reflects the process of finding small snippets of information then weaving them into the story of Hanging Rock.

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77 Boileau, Joanna, *Thematic History of Nundle, Manilla and Barraba*, p.68.
Hanging Rock 2013

At Hanging Rock lives one man who is an initiated elder of the Gamilaroi people. According to anecdotal evidence, there are one or two others who are of Aboriginal descent.

There is community centre where the school used to be. Local people organise activities such as Christmas in July and film nights. There is a Land Care group, a men’s group and a Progress Association whose committee is working on a local history publication. At Hanging Rock there are now signs marking historic places of interest which show tourists the colonial history of Hanging Rock.

A trout farm is located on Morrison’s Gap Road; this draws visitors to the area as does Sheba Dam, a popular camping and fishing spot no longer used for its original purpose as a water source for the goldmines. The Hanging Rock Lookout is a point of interest for visitors as is the Historic Cemetery.
There is no post office or shop so people have to travel down the steep road to Nundle or to Tamworth for supplies. It is nothing like the booming goldmining town it once was with shops, post office, hotels and a population of thousands.

In the past and in recent times, the inaccessibility of the country surrounding Hanging Rock made a haven for those outside the law.

**Bushrangers and Murderers: hiding in the wild country**

The heavily timbered forest and deep gorges, the inaccessible rocky outcrops on the escarpment combined with the vastness of the Great Dividing Range made the country between Gloucester, Walcha and Nundle an ideal hiding place for lawbreakers. Captain Thunderbolt and the Governor Brothers used the cover of the wilderness to escape capture for as long as they could.

**Captain Thunderbolt: a man astride a thoroughbred**

Fred Ward, alias Captain Thunderbolt, was a nineteenth century bushranger active in the area around Armidale, Uralla and Walcha and in the mountainous country surrounding the Northern Tablelands. He met a beautiful young half caste woman named Mary Anne Bugg and they were later married at Stroud. Mary Anne often accompanied him on his escapades. Thunderbolt said that he would rather have a fast horse to make his getaway on than shoot people. He stole many thoroughbreds from the district. Thunderbolt was finally shot and killed near Uralla where he is buried. There is a statue of Captain Thunderbolt mounted on a thoroughbred at Uralla; the road from Gloucester to Walcha is named after him.  

Jack Wright (Yankee Jack) had an encounter with Thunderbolt one evening at Glen Morrison in the Walcha District, as he was setting up camp for the night. Thunderbolt, accompanied by a half caste aboriginal woman (Mary Bugg?), held him at gunpoint and went through his belongings. Unable to find anything worth stealing the couple rolled themselves in Jack’s blankets and slept near his fire while he shivered all night beside a tree. The woman was very sick and coughed all night. The intruders left at daylight. Shortly afterwards a trooper and two black trackers arrived in pursuit of the couple.  

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78 Australian Bushranger Frederick Ward alias Captain Thunderbolt  
Governor Brothers: running towards their fate

In 1900 Jimmy Governor, a half caste Aboriginal man, was on the run after brutally murdering the Mawbrey family. Jimmy had been enraged by comments made to his non-Aboriginal wife by the governess at the Mawbrey homestead at Breelong near Dubbo. After years of being belittled by his white bosses he snapped and decided to murder everyone in the house. After the attack he went bush. The police had been after him for months. They tracked Jimmy and his brother Joe to within twelve miles of Nundle. Some of the local people exchanged shots with the Governors and the fugitives hid in the mountains surrounding Nundle. The men had been surviving by breaking into isolated houses in the district. They ransacked the home of the Swab family who lived on Back Creek near Hanging Rock, taking a bullet mould and loading gear, eggs, scissors and comb. Fortunately the family had been warned by police to leave their isolated property the previous day. At one point the fugitives were known to be on the property of a Mrs Ryan.\(^{80}\) The Ryan family property adjoins Mount Pleasant which is close to Hanging Rock. Joe and Jimmy managed to avoid capture at Nundle but were eventually tracked to Wingham, which is in the Manning Valley. Joe was killed and Jimmy was shot and later hanged in Sydney.\(^{81}\)

The Governor Brothers were the subject of an intense manhunt that ranged from Dubbo area to the Northern Tablelands of NSW, over the mountainous country of the Hanging Rock and Walcha region and finally ended in the Manning Valley.

On their way to the coast the Governor Brothers would have travelled across what are now the Curracubundi and Nowendoc National Parks. Part of this is the Falls Country to which, in the 1840s, some of the Dunghutti people retreated to wage guerrilla warfare against the settlers.\(^{82}\)

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\(^{80}\) Personal Anecdotal Account by Robert Swab, given to me by Marcia Ajani, see appendix i

\(^{81}\) *Maitland Mercury*, 6th September, 1900.

\(^{82}\) Blomfield, Geoffery, *Baul Belbora: the end of the dancing*, first published with assistance of Aboriginal Arts Board of the Australia Council, Hogbin Poole, Redfern NSW, 1986, p.4.
Connotations

Hanging Rock has been the focus of geological surveys, gold mining, logging, cattle grazing, potato growing and now fledgling tourism. Before Europeans came to the area it was a pristine wilderness in which the Aboriginal people existed in harmony with nature. I have examined these developments from an artist's perspective and from the viewpoint of a concerned environmentalist.  

It is intriguing to consider just how many lives have been touched by a connection to Hanging Rock. These connections overlay the land and are layered over time. When delving into the history of the region it is clear that the gold rush was the main reason that people flocked to Hanging Rock in the nineteenth century. Each journey embarked upon that ended at Hanging Rock involved a huge effort; overland travel at the time was by foot or horse power.

Some of the early miners to go to Hanging Rock were simply going for the adventure and had no intention of staying; Alexander Terry, Frederic C. Terry and Captain Pitt were some of those. They followed the route that many took on the way to the Hanging Rock goldfields, an arduous journey by foot, sharing one horse between them to carry their belongings.

Alexander Terry kept a diary of his experiences which allows an insight into the viewpoint of one educated British man, in the colony for the first time. Alexander Terry (1821-1910) was a Civil Engineer; his handwritten diary is housed in the Mitchell Library NSW, and is a primary research source about Hanging Rock. Donated to the library in 1880, along with the Terry Family History, it was later transcribed by library staff and remains unpublished.

83 I am passionate about the environment and am pained by the way in which it is too often destroyed for financial gain. In 1982, when living on an isolated property near Medowie NSW, I was dismayed to learn that an aluminium smelter planned to dump toxic waste from their potlines on a nearby site. It was proposed to dump the waste containing cyanide and fluoride, into pits in the ground. The selected site was near a creek that eventually ran into Swan Bay, where oyster leases operated. The run off on the other side ran into the Grahamstown Dam, part of the water supply for Newcastle. I objected strongly and, together with a committee of several residents and many other concerned people, fought the proposal for four years. After a Commission of Enquiry, the waste containing the toxic material was not permitted to be dumped. It was stored on site at the smelter for many years until a suitable method of disposal could be found.

84 Alexander Terry Diary 1852, p.p.88, 94, 97.
85 Ibid
To read the diary is to be transported back in time; Terry was at Hanging Rock in 1852, the early part of the gold rush. He travelled from Sydney to Morpeth by boat then by horse drawn bus to Maitland, through the Hunter Valley, over Crawney Pass in the Great Dividing Range, then to Hanging Rock. He described the exploits of himself and his companions in great detail.

It is helpful to have a map for a journey but a map is not the experience. It is an abstract version of landscape, a record of someone else’s knowledge of place. In her book *The Lure of the Local*, Lucy Lippard states that ‘a map is not terrain’. Terry mentions several instances where they take the wrong road or when they lost their way. Alexander Terry makes no mention of a map. If he did have one it may have been a sketch drawn quickly on a scrap of paper, or perhaps one printed and sold along with the mining equipment they purchased in Sydney. A map could not tell them what lay ahead.

When searching for artefacts from the past, I had previously been to many of the sites Terry visited at Hanging Rock. When he described those places it was easy to imagine myself there because I had experienced them. Even though I had earlier followed a similar route to Terry when visiting Hanging Rock, after reading his diary I decided to retrace his steps once more. Over one and a half centuries later, I wanted to follow the trail that Terry’s party followed, a track well-trodden in the nineteenth century by people drawn to Hanging Rock by a golden thread. Alexander Terry travelled mainly on foot, sometimes on horseback. I was in an air conditioned four wheel drive vehicle. Terry’s trek took many difficult days, mine hours.

In his diary Terry writes of the place where the river was flooded, where he saw a snake, what the animals looked like, how the black cockatoos screeched, who he met and where he built a fire. It is through these small observations that connections and memories are made. It is only when one walks over the land or stops a vehicle so as to explore a location intimately that a real sense of place develops. I have superimposed my experience of Hanging Rock and the journey to it in the twenty first century over that of Terry and his party in 1852. Terry was a product of his upbringing and times. Some of the comments made by Terry appear arrogant or racist today.

87 *Alexander Terry Diary 1852*, p.p.87, 88.
Alexander Robert Terry Diary 1852

The Terry Journey Begins

In Sydney, the men pawned some of their belongings so that they could purchase mining equipment for their adventure. Next they travelled by boat to Morpeth, and to Maitland by horse drawn bus, where they bought a horse to carry their supplies. They stayed at Maitland overnight and next day they walked until dark, where they camped for the first time. Alexander Terry didn’t fall asleep as easily as his companions and his thoughts of home may be familiar to many travellers.

*I laid awake a long time - watching the moon and stars - and trying to accustom myself to the curious fact - that I was even then lying on the bare ground some 16,000 miles from home - in a new country and in completely a new position - an embryo gold digger.*

Deeper into the Hunter Valley

Their horse had wandered off during the night and early the next morning they spent some time searching for it. The party travelled a short distance to Black Creek where they met a couple of ‘lags’ (freed convicts) from whom they bought some food and milk before continuing on towards Singleton, a large town ten miles away. Alexander Terry (the engineer) bemoaned the fact that there was a shortage of men to work on the roads, which were very rough. Most of the workers had gone to the goldfields and to keep those few who remained wages had been doubled.

When driving through Black Creek on the way to Hanging Rock in 2012, I saw men working on the new Hunter Valley freeway with the aid of heavy equipment. It occurred to me that Terry would have been amazed at what was happening there. It is likely that Black Creek was so named because of the concentration of Aboriginal people in the area.

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88 Alexander Terry Diary 1852, p.80.
89 Alexander Terry Diary 1852, p.82.
Shortly after leaving the 'lags' Terry’s party found the road to be ankle deep in water and very swampy so they pulled the rails from the fence and, after replacing them, walked the horse through the paddock to avoid the water. The blacksmith and the inn keeper (the ‘lags’) chased after the Terry party, abusing them for breaking down the fence, forcing them to retrace their steps and travel by another track.  

Clearly, the ‘lags’ believed that they had more right to the land than the Indigenous people so recently dispossessed; the fences marked territory in a way that was unknown prior to British occupation of Australia. Until then, the country was roamed by tribes who knew each other’s boundaries and defended them forcefully, needing no fences because of their hunter gatherer lifestyle.

By nightfall the party had arrived at Singleton where they bought provisions and camped for the night. Next day they travelled to Glennies Creek. At this point in the journey Terry seems to be disappointed with the environment which he described as barren hills with no cultivated land. The sameness of the vegetation was not pleasing to him, he also comments about the small variety of birds.

This attitude is, even now, typical of many travellers who unfavourably compare the place where they are with the place they came from.

The men next found their way to a place called Pig Holes where they stopped for food. Their feet were chafed and sore. Before they left, Frederic Terry made a sketch of the interior of the shepherds hut located there.

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90 ibid, p.81.
91 Alexander Terry Diary 1852, p.p.83, 84.
92 ibid, p.85.
Unfortunately I have been unable to locate the sketch if it is still in existence.

The village of Muswellbrook, where they went next, was described by Alexander Terry as having ‘a few gardens, some good houses, a couple of pretty looking churches and some good shops’\(^{93}\)

In 1824, on an expedition to search for suitable land for settlers, Henry Dangar designated a site for the township of Muswellbrook at a junction of two rivers. By the time Terry was there, it had been settled for some time.\(^{94}\)

At Muswellbrook, goods were purchased; they then continued on towards Aberdeen. It was almost sundown by this time. The men soon lost their way and arrived at Aberdeen, some eight miles from Muswellbrook, in the dark. They stayed overnight at the small settlement in a hotel owned by a Mr Richardson. Aberdeen comprised of only several houses and an inn and was located in a small valley.

We stopped at Aberdeen for a short while. There is a small park on the main road, a visitor’s centre, and some shops. In the park is a sign saying that the area is the country of the Wanaruah people of the Geaweagal clan.

The next destination for Terry was to nearby Segenhoe. Shortly after leaving Aberdeen, they had to wade through the waist deep Hunter River. Yet again, they lost

\(^{93}\)ibid.
their way several times before finally arriving at their destination. Terry described Segenhoe as ‘a large agglomeration of half ruined buildings’.

Segenhoe was the property of British MP Thomas MacQueen. Established in 1825, it was a large property on which at one time 100 convicts worked. It was overseen in Thomas MacQueen’s absence by Mr McIntyre. After MacQueen had financial problems in England he came to Segenhoe in 1838, at his request, the township of Aberdeen was laid out near the Hunter River crossing. In 1851 there were twenty seven residents in Aberdeen. Segenhoe Inn was built in 1837 and is situated in Mac Queen Street Aberdeen. It seems likely that Terry’s party stayed there.

On a rainy night, after leaving Segenhoe, Terry’s group became lost, finally ending up at Scone where they found an inn for the night. Mr Monroe, an ex-convict, now the inn keeper at Scone, told them about the Indigenous people who lived in the region. He described a corroboree he had witnessed and also how warfare was conducted between rival groups. Terry had seen some of the Aboriginal people as he travelled towards Hanging Rock. About those people, Terry wrote,

> They are universally classed amongst the lowest and most ignorant of all the human race… they are quite black-with large lips-and squat nose- small twinkling eyes- presenting altogether a most revolting appearance… the women look better in their opossum cloaks with generally a pica ninny slung over their thin shoulders… there are very few of them now about all the places where Englishmen have settled and no doubt before many years their race will become extinct.

This racist view, now discredited, was typical of the times. Many of the European settlers seemed unconcerned about the damage that was being done to the Indigenous people. There were some who held different views but they were in the minority.

Before the British Invasion, Aboriginal people seemed to have lived an idyllic life; they hunted and gathered and observed tribal laws. The images below show how people participated in the daily life of the tribe. That changed within a short time after the arrival of the foreigners.

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95 Alexander Terry Diary 1852, p87.
97 Alexander Terry Diary 1852, p.90.
In 1825, from Lake Macquarie NSW, Reverend Threlkeld wrote;

*In some parts of the Colony there is quite a hostile feeling against the Blacks, and those who ought to be their champions are silent on the subject. A gentleman (Mr Cox)… recommended at a public meeting in this Colony that the best mission towards the Blacks would be to’ shoot them all and manure the ground with them!!!’…*  

Reverend Threlkeld was concerned about the plight of the Aboriginal people, many of whom had been dispossessed of their traditional land after early colonisation by the British. He was instrumental in the establishment of a mission station at Lake Macquarie, NSW, under the auspices of the London Missionary Society. It was hoped that the mission station would ‘provide protection from ongoing atrocities’ against the Aboriginal people.

When first contacted by white settlers in the first decades of the nineteenth century, the Aboriginal people of the New England Tablelands would have been aware that contact with Europeans could be dangerous. This is not surprising, communication with other groups of Indigenous people was facilitated by travelling messengers, poets, singers and dancers, by the use of smoke signals, and through ceremonies where great numbers of Aboriginal people from different areas gathered. Large parties from the

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north are known to have travelled as far south as the Hunter Valley to attend these events. News of atrocities by settlers against the Aboriginal people would have travelled great distances.

The map of NSW below is sectioned into Aboriginal tribal areas.

![Diagram of Aboriginal Lands NSW](image)

**Fig. 95** Diagram of Aboriginal Lands NSW - from *The Red Chief* by I.L. Idriess p7

In the late 1820s the Gamileroi people numbered between ten and twelve thousand and were the largest indigenous group in the Upper Hunter. Between 1830 and 1832

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100 Blomfield, Geoffrey, *Baal Belbora: The End of the Dancing*, First Published with assistance of Aboriginal Board of the Australia Council, Hogbin Poole, Redfern NSW, 1986.

a pandemic killed one third of the population.\textsuperscript{102} Introduced diseases and alcohol continued to decimate the people. Settlers built fences preventing access to traditional water supplies and hunting grounds which exacerbated an already dire situation.\textsuperscript{103}

There seemed to be no understanding of the importance of land to the Indigenous people. The connection between place and spirit is crucial to the lives of Aboriginal people. For them, the loss of land and culture was devastating. The following quote by John Heath, a contemporary man from the Biripi people whose land adjoins Hanging Rock area to the north-east, shows that the ties between land and culture are still vital.

\begin{quote}
\textit{Man’s relationship to the land as set down in the Dreaming … saw the land as the Mother with all beings, creatures and topographical features being intricately linked and possessing rights of being. Land is the lifeline of existence as we know it. Without it no community will survive. In the Goori way it is seen as a mother: we live off the earth, we return to the earth, we seek solitude in her, we are protected by her, we dare not desecrate her, we do not covet that which doesn’t belong to us, our law is enshrined in her and we carry out our rituals accordingly.}\textsuperscript{104}
\end{quote}

In 1852, as he travelled towards Hanging Rock as a newly arrived Englishman, Terry may have been ignorant of the injustices that the Aboriginal people he encountered had suffered.

Bellview was a shepherd’s station ten miles from Aberdeen, owned by a Mr Mac Intyre.\textsuperscript{105} The men called in there on their way to the Gundy shepherd’s station.

Today Gundy is a small township with a couple of shops, a church, a graveyard and a few houses. The image below is of the church and graveyard.

Aboriginal people were plentiful in the Gundy area pre - invasion; it is notable that no mention was made of this by Alexander Terry in 1852. Some occupied the land where the church of St Matthew was eventually built (image below). They refused to leave their land until tricked by the church people, who brought to the site a recently

\begin{footnotes}
\footnoteref{102} ibid.
\footnoteref{103} ibid.
\footnoteref{104} Heath, John, \textit{Muloobinbah: The Contribution of Aboriginal People to the Resources of the Hunter Region}, p.43.
\footnoteref{105} \textit{Alexander Terry Diary 1852}, p.92.
\end{footnotes}
deceased tribesman from further away, knowing that the Aboriginal people would move because of their customs regarding death.  

The men then made their way towards Waverly Station, four miles further on, with the intention of buying food. In his diary Alexander Terry wrote that the owner of Waverly station came to invite them to his property so that they could have some food; although the family seemed contented they lived in a ‘miserable bark hut’. After they left Waverly, the men had difficulty finding the correct track due to the heavy rain the day before having washed away the hoof marks and footprints of previous travellers to the goldfields.

Terry and the others had by now crossed the Pages River (a tributary of the Hunter River) three times. Next they came to the Isis River (another Hunter River tributary). The water from the mountains causes these watercourses to flood quickly after heavy rain.

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107 ibid, p.p.94, 95.
108 ibid, p.p.93, 94.
Through the Isis Valley and over Crawney Pass

As they made their way along the Isis Valley, Terry wrote that, despite knowing that they were getting closer to Hanging Rock and thinking about the fortunes to be made there, it was the most ‘tedious part of the journey - for before we reached our encampment that evening we had to cross the Isis I think thirteen times’.

We travelled along a gravel road that was, at times, high above the river and at others close by it. There were farms along the fertile valley, where fat cattle grazed and strong wooden bridges made the river crossings easy. On the day I travelled the route taken by Terry, the Isis River was a meandering brook.

Crawney Pass was the next goal; they were hoping to get over the mountains by that night; once again the travellers lost their way. They followed cattle tracks instead of the correct trail and became separated overnight.

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109 ibid, p.95.
110 ibid, pp.96, 97.
The men struggled for hours to get to the top of the pass; Alexander Terry was not very impressed with what he saw. Upon reaching the summit, he wrote,

we reached the summit and enjoyed a very extensive view of the country - however there being no signs of cultivation of anywhere - nor anything grand - or majestic - the sight neither excited pleasure nor admiration.¹¹¹

Once more, Terry had an expectation that Australia should resemble England; he remained unappreciative of the country as it was. Nonetheless, after crossing Crawney Pass the landscape seemed to meet with Terry’s approval. He described it as being’ exceedingly beautiful … well watered plains … with fine grass similar to English …”¹¹²

It is possible that Terry was observing part of the country that had been ‘fire stick farmed’ by the Gamilaroi people for thousands of years before Europeans arrived. In his book The Biggest Estate on Earth, Bill Gammage, [citing Oxley] describes how the Liverpool Plain, NSW, was ‘all fine rich grassy soil without a tree … the country appears to be spread out like a green ocean’ [Oxley].¹¹³ The Aboriginal people cut back the trees and burned the grass so that the sweet new growth attracted large numbers of kangaroos which they hunted for meat and skins. The practice was carried out in many parts of Australia. The image below of the grave of a Wiradjuri man from Gobothery Hill, near Condobolin on the Lachlan River, NSW, was drawn by George Evans who, in 1817-18, accompanied John Oxley on explorations of inland NSW¹¹⁴.

Although the image is not of the Liverpool plains, it shows both the care taken by the

¹¹¹ ibid, p.101.
¹¹² ibid, p.103.
¹¹⁴ National Library of Australia
Aboriginal people when burying their dead and also how the land was covered in grass and sparse trees.

These were the areas that the settlers usurped to establish sheep and cattle properties. In 1833 the Australian Agricultural Company (AA Co.) took up a large tract of land on the Peel River to establish a sheep station. There was an abundance of good pasture in the area. In 1834, six thousand sheep were moved to 'The Peel'. Land that had supported the Aboriginal people from the region for aeons was fenced off for the sheep.

Fig.99  The Grave of a Native of Australia by George Evans 1817; engraved by R. Havell & Son  

Fig.100  Nundle side of Crawney Pass  photograph by S. Burgess  6/4/2012

Destination in Sight

After crossing Crawney Pass and travelling a further eight miles, the Terry party arrived at Mr Swain’s station, a place many travellers to the area rested at. Shortly afterwards they crossed some very boggy ground. They eventually arrived at the Peel River, not far from their destination. On their right, the Great Dividing Range rose steeply. Hanging Rock was clearly visible. In 1953 Bayley describes Hanging Rock as ‘a vast mountainside, its massive treeless rock face overhangs the chasm at its base and rises hundreds of feet to the plateau above.’

To reach the diggings it was necessary for Terry’s group to travel three miles up a ravine, cross a ridge then descend into a valley at the bottom of which runs Oakenville Creek. The men lit a fire and prepared the camp for the night. Alexander Terry commented on the noisy cockatoos at the place where they had chosen to stop. Today Black Cockatoos still screech loudly as they fly overhead in the vicinity of Hanging Rock. Late next morning the men finally made their way up the mountain to the diggings.

Recording his first impressions of the goldfields Terry writes:

> it is a curious sight with forty or fifty tents either side of the rivulet and this last turned about in many directions...we were now in the bed of a very narrow ravine and as each company of diggers were working their cradles filled with earth and stone these made a curious noise which was echoed by the hills...there was a look of life and activity amongst them all that greatly excited us to begin.

Fig. 101  Sketch of Diggings below Hanging Rock  Illustrated Sydney News 1852

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117 *Alexander Terry Diary 1852*, p.p.103, 104.
118 ibid, p.106.
Frederic Clark Terry, Alexander’s brother, may have been responsible for the unsigned sketch (above) of the Hanging Rock diggings, published in the Sydney Illustrated News in 1852, the year Alexander Terry went there. While yet to be verified, this could be a reasonable assumption given that Frederic made several sketches along the way to the goldfields.\textsuperscript{119} The caption under the image said ‘from the pen of a traveller’\textsuperscript{120}

![Fig. 102 Oakenville Creek below Hanging Rock 25/1/2010](image1)

![Fig. 103 Mine Shaft under Hanging Rock 27/7/2008](image2)

Fig.102 Oakenville Creek below Hanging Rock 25/1/2010 Fig.103 Mine Shaft under Hanging Rock 27/7/2008 photographs by S. Burgess

Signs of the mining past can be found along Oakenville Creek and in the surrounding area today. Oakenville Creek was teeming with miners in the early days of the gold rush. The marks of occupation are apparent. There are fireplaces made of rock near flattened pieces of ground where bark huts once stood, large holes with mullock heaps beside them, shards of pottery and fragments of glass from the 19\textsuperscript{th} century, rusty metal nails and belt buckles. To discover objects to be used in my works of art, I perform a kind of archaeology; digging through the layers of detritus from the past in an effort to connect to those people, to understand their experiences.

**Settling In**

The men pitched their tent beside Oakenville Creek; they then trekked up the mountain to buy provisions at Dr Jenkins store, which was situated near the top of Hanging Rock. On their way to the store the men stopped to watch the diggers and ask them questions about their experiences; feeling disappointed when told that it would be

\textsuperscript{119} \textit{Alexander Terry Diary 1852}, p.p.82, 85.

\textsuperscript{120} Frederic C Terry contributed sketches to Illustrated Sydney News in the 1850s. Further research revealed that Frederic Clarke Terry was also known by the name Frederic Casemere Terry. He later became a respected Colonial artist, a contemporary of Conrad Martens. At the time he was at Hanging Rock he was not well known as an artist in Australia.
harder to get gold than they expected. Many miners were now at the diggings and the
gold was more difficult to find. 121

Disillusionment

The newly arrived diggers pitched their tent then spent the evening with the group
camped next to them. Their neighbour’s shelter was a bark hut or Gunya which was
warmer and dryer than a tent. Three of the neighbours were ex-convicts and one was
an Aboriginal woman who ‘belonged’ 122 to one of the men, named Cooper. They had
been there for two months and although they had dug a hole eight feet deep by eight to
twelve feet square they had found not even an ounce of gold. 123

The next day, Alexander Terry’s party went prospecting in a nearby gully but got only a
few specks of gold. 124 Although they had been at Hanging Rock only a short time, by
now the men could see that they were unlikely to make their fortunes. The onset of
cold, wet weather added to their misery. Some of the more experienced miners left for
the season at that time. 125

Because of the description of the weather, it seems as if the season would have been
late autumn or early winter. This is similar weather to that experienced in present times.

The men originally hadn’t planned to stay long at Hanging Rock; Alexander Terry had
been offered a cheap passage back to England and was keen to go back to Sydney to

121 Alexander Terry Diary 1852, p.107.
122 It was not uncommon for European men to take Aboriginal women as ‘wives’ at that time.
123 op cit.
124 Alexander Terry Diary 1852, p.85.
125 ibid, p.110.
connect with the ship before it left. Captain Pitt and Frederic C. Terry stayed behind at Hanging Rock hoping to get work as they had little money. They decided to stay until the next season in the hope that their luck would change. ¹²⁶

**Departure from Hanging Rock**

Because it was torrential rain as he left, Alexander Terry exchanged his red blanket for a possum skin cape which was more waterproof. ¹²⁷ Feeling regret for leaving the others in such dire circumstances, he rode away towards Sydney, pausing to carve his name into a tree at the top of Crawney Pass. ¹²⁸

I searched in vain for the tree in which Alexander Terry carved his name as he reached Crawney Pass on his return journey.

When Alexander Terry rode away from Hanging Rock, in the pouring rain and without gold, he was actually wearing something very precious. He was unaware of the significance of the possum skin cape to the Indigenous people who made it and could not have known how rare these objects would later become.

**Home to England**

Frederic C. Terry must have changed his mind about staying on at Hanging Rock. Later in his diary Alexander writes that they met up in Sydney shortly before Alexander embarked upon the voyage home. Frederic Clark (Casemero) Terry had a portrait to finish in Sydney before going straight back to Maitland to earn enough money to enable him to redeem his belongings from the Sydney pawnbroker and return home to England. While they were waiting for Alexander’s departure from Sydney, Alexander and Frederic met a man named Marshall Claxton who promised to assist Frederic to pursue his career as an artist in the colony. ¹²⁹

¹²⁶ ibid.
¹²⁷ Possum skin capes are now very rare. There are presently only fifteen in various Australian museums. Up to 70 skins (which could take a year to collect) were used to make each cape. Every family or clan group incised their unique designs on the inside of the capes they made. They were worn with the fur to the outside when it rained, to utilise the waterproof qualities or with the fur on the inside for warmth in cold weather.
¹²⁸ Alexander Terry Diary 1852, p.110.
¹²⁹ ibid, p.124.
Although Frederic had expressed to Alexander his wish to return to England as soon possible,\textsuperscript{130} that was never to happen. Frederic remained in Sydney and became well known and respected as an artist. He travelled to Newcastle and other parts of the colony on sketching tours and later exhibited his work in Sydney and Paris, along with Conrad Martens and others. One of his watercolours, exhibited in Paris, was presented to the French government.\textsuperscript{131} In the 1850s and 1860s Frederic C Terry also worked for illustrated books and newspapers, notably the Illustrated Sydney News.\textsuperscript{132} By 1867 Frederic C Terry was drawing master at the Sydney Mechanics School of Arts.\textsuperscript{133}

In 1854 Frederic Terry was commissioned to do a series of sketches by publisher John Sands. Titled Landscape Scenery, Illustrating Sydney, Richmond, Parramatta, Maitland Windsor and Port Jackson, New South Wales or The Australian Keepsake 1855, the work was reviewed by the Sydney Morning Herald as a work of genius. Due to a mistake by the English engravers, Terry’s name had, regrettably, been printed as Fleury throughout the album.\textsuperscript{134}

Frederic died in 1869 at the age of forty-four, leaving an orphaned ten year old son. His wife, Margaret, whom he married in 1858, had died three years earlier. He had become a hardworking and well-known artist but was indebted to his landlord because of the ill health he suffered at the end of his life. When his household goods and large collection of paintings were valued for probate the estimate was only forty-five pounds. He owed the landlord sixty-five.\textsuperscript{135}

The Alexander Terry diary is personal and rich in detail. With hindsight, the readers of the diary are able to see what effects development has had on the places he described. Singleton and Muswellbrook are now large towns supporting mines, power stations, cattle farming and wineries. Hanging Rock has contracted from a place with golden promise to a small community with memories of former glory. The effects of colonialism on the Indigenous people of the area proved devastating. Alexander Terry echoes the prevailing attitude of the British towards the Aboriginal people. Throughout the section based on the Alexander Terry diary are woven other stories indicating what

\textsuperscript{130} ibid, p.134.
\textsuperscript{133} Design and Art Australia Online, p.4.
\textsuperscript{134} ibid, p.3.
\textsuperscript{135} ibid, p.4.
was happening at the time so as to give an overall view of the area and a broader perspective.

**Reflections**

![Image](image.png)

Fig.106 Circa 1880s Slab Hut at Sheba Dams photograph by S. Burgess 12/5/2012

Alexander Terry describes the diggings, the rich brown colour of the soil, the vegetation, the sharp rocks, and the way the land falls; these are recognisable now.

The available historical material about Hanging Rock in museums, and text, are quite limited. At Hanging Rock little remains of the houses where settlers once lived. There are a couple of older cottages along Barry Road and a slab hut which the gatekeeper of Sheba Dams used. Because many of the dwellings were quickly erected to house the miners they have not survived. There are now (late 2012) signs to indicate where other buildings such as the school, the Post Office and Gibbons' Inn were when the population was at its peak. It is remarkable to be able to read a firsthand account of the experiences of Alexander Terry and his companions, written in 1852, when the gold rush at Hanging Rock was so new.

When writing about history of place, Lucy Lippard suggests that ‘when library work precludes field work, the role of the place itself is often lost; ideally the two should be combined’.

I have endeavoured to combine the two in an effort to bring a different perspective to the examination of the history of Hanging Rock. By observing what remains in the landscape and layering that over what has previously been written, there is, for me, a closer connection to those who were there before. By using that methodology, the history of the place is not an abstraction but something that becomes more animated.

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I have collected fragments of glass, pottery and metal objects from places where Terry and the other miners may have been, found large sections of mining equipment and documented these finds by taking photographs. I have seen plants that were not native to the area growing close to where there is evidence of settlement. I have gathered rocks, recorded sounds and visited the nearby Nundle museum to search for artefacts from the past. I have also retraced Alexander Terry’s journey and searched (unsuccessfully) for the tree where he carved his name as he reached Crawney Pass on his way back to Sydney.

Deleuze and Guattari’s model of the rhizome is evident in the research method adopted, that of following trails, making connections and digging through layers of time. Deleuze and Guattari write about multiplicity being rhizomatic, the simplest definition is a collection or connection of parts. According to Deleuze and Guattari ‘multiplicities are defined by the outside: by the abstract line of flight or deterritorialization according to which they change in nature and connect with other multiplicities.’ In the preceding section are combined both European and Aboriginal perspectives regarding land which are overlain with other historical information; layered over that are my experiences when re-tracing Alexander Terry’s journey.

137 Colebrook, Claire, Understanding Deleuze, Allen and Unwin, Crows Nest, Australia, 2002, p, xxvi.
Chapter 4  Place

Place is latitudinal and longitudinal within the map of a person’s life. It is temporal and spatial, personal and political. A layered location replete with human histories and memories, place has width as well as depth. It is about connections, what surrounds it, what formed it, what happened there, what will happen there.139

Lucy Lippard suggests that place is deeply embedded in human experience. For example the place where we were born and grew up may elicit strong memories long after leaving, it may be somewhere that can give comfort when recalled; alternatively it may be somewhere deeply disturbing, somewhere best forgotten. Lived experiences, people, objects and time combine with landscape and history to make a place memorable. These connections, along with a personal narrative, are what make place significant.

Deborah Cherry and Fintan Cullen are editors of Location, a collection of essays by various art theorists who examine aspects of the way location is exemplified in art. In the first chapter Cherry and Cullen write in more general terms about place or location. They remark on the way in which, in the 21st Century, the use of the word now encompasses other connotations than originally intended. They define location this way: ‘Bridging time and space, location hovers between the generic and the specific; it entangles particular sites and larger spaces, the imaginary and the actual, the virtual and the material, memory and history.’ They go on to write that ‘in examining location … memory and history turn out to be intertwined’.140

Clearly, the words place and location have multiple meanings that are far more complex than the simple words appear. Sense of place evokes emotional and spiritual bonds beyond the social, cultural and geographic context. According to the strictly geographic context, place is comprised of both human and physical characteristics. Geographic location is either relative, described by its location and connection to other places or absolute, defined by latitude and longitude or street address.141

The human characteristics include architecture, land use, livelihood, religion, transportation, food and communication networks. Humans alter the landscape in

140 Cherry, Deborah, Cullen, Fintan, editors, Location, Blackwell Publishing Ltd., 2007, p1.
either positive or negative ways. Movement and migration impact the land as well. Tracks and roads scar the earth and may give access to previously unspoiled places. Plants and animals, rivers, mountains and countryside make up the physical aspects of geography and physical and mental maps divide the world into regions which may be formal, functional or vernacular.\footnote{142}

What draws us to a particular place? Why do some places resonate with us when they are no longer accessible? There are many factors affecting the response to place and the same place may produce different responses in each person. Lucy Lippard writes that,

\begin{quote}
For all of us, particular places are of great personal significance. First and foremost is the place of our birth. Many people feel that their native place is somehow sacred and often want to be buried or have their ashes scattered there … Then there are all the places at which important events have occurred in our lives from our childhood on, including those at which we have received of moments of illumination and insight or a sense of the numinous, the holy. Such places have a continuing significance for each of us.\footnote{143}
\end{quote}

This section looks at some of these factors in relation to Hanging Rock. The sense of connection to past, present and future is important. I think of human experiences at Hanging Rock as being both layered and connected by threads to each other and to environment. Hanging Rock is layered with attempts to dominate the land; yet this fragile eco – system has much to reveal on its own terms.

Deleuze and Guattari write about assemblage, they say ‘all life is a process of connection and interaction. Anybody or thing is the outcome of a process of connections.’\footnote{144} Similarly, the way in which Hanging Rock has evolved consists of numerous connections and interactions. There are connections to place, to other humans, plants and animals, to time, culture and spirit.

Hanging Rock area has a complex layer of both natural and human histories, which I will briefly map out in order to reveal more that I am responding to artistically. Hanging Rock area is intersected by tracks and creeks, which bear witness to the mining past. Oakenville Creek, Quackanaka Creek, Swamp Creek and Nuggety Creek were lined with tents and huts when the gold rush was at its peak. There were several separate communities of miners and their families based at Hanging Rock and nearby; some

were at Mt Pleasant, some at Happy Valley and Bowling Alley Point, others at Nundle. Burrows Creek is named after Nathan Burrows, the first leaseholder at Hanging Rock Run on whose land the first gold was found. Mines are now more difficult to see because the vegetation has grown over many of them but the remains of mining equipment are visible deep in the gullies. Sheba Dams are now popular campsites, their original purpose, a water supply to the dry diggings, no longer necessary. Generations of visitors have picked over the land hoping to find a nugget of gold. Hanging Rock lookout overlooks Oakenville Creek, Nundle and also provides an uninterrupted view north towards Tamworth and south to Crawney Pass.

**Place and Spirituality**

Biologist Rupert Sheldrake has written about what he calls ‘morphic resonance’ which is a process whereby plants and animals connect to a ‘collective memory’ which is similar to C.G Jung’s idea of the collective unconscious. Sheldrake states that this system applies to inanimate systems as well, such as molecules and crystals. According to Sheldrake any self-organising system from a tree to a galaxy is governed by this process of ‘morphic resonance’. He says that all self-organising systems are organised by morphic fields which have inherent memories of their own past patterns of activity and also of similar previous systems. Sheldrake postulates that these principles may account for the different qualities evident in diverse locations and the way in which these places affect those who frequent them. He gives examples of places which are considered sacred such as Mt Kailash in the Himalayas and the many sacred caves, rocks, rivers and springs that are considered to be places of great power. Throughout history there is evidence of pagan sites of worship which were later overlain with Christian churches.

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147 Ibid, pp220, 223.
Sheldrake also discusses the way that sites for temples, villages, houses and tombs were originally chosen. He says that this is because of their harmonious relationship to the surroundings, called geomancy.\textsuperscript{148} Sacred places may be natural, such as groves of trees or close to water, for example where two rivers meet, or where there is a natural spring, or perhaps where there are land formations that have meaning. They may be places where the energy is regarded as being positive and the plants and animals are abundant.\textsuperscript{149}

Sheldrake writes about the way in which some national parks take on a transcendental quality because of the religious experience that they engender in some visitors. He says that ‘they are more than recreational areas; they are natural temples or sanctuaries’.\textsuperscript{150}

For me, being in a magnificent natural environment such as Hanging Rock engenders a sense of awe and expansiveness, that Sheldrake calls a ‘transcendental quality’. I feel connected to every living thing and am aware that each thing is as important as the next. It can be at once both uplifting and humbling to know that everything is simply a part of the endless cycle of life, death and regeneration. What I experience could be

\textsuperscript{148}Sheldrake, Rupert, \textit{The Rebirth of Nature}, p178.
\textsuperscript{149}ibid, p.p.177, 178.
\textsuperscript{150}ibid, p.177.
described as a spiritual or religious experience. I am sure I am not unusual in having this experience. Many people, particularly artists, respond to nature in a similar way.

**My Work**

The ceramic boat (below) was made after watching leaves floating down Quackanaca Creek at Hanging Rock. I observed how the leaves eddied around various rocks and sticks in the creek then broke free and flowed on until caught again. Over time, the leaves eventually broke down into smaller and smaller pieces until they were almost unrecognisable. I related the process of decay of the leaves to the way all things decay; to the human experience of moving through life, just as the leaves flowed through the water. The boat represents the fragility of the human body and the leaves as well as movement through time.

![Leaf Boat and detail by S. Burgess](image_url)

**Science and the Numinous**

Scientist, Albert Einstein (1879-1955), seemed able to see the world from a more spiritual perspective than many other scientists of his time; in fact it appears to be a Buddhist perspective. He wrote,

_A human being is part of the whole, called by us the Universe. A part limited in time and space. He experiences himself, his thoughts and feelings, as something separate from the rest, a kind of optical delusion of his consciousness, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures._

Unfortunately some scientists are unable or unwilling to expand their thinking to encompass the possibility that there is more to nature than can be measured empirically. Scientists are trained to be objective, to be rational and unemotional yet scientists such as Rupert Sheldrake and David Suzuki (both biologists) are passionate

advocates for nature. At times Sheldrake has been criticized by his peers for being unscientific because he draws on spiritual experience as well as empiricism; nonetheless his ideas are stimulating and thought provoking. In the web page Ideas of Thinkers Worth Thinking About, Sheldrake’s ideas on morphic fields and morphic resonance are discussed by Hans Beihl, an avowed sceptic who says ‘that although he thinks that scientific support for Sheldrake’s theory is weak, the ideas that Sheldrake explores have a value beyond science’. It is refreshing to learn that a scientist such as Sheldrake has an open mind and is not afraid of ridicule by his peers. Sheldrake’s writing is fuelled by the ‘wonder he finds all in living things’. He became a biologist because of his fascination with the natural world. As he furthered his studies at university, he was taught that rather than be emotionally involved with the subject he should practice emotional detachment. His teachers believed that ‘biological organisms were inanimate machines’. Over time, he was able to achieve the required detachment but felt that this didn’t relate to his experience of nature. He realized that by seeing nature as inanimate, there was a division that threatened our survival. The mechanistic view of nature that prevailed in conventional science allowed nature to be exploited for economic development. He says: ‘In the official world - the world of work, business and politics - nature is conceived of as the inanimate source of natural resources’. In much of his writing Sheldrake pleads for a return to a view of nature as sacred. Similarly, in my work this has been a recurring theme; nature has inspired me for as long as I can remember. The reverence I have for nature, the feeling of unity with all creatures and the seemingly endless variety of colour and form to be found in nature is reflected in my work. Hopefully others will be inspired to view all of nature as sacred by contemplating the developed art works.

Custodians of the Land: the sacred mother

The connection between place, spirit and humans is evidenced in the world view of Indigenous peoples. Australian Aboriginal people are known to have deep connection to the land, plants, animals and the heavens above. Creation stories describe how the world was formed and tell how the people must live in order to protect and maintain the

156 Ibid, p.3.
157 Ibid.
environment so that life, land and culture are balanced and sustained. The concept of interconnectedness of people, plants, animals, land and spirit is passed from one generation to the next.\textsuperscript{158}

Through art, Aboriginal people expressed their beliefs and connection to country. Totemic designs were carved or painted onto functional objects to invoke magic. Clubs were carved with designs that were intended to make them deadly and shields were covered with designs to counteract the enemy's magic.\textsuperscript{159} Tribal groups used art to show the way for hunters and to describe the animals in a particular region. There was always a spiritual meaning as well; trees were carved to show the spirits of the dead the pathway between earth and sky\textsuperscript{160} and bodies were adorned for important ceremonial occasions.

Aboriginal people believe that the ancestral spirits of the Dreamtime created the world. They created the plants and animals, landscape, sun, moon, stars and sky; the seasons, laws, customs, songs and ceremonies.\textsuperscript{161} There is no separation between the religion, people and country. Conversely, Europeans viewed landscape as outside of themselves, as scenery something to be exploited as if everything in the environment was there to be manipulated for their needs.\textsuperscript{162}

In Western art, landscape has been used to represent the cultural conventions prevalent at the time. According to Simon Schama, the word 'landscape' was derived from the Dutch and German roots meaning a unit of human occupation, a jurisdiction.\textsuperscript{163} Western artists projected onto the landscape the values of their times, which inevitably promulgated the separation between land and people. Schama writes that,

'some historians believed that the Renaissance and the scientific revolutions of the sixteenth and seventeenth centuries doomed the earth to be treated by the West as a machine that would never break, however hard it was used...Intensive agriculture is said to have made

\textsuperscript{158} Grieves, Vicki, Aboriginal Spirituality: A Baseline for Indigenous Knowledge Development in Australia, p2.
\textsuperscript{159} Massola, Aldo, As They Were: the Aborigines of South-Eastern Australia, Heinemann, Melbourne, 1971, p. 56.
\textsuperscript{160} McCarthy, Frederick, D., Australia’s Aborigines: their life and culture, Colorgravure Publications, Melbourne Australia, 1957, p162
\textsuperscript{161} ibid, p. 115.
\textsuperscript{163} ibid, p. 10.
possible all manner of modern evils leading to exhausted natural resources…'

Australian Aboriginal peoples, on the other hand, don’t look into landscape, as Europeans do, but are in and of Country, embedded both culturally and psychologically. In her essay, The Concept of a Cultural Landscape, eco-feminist, Val Plumwood writes that ‘to describe the land as ‘landscape’ is to privilege the visual over other more rounded and embodied ways of knowing the land, for example by walking over it or by smelling and tasting its life.’

The similarity between eco-feminist theory and Aboriginal experience of country is articulated by Plumwood when she writes that ‘for any given piece of the earth’s surface, we can … tell a story of landforms created, by motions of the earth, by volcanoes, tsunamis, earthquakes, meteorites … geological depositions and weatherings.’ What Plumwood argues for is what Indigenous people the world over have long believed. In 2005, Kwaymullina wrote: ‘rock, would be called ‘non-living.’ but rock is there, just the same. Human is there too, though it is neither the most or the least important thread - it is one among many; equal with the others.’ Plumwood uses very similar words when she writes ‘from an ecological perspective, all the species belonging to the land influence and maintain the land. The human is just one among many here.

For tens of thousands of years Australian Aboriginal people lived in harmony with nature. It is only since Europeans arrived that rapid detrimental changes occurred in the environment. It is not only in Australia that the environment has been damaged by uses that are unsustainable. David Suzuki writes about this problem in his book, The Sacred Balance, he asks James Cornell, a Nisga’a Indian elder from British Columbia how he felt when he saw a clear cut forest for the first time and the man replied ‘I couldn’t breathe. It was as if the earth had been skinned. I couldn’t believe that anyone could do that to the earth.’ Suzuki continues that forestry ‘experts’ reassure us by saying that it will ‘green up’, that the tree plantations that are planted where native timbers once grew can be harvested in a shorter time than the original

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164 ibid, p. 13.
166 ibid, p.125.
168 op. sit. p.125.
169 When in Australia on the Beagle Voyage, Charles Darwin noted in his diary on 16th January,1836 that’ the decrease in numbers of Aboriginal people must be owing to drinking of spirits, European diseases and the gradual extinction of the wild animals’ Charles Darwin: An Australian Selection, National Museum of Australia Press, Canberra, 2008, p16.
These ‘experts’ don’t mention what is lost. How the planting of a single species, such as pine, upsets the natural balance. How the animals living there are robbed of sustenance and habitat. How the biodiversity is altered by the decision to plant plantation timbers or put sheep and cattle on land that once supported many species. Much of the environment of Hanging Rock has been impacted by the planting of plantation pines, native forest was heavily logged and what remained was later bulldozed to accommodate the introduced species of fast growing timber. The impact of gold mining can still be seen on the land and cattle grazing and farming has allowed weeds to proliferate where land has been cleared.

Many native peoples see the earth as the sustaining Mother. The developed world has more often treated the earth as a resource and a garbage tip. Perhaps these two opposing views are at the heart of the environmental destruction inflicted upon the earth. Powerful companies often appreciate only that which is economically advantageous to them. Those who plead for another way of valuing the earth are very often disregarded. Suzuki writes that we should ‘trust our gut reactions’. Too often, when doubt is expressed about what is proposed we are told ‘that we are “too emotional” as if caring enough to be emotional somehow invalidates our concern. We should be confident in our initial gut reactions and let them prove their case.

The concern shown towards the earth by environmentalists goes far beyond self-interest. It comes from a deep concern for future generations and, in most cases, a deep love of the natural world. They often battle the apathy of those who are ignorant of what is at stake if economic arguments are given precedence. Concerned environmentalists embrace values that, in some ways, parallel the way in which native people view their connection to the land. It is essential to survival, a nourishing, nurturing place that is vital to the spirit as well as the body.

**Aboriginal People from Hanging Rock District**

There are several groups of Aboriginal people whose country adjoins Hanging Rock. Gweagewal, Dunghuttli, Birripi and Gamilaroi boundaries surround Hanging Rock. It is believed that in the past these people traversed the high country when they moved

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171 ibid, p209.
173 ibid Introduction xxx
from the coast to the inland plains and back for hunting, trade and corroborees at various times throughout the year.

In the Tomalla Nature Reserve, close to Hanging Rock, campsites and art sites made by the Anaiwan people have been found.\textsuperscript{175} The Anaiwan and Gamilaroi shared country around Nundle. Anaiwan country was mainly located between Guyra and Ben Lomond and south to Uralla and the Moonbis. The Gamilaroi and Ainawan people had strong ties based on the sharing of resources, trade and ceremonial links.\textsuperscript{176}

In 2004 in Nundle Shire, six Aboriginal sites were listed by National Parks and Wildlife; these include one rock art site, two axe grinding grooves and three artefacts.\textsuperscript{177} The sites in the Tomalla Nature Reserve near Hanging Rock were mentioned in 2011; these may be additional finds not previously recorded.

The Dunghutti people are located in the country that extends from Walcha across The Falls country which encompasses Nowendoc and the surrounding district, through to Gloucester. This area incorporates the headwaters of the Manning, Hastings and Macleay Rivers. The extent of Dunghutti country includes Port Macquarie and Kempsey.\textsuperscript{178} Each time we travel to Hanging Rock we pass through parts of this country.

According to James Rose, an anthropologist from Native Title Services in Sydney, NSW, Hanging Rock is believed to be a shared place which was traversed by Aboriginal people moving about the region.\textsuperscript{179} The area is very cold in winter and may not have been an inviting place for more permanent settlement. There are mentions of Aboriginal people in the district of Nundle and Hanging Rock at the time of early European settlement. It is not clear exactly where these people came from however the Gamilaroi are the most likely group as their country includes Nundle and Hanging Rock and covers a large part of the Northern Tablelands. Aboriginal rock art has been found in Gamilaroi country and conserved. In the Early History of Tamworth and District, Jim

\textsuperscript{176} Boileau Joanna, Thematic History of Nundle, Manilla and Barraba, Tamworth Regional Council, 2007, p.7.
\textsuperscript{177} Ibid, p.15.
\textsuperscript{178} Blomfield, Geoffery, Baal Belbora: the end of the dancing, first Published with assistance of Aboriginal Arts Board of the Australia, Hogbin Poole, Redfern, NSW, 1986, map, p.5.
\textsuperscript{179} Phone Conversation 2006.
Carey describes some as being ‘red ochre on granite and consisting of human figures accompanied by grid tracks, direction signs, circles, lines and dots’.  

The image (above) of a carved tree shows some of the patterns used by Aboriginal people to mark the gravesite of an important member of the tribe.

At Hanging Rock there are no obvious traces of past Aboriginal use of the land but that is not surprising because of the way the land has traditionally been respected. Pre-European invasion, there would not have been scars on the land from sheep, horses and cattle. The tracks that people used would have been used only for walking with bare feet. Bill Gammage remarks that ‘Aboriginal land consciousness is rightly seen as drenched in religious sensibility, but equally the Dreaming is saturated with environmental consciousness. Theology and ecology are fused.’

The majority of European settlers who moved into the region in the nineteenth century had very different ideas about the importance of the environment. As the settlers took over the land for the purpose of grazing stock and growing crops, many of the Aboriginal people were forced from their traditional country and way of life. In most

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180 Carey J. *Tamworth and Districts Early History*, Published by Tamworth Regional Council, 2006, p.6.
instances this created conflict between the two groups. According to Rodney Harrison in his book *Shared Landscapes*:

> Land acquisition and exploitation were the primary motivations of both new colonists and the Crown. But land was equally important to Aboriginal people … Later, the land was to become equally important to non-indigenous identity and ‘sense of place’ in ways that mirrored the feelings of Aboriginal people.”

Harrison is writing of a later period in the history of Australia, after the Indigenous people had been dispossessed. They were living in missions and on the fringes of towns. It is doubtful that the depths of feelings of the Aboriginal people were understood by the majority of the settlers; particularly the sorrow when their country was appropriated and family members died. The Aboriginal people believed that their spirit remained connected to their country after death. The same deep sacred connection to country seemed lacking in many European settlers. Some of the settlers were sympathetic to the plight of the Aboriginal people and did what they could to help. Blomfield writes ‘in the pioneer days of British invasion there were some splendid exceptions who treated the Aboriginal race with compassion and some understanding’

At the Interface: Early Encroachment on Aboriginal Land near Hanging Rock

In 1825 Europeans travelled through Hanging Rock. Surveyor-General John Oxley had instructed Henry Dangar to make a second expedition to the Liverpool Plains and the Peel River to appraise the country for the grazing of sheep and cattle. Oxley had explored the area in 1818, eventually finding his way to Walcha and then following the Hastings River to Port Macquarie.

Dangar found an easier pass through the Liverpool Ranges at the head of the Pages River near Murrundi. He then followed the foothills of the Great Dividing Range east until he reached the Peel River near where Nundle is today. He crossed the mountains via Hanging Rock then followed the Barnard River out of the mountains. It was an extremely difficult journey, it is steep and rocky in much of the country they had to cross; the horses died of exhaustion on the way back to Port Macquarie penal

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183 Blomfield, Geoffery, *Baal Belbora: the end of the dancing*, first Published with assistance of Aboriginal Arts Board of the Australia Council, Hogbin Poole, Redfern, NSW, 1986, p.133.
184 ibid, p.133.
Henry Dangar is said to have ‘arrived barely alive at the coast.’ The map below shows the route Dangar followed in 1825.

Fig.110 Highlighted section (by author) between Muswellbrook and Port Macquarie indicates route passing through Hanging Rock Region to the coast at Port Macquarie. Dangar’s trek eventually ended at Port Stephens.

At the time of Dangar’s 1825 crossing of the mountain at Hanging Rock, the limits of location for the colony did not extend beyond the County of Gloucester. The Aboriginal people from the region yet unsettled by Europeans lived, as they had always done, in harmony with nature in their traditional country. Geoffrey Blomfield, a Dungutti man who lived in the Walcha area for most of his life, describes the encroachment of the Europeans into Dungutti country in the Macleay Valley. The depth of despair and the outrage he feels at what happened is unmistakable.

The lands of the people of the Macleay Valley were occupied by the land hungry British in an arrogant and illegal way. This lust for land had been born of laissez - faire capitalism which had developed in man a ruthless disregard for the rights of others. Greed was, and still is, stronger than the sense of justice in Western civilization. The people of the Macleay lost their ancient lands and had their way of life

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smashed before they fully realized what had happened to them. The familial areas, which passed from one generation to the next, and from which they harvested their food ... and derived their spiritual sustenance, the sacred places which were the homes of their spirits from the Dreamtime, were suddenly theirs no longer. 188

Groups of Dunghuti people, outraged at the injustice, eventually withdrew into the Falls Country, the wilderness between Gloucester and Walcha where the Great Dividing Range falls sharply to the coastal plains. For close to twenty five years they waged guerilla warfare against settlers. 189 The ancient footpaths which intersected the wild country were probably utilized by the Aboriginal people when they raided the settlers, stealing their sheep and cattle.

In Shared Landscapes Rodney Harrison discusses how the trails travelled by Aboriginal people before European settlement of the Kunderong Ravines (part of Dunghuti country) were later used by pastoralists as stock routes. When searching for an easy way to travel from the tableland to the coastal plains, settlers followed pathways made by animals and the Aborigines of the area. Harrison notes that the ephemeral nature of these tracks requires sensitive management if they are to be preserved. 190

In the first half of the nineteenth century, Aboriginal people from Kunderong area assisted the invaders to traverse their country. They showed them where to cross the creeks; they cut a pathway through the vines and bushes with their boomerangs and showed where to find bush foods. They carried the supplies for the explorers and showed them the best mountain passes. 191

Walcha and Apsley Falls

Walcha district was an important meeting place for Indigenous people. There is anecdotal evidence that large numbers of Aborigines lived around Walcha and that a massacre occurred at Apsley Falls in the early nineteenth century. Settlers on horseback are said to have driven the Aboriginal people towards the falls and forced them to jump to their death onto the rocks far below. The Amaroo Aboriginal Land Council at Walcha made enquiries from the elders on my behalf and were told it did happen. This is oral history but is more plausible than the absence of the incident in

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188 Blomfield, Geoffery, Baal Belbora: the end of the dancing, p.27.
189 ibid p.6.
190 Harrison Rodney, Shared Landscapes, p.136.
191 ibid, p.114, citing explorer, Clement Hodgkinson, April 1841.
documentation of European history of the time. Walcha National Parks and Wildlife staff erected a sign documenting the killings near where the incident is said to have occurred. The images below were taken by me on a recent visit to the site. Many massacres went unreported and the guilty party unpunished.

The Myall Creek massacre occurred in 1838 at Bingera, on the Northern Tablelands. The perpetrators were tried and found guilty of murder for atrocities against the Aboriginal people.192 They were the only Europeans ever executed for the massacre of Aborigines in the history of Australia.193

Figs.111, 112  Sign and Bluff at Apsley Falls  photographed by  S. Burgess  17/11/2012

Walcha is approximately 60 kilometres in a direct line from Hanging Rock and is linked closely to the history of the HR district. In 1818, explorer John Oxley and his party travelled through what is now Walcha when reconnoitring the Liverpool Plains. While there George Evans, Deputy Surveyor, NSW, drew a view of the falls that Oxley had named Bathurst’s Falls on the River Apsley. The explorers were searching for places to extend occupation by settlers further into the limits of location that had been drawn on the map of NSW. They were looking for good pasture and water for stock and climate and conditions suitable for growing crops. As they moved across the land, they named various landmarks and places after British people of importance acting as if the country belonged to them. The Aboriginal occupation seemed of little consequence except as

192 The Myall Creek Massacre occurred in 1838 on the property of Henry Dangar (the explorer). Seven white settlers were found guilty of murdering Aboriginals and eventually hanged. There was an outcry about the hangings, the majority of people in the colony were sympathetic to the murderers and raised money to pay for their defence. Massacres still occurred after that but were kept secret. Blomfield, Geoffery, Baal Belbora: the end of the dancing, p. p.30, 31.

ethnological interest or if skirmishes occurred. Drawings were made and journals kept to record experiences as the explorers made their way further into land unknown to them.

Fig. 113  Apsley Falls (named Bathurst Falls by Oxley)  George Evans 1818

As I pass across the country I am conscious of the scenic beauty and also of the injustice that the Indigenous people suffered and continue to suffer as a result of the invasion of their country. I am mindful of how much degradation has been wrought on the area because of greed and disregard for the sustainability of the environment. The
land is layered with history and profound sorrow yet is capable of future regeneration if
cared for as it should be.

In the latter half of 1852, Reverend R.W. Clarke was engaged in geological surveys in
the Hanging Rock and Walcha district. From his camp at Walcha he wrote to the
Colonial Secretary informing him of the extent of his explorations and the outcomes. He
found his way to Apsley Falls after crossing the Great Dividing Range of which Hanging
Rock is a part. He describes various land formations and the way in which these can
influence scenery. He writes in section four of the report:

These correlative phenomena distinctly point out the great
dependence of what is called natural scenery upon geological
conditions, and the value of the pursuits of the geologist to the aspirer
after eminence in some departments of the arts. The ordinary
admirers of the wild or beautiful in the external landscape seldom,
perhaps, understand, that it is with the causes that have produced or
modified the gracefulfulness or sublimity of such scenes that geology is
conversant; and many an artist fails in his attempts to imitate nature,
because he does not perceive that, to become creator in art, he must
necessarily obtain some insight into the laws by which what is called
nature has been produced. Nowhere, I imagine, could a student in art
or nature obtain more useful aids to his invention than in
contemplating the varied surface and slopes, the gorges and valleys
that adorn the narrow but important "Cordillera" of Australia. Having
crossed and re-crossed it in no less than sixteen points throughout its
undulating course, between the latitudes 31° and 36°, I cannot but
pronounce it as interesting to the lover of the picturesque as it is
instructive to the geological explorer.¹⁹⁴

Reverend W.B. Clarke was not only a well-respected scientist; he was also a Church of
England priest. He was the first rector of St Thomas church in North Sydney (built
1843-45). Colonial artist Conrad Martens assisted in designing the church, he also
carved the sandstone font and donated the communion vessels. Martens lived a short
distance from the church and was the first church warden.¹⁹⁵ Both Martens and
Reverend Clarke had connections to Charles Darwin (1809-1882). Martens travelled on

¹⁹⁴ Clarke, Reverend W. B., Report to Colonial Secretary, 28/12/1852, Maitland Mercury, 25/5/1853.
¹⁹⁵ Nicholas F.W., Nicholas J., M., Charles Darwin in Australia, Cambridge University Press, UK, 2002,
p154.
the Beagle as an artist with Darwin, and Reverend Clarke communicated by letter to Darwin as well as sending geological samples to him from Australia.196

Conrad Martens, Reverend Clarke and Alexander Terry’s party were all either at Hanging Rock or within sixty kilometres of it during the period between 26th April and late 1852.

At the time, Conrad Martens was a prominent colonial artist and, as Frederic. C. Terry became better known, they became contemporaries. There is an interesting linkage between the lives of Clarke, Martens and Frederic. C. Terry and the area over which they travelled in 1852. During this period in history the new colonial territory continued to be surveyed, mapped and documented as it expanded further into Aboriginal land. The traces of these journeys lie over the land at and around Hanging Rock.

On 6th November, 1851, Martens arrived at Moreton Bay by boat. He then went to Brisbane where he spent a couple of weeks sketching the town and suburbs. He slowly made his way back to Newcastle sketching at various locations on the way. On the 26th of April 1852, Conrad Martens visited the Walcha area. On his return journey he drew two sketches of the Apsley Falls.197 In 1874 Martens painted a watercolour from the drawing, the painting became the first acquisition by the Art Gallery of NSW. In 1873 a smaller painting by Martens of a different scene at Apsley Falls had been commissioned for the National Gallery of Victoria.198

196 ibid p. 11, p. 154.
Conrad Martens was drawn to the magnificent country that Rev. Clarke described as being ‘as interesting to the lover of the picturesque as it is instructive to the geological explorer’. Martens had adopted a classical style of landscape painting which began in Rome in the seventeenth century with Claude Lorrain a French artist working in Italy. The style was influential for Dutch landscape painters and later was adopted by English artists, notably Turner. Martens was influenced by Turner’s style. Martens is quoted as saying that he studied Turner’s book, Liber Studiorum, where he found ‘breadth, grandeur, and a total absence of all petty details’.

Artists such as Conrad Martens had brought from Europe the artistic conventions of the time towards landscape painting. These conventions had a long history. As noted by Simon Schama, ‘inherited landscape myths and memories share two common characteristics: their surprising endurance through the centuries and their power to shape the institutions that we still live with.’
Landscape painting was used to forge a national identity in Britain. The artists who had come so recently to Australia applied the conventions learned in Britain to the Australian landscape. It took some years before that changed. Just as the British on the First Fleet had overlain their way of life over a new land, over the existing people of Australia, the Colonial artists at first attempted to superimpose the British landscape onto the Australian bush.

On May 1st 1852, as he travelled from Walcha to Newcastle on his journey home to Sydney, Martens stopped at Nowendoc to make a sketch of the creek. He gradually made his way to Giro, Stroud, Washpool, Booral, Carrington and Raymond Terrace; all places with which I am very familiar; they are either close to where I live or places that I pass through when travelling to Hanging Rock. As I pass these places in the 21st century I imagine how the landscape would have appeared to Martens in 1852. Martens sketched eleven drawings between the first and fourteenth of May, 1852. Conrad Martens was attracted to the beauty of the country between Walcha and Stroud during early colonial times and today it is still glorious country, albeit having been altered by the way in which some areas have been developed. Coal mines have been established near Gloucester and the threatened expansion of the industry is causing great concern, as is the exploration for coal seam gas in the area.

ibid.

There has been an ongoing campaign by members of the community in the Gloucester region to prevent both the expansion of the coal mines and the exploration for coal seam gas. Public meetings were organised to alert people to the potential environmental impact of the proposals. Signs have been placed along the Bucketts Way and Thunderbolt’s Way by the concerned residents.
When considering Hanging Rock and environs no one meaning of place suffices. The native Aboriginal people belonged to country; it was suffused with their Dreaming and nourished them, they were the custodians of the land. When their land was usurped by colonists things changed rapidly. Hanging Rock was outside the limits of location at first, settlement was proscribed. As more people arrived in the colony explorers like Oxley and Dangar were sent to find land suitable for sheep and cattle so that settlers could expand further into Aboriginal lands. That caused great upheaval to the way of life of the Gamillaroi and Dunghutti people from the region, leading to massacres and guerrilla warfare.

Colonists mapped and documented the region. Artists, such as F.C.Terry and Conrad Martens travelled the land in 1852 sketching and painting what they saw. Geologists were sent to record the mineral deposits and topography. Reverend W.C. Clarke spent some time at Hanging Rock, Nundle and Walcha carrying out surveys in 1852.

Instead of being valued for itself, the place was seen as a resource and as such became degraded over time. Goldmining and logging affected the environment; fortunately some of the issues are now being addressed; nature reserves and national parks have been established close to Hanging Rock.

The writings of biologists David Suzuki and Rupert Sheldrake and eco-feminist Val Plumwood argue for a more ethical approach to the environment, to see it as sacred and value it for more than just economic reasons. Buddhist philosophy also encompasses an awareness of the interconnectedness of all things. These views are more in line with the beliefs of Aboriginal people and may lead the way to a more sustainable future.

Environmentalists have a more holistic view of the ecology; seeing that all things in the environment need to be valued. The environment at Hanging Rock has been degraded but, if carefully managed, it may be possible to restore it so that all creatures have a greater chance of survival.
Environment at Hanging Rock and Surrounding Area

At its heart, modern ecology is a continuation of the ancient quest for a deeper understanding of the often invisible and mysterious web of relationships that connect living things to one another and to their surroundings.\textsuperscript{206}

The quote above from \textit{Wisdom of the Elders} is one more example of the concept of interconnectedness that is recurrent throughout this exegesis. When one part of the web is damaged who knows what the consequences will be? Financial considerations are too often placed far above environmental concerns.

Ever since I first visited Hanging Rock in 1979 my main concern has been that the natural surroundings were not sufficiently valued by many of the landholders. I wanted more local people to appreciate the environment there. It is incredibly beautiful and quite unique because of the land formations and variety of native wildlife. It sits on the escarpment of the Great Dividing Range, eight kilometres above the town of Nundle. There is a marked change in vegetation and temperature between the two locations as the road winds up the steep terrain to an elevation of 1194 metres. Over time, mining, farming and logging have changed the environment. This is a concern because recently studies have been carried out which indicate that there are several rare and endangered plant species in the area.

Much still needs to be done before a clear picture of the diversity of the plant life emerges. For example recently Dr. Lachlan Copeland, a botanist from the University of New England, discovered a new species of Bertya, a rare native shrub, close to Hanging Rock. Dr. Copeland said:

\textit{The whole gorge and escarpment country of north eastern NSW is very understudied…the area is very important as a water catchment and flora and fauna refuge. There is great potential for ecotourism… much basic botanical and zoological study needs to be done just to know what is there.}\textsuperscript{207}

While at present much of the area is covered by plantation pine or used for grazing, Copeland's work points to the existence of a hidden or forgotten layer, one that is redolent with the story of loss, degradation and, more hopefully, of rediscovery. There

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\textsuperscript{206} Knudson Peter, Suzuki David, \textit{Wisdom of the Elders}, p.43.
\end{flushright}
are now nature reserves in the region as well as National Parks. Parts of the country are at last being valued for the magnificence and diversity to be found there rather than for what can be taken from the environment for monetary gain.

In 1999 a rare species of eucalyptus oresbia (small fruited mountain gum) was documented by John T. Hunter and Jeremy J. Bruhl. It was found growing on the steep gradient between Nundle and Hanging Rock. After searching nearby areas, no more stands of this particular tree were located by the researchers. Disturbance of the country after settlement by Europeans may have contributed to the extinction of other species.

The plan of management for Back River and Tomalla Nature Reserves defines several endangered, threatened or rare plant species in the reserves. Among them is the Barrington Tops ant orchid, New England bush pea, Bendemeer white gum, Barrington wattle, white flowered wax plant, wedge leaved guinea flower and the blush daisy bush. There is one critically endangered plant in Tomalla Nature Reserve which does not have a common name (olearia sp. aff. erubescens). In Back River Reserve, the Dungowan Starbush is mentioned as being endangered. It is important to conserve the area so that these plants can survive in the future.

Fig.120 Wedge-leafed Guinea Flower (Hibbertia Hermanniifolia) photograph by D. Simpson 2006 www.somemagneticislandplants.com.au

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208 Tomalla and Back Creek Nature Reserves, Oxley Wild Rivers, Nowendoc and Curracubundu National Parks
Logging has been one of the main factors in the alteration of the natural environment at Hanging Rock. There were many large native trees in the area. Shortly after settlement, the timber was difficult to access; the track up to Hanging Rock was very steep and rough. That soon changed: ‘After a winding road had been constructed up the mountain to Hanging Rock in 1874, timber was logged and transported to a mill at Nundle for use in railway construction.’\textsuperscript{211} In 1917 and 1918, both Nundle State Forest and Hanging Rock State Forest were gazetted. In 1964 the Forestry Commission planted pine plantations where native forests once grew. Logging has continued ever since in the pine plantations and also the remaining native forests administered by the Forestry Commission. After logging there is a lot of waste timber remaining. The country resembles a warzone after the forest is harvested. What remains is bulldozed together and burnt.

\footnotesize{\textsuperscript{211} Bailey, W., Lobsey, L., \textit{Hills of Gold}, p.75.}
There are pockets of untouched native forest at Hanging Rock which show how it would have looked in pre-European times. It now seems inconceivable that a wilderness area such as this was degraded by commercial interests. Before logging, mining and farming there must have been more diverse plants and animals. Unfortunately environmental considerations were not paramount at the time when the loggers were given permission to cut the forest. In 1953 Bayley writes ‘On the ranges to the east of Hanging Rock for thirty miles at the head of the Manning and Barnard Rivers lie vast forests of valuable timber.’\textsuperscript{212} Logging is still being carried out there today. Nearby there have been positive changes towards the conservation of the area. A National Park has been established close to Nowendoc which covers vast tracts of wilderness. Oxley Wild Rivers National Park near Walcha has been proposed as world heritage wilderness. Tomalla Nature Reserve has been declared and both Tomalla Reserve and Curracubundi Wilderness Area has become part of a series of wildlife corridors linking the coastal plains to the New England Tablelands.
In November 2010, the Curracubundi Wilderness Assessment Report was published by the NSW Department of Environment, Climate Change and Water. It proposed a wilderness area stretching from the coastal Manning Valley including land further inland around Gloucester, Giro, Nowendoc, Walcha and near Hanging Rock. The country to be proclaimed wilderness is spectacular and much of it is inaccessible. The ranges are steep and rocky and much of the land has not been explored. Where the wilderness areas meet farming land a buffer zone was proposed so that land use by farmers would not be compromised. Where possible, rehabilitation of places minimally affected by logging and farming practices would be carried out. Some of the landowners were opposed to the proposal and saw it as a 'land grab' by the government.  

Of those who responded, no landholder wished to declare wilderness on their land, however several expressed an interest in selling all or part of their land to DECCW. The main objections or concerns raised in the submissions received from landholders were:

- wilderness proposal would devalue their property
- disturbance associated with past agricultural practices within wilderness assessment area
- the wilderness process was another opportunity for the government to remove landholder’s rights and ‘land grab’.

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214 Curracubundi Wilderness Assessment, p.20.
Aboriginal custodians were consulted and their knowledge of the region valued during the preparation of the report. The forests contain many sacred sites which have been maintained by generations of Aboriginal people. These sites were used for ceremonial purposes. The forests contain the cultural heritage of the Aboriginal people and sacred sites are secret places which should remain that way. Non-Aboriginal people must respect the wishes of a people who have been robbed of so much. An Aboriginal man told a researcher for another project that ‘the forest is the blanket that protects our sites’.  

The report excludes Crown Land and State Forest but covers an area between Gloucester and Walcha. The aim is to form a landscape corridor linking the Northern Tablelands to the coastal plains of the Manning Valley. It is an important part of the Manning River Catchment. The report states that ‘Wilderness comprises the last substantial remnants of the ecologically complete environment that once covered the earth.’ It also says that there are seventy five different ecosystems in the area covered by the report. Some of Australia’s most iconic and endangered marsupials such as the Brush Tailed Rock Wallaby and the Spotted Tailed Quoll are to be seen there.

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215 ibid, p.43.  
In the report Snow Gums are said to comprise part of the diverse eco-systems to be found in Curracubundi Wilderness area. Several species of plants and animals mentioned in the wilderness assessment still survive at Hanging Rock.

At Hanging Rock there is a stand of Snow Gums on a property adjoining the main road. No doubt in the past there would have been many more. Spotted Tailed Quolls are also found at Hanging Rock. There is a mention in the wilderness report of links between Curracubundi’s wildlife corridor through to the important tableland areas of Nundle and the Hanging Rock State Forest.  

Sheba Dams

Sheba Dams were formed in 1888 and 1889 by the American Company as a reservoir for water which was then transported by a system of races from the dams to the dry diggings. The miners paid for the water which was regulated by a sluice and gate. The American Company was granted water rights to the entire western slope of the Liverpool Ranges in 1882. The dams have not been used for their original purpose for many years and are now a popular campsite and recreation area and providing welcome relief from the heat in summer. The dams also attract birds and animals to the area.

Fig. 129 Lower Sheba Dam 5/12/2012  
Fig. 130 Mechanism to open Sluice Gate 5/12/2012  
photographs by S. Burgess

219 *Curracubundi Wilderness Assessment*, p.10.  
221 ibid, p.25.
Hanging Rock Initiatives

Recently signs have been erected at Hanging Rock in places that visitors frequent. The signs detail the historical sites of interest and also the native animals to be found in the area. The community has been involved with the relevant government bodies to facilitate awareness of what is there. Until recently there were few clues available to tourists as to what had been there as so few of the early buildings remain and native animals are normally shy around humans.

There recently seems to have been a change for the better in the way that the environment is perceived at Hanging Rock. Namoi Catchment Management Authority recently erected information signs in the camping area at Sheba Dams stating that; ‘The protection of the area around Sheba Dams is critical to the survival of more than 60 rare and endangered plant species recorded in the area.’

The sign lists the birds, reptiles and mammals to be found in the area. Notably there is an image of the Spotted Tailed Quoll which is an endangered species of the region.

![Fig. 131 Spotted Tailed Quoll -Sign 30/11/11](image1)
![Fig. 132 Skink at Sheba Dam 30/11/11](image2)

After many years of exploitation, the environment is being valued for the diversity found there and measures are in place to preserve and protect what is left. Two reserves have been set aside close to Hanging Rock in an effort to prevent further degradation.

My concern about the weeds that have proliferated at Hanging Rock led to a body of work about this issue. Weeds have caused problems for both farmers and the environment since they were introduced in the early days of the British invasion.

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222 Namoi Catchment Management Authority, Sign at Sheba Dam, 2011.
Weeds as Metaphor for European Settlement

European settlement radically altered land use in Hanging Rock. Once used by indigenous people for hunting and gathering as they traversed the country, over time the land became exploited and scarred. Europeans burrowed into the earth in a quest for gold and destroyed native vegetation to make way for pasture and crops. Today it is only possible to imagine the untouched beauty of the area and mourn the loss of what once was.

Blackberries

Where land has been cleared and also in some places where there is native vegetation, weeds are found. At Hanging Rock, vast tracts of land have been put to use as pine plantations, amongst these are massive blackberry vines. Some cover areas as big as houses. Spraying fails to eradicate them for long. Birds have carried the seeds far beyond their original locations. Like any other noxious weeds and introduced wildlife species now causing damage, blackberries were brought to this country by European settlers who had little understanding of the potential harm that would ensue.

According to the CSIRO blackberries were introduced in the 1800s as a horticultural plant which yielded fruit and pollen. The plants, now classified as noxious, cover an area in temperate Australia of 8.8 million hectares, approximately the size of Tasmania.

My Work

I produced a body of work in response to my concern that blackberry bushes were so entrenched in the land at Hanging Rock. The thorns are not exactly like blackberry thorns, they are intended to convey a sense of the fragility of the environment and the feeling of being repelled at the same time.

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223 Management of invasive European blackberry
Scotch Thistle

Scotch Thistle is believed to have been introduced to Australia as an ornamental plant in the early 1800s. By 1850 Scotch Thistle had been declared a weed. Plants may produce up to 20,000 seeds which are viable for 20 years. The plants are difficult to eradicate and proliferate in land ploughed for pasture.224

At Hanging Rock, as in many other places in New England, Scotch Thistle is found. It has a certain appeal with its purple flower, a symbol of Scotland, and its delicate seeds which are carried far on the wind. Like other introduced plants it has caused huge problems for the generations of farmers who came after the early settlers.

My Work

I took a photo of a seed head touched by frost on my land at Hanging Rock. The delicate filaments visible just prior to bursting away from the plant are deceptively beautiful. Who would think they could cause such devastation in the countryside?

An installation based on the seeds of the Scotch Thistle was made. The stems are made from porcelain clay and the heads from natural fiber. Some are to be fixed to the wall and some will be suspended in front; others will be on the floor. My intention is to give a sense of the huge numbers of seeds that are carried on the wind to proliferate in the landscape.

**Prickly Pear**

Captain Arthur Phillip introduced prickly pear to Australia in 1788 by collecting cochineal insects from Brazil, along with the prickly pear plants they were feeding on. He transported them to Botany Bay to begin a cochineal dye industry in the new colony. In 1839 a different strain of plant was taken to Scone NSW where it was planted in paddocks as stock feed. By 1886 prickly pear had become such a pest that the Prickly Pear Destruction Act was passed to try to eradicate what had become a major problem.
Evidently that measure was unsuccessful by 1924, in New South Wales and Queensland; prickly pear covered 250,000,000 hectares of land. The Cactoblastis caterpillar was introduced as a biological control in 1926 and within six years many of the plants had been eradicated. 225

At Hanging Rock, prickly pear is found in proximity to where 19th century Europeans settled. It comes as an unpleasant surprise to be traveling through the Australian bush and come upon flourishing introduced cactus. I recently photographed a prickly pear plant with red flowers bursting from its light green body. While I must admit I was excited to find a plant in flower (previously never seen by me) and enjoyed looking at the form and colours I was concerned that these plants which have been noxious weeds for so long are still surviving.

**My Work**

In the gallery will be porcelain sculptures based on the form of prickly pear. They will be growing from the corner of the space, lurking there as if threatening to multiply once more.

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**Back Creek and Tomalla Nature Reserves**

In December 2011 two Nature Reserves close to Hanging Rock were declared. One is at Back Creek (735 hectares) and the other at Tomalla (605 hectares). Back Creek is eight kilometres from Hanging Rock in what was previously part of Hanging Rock State Forest. The recognition that it is important to protect even small sections of the area is noteworthy. The report comments on the significance of the two sites in relation to the surrounding region;

Back River Nature Reserve is significant as it forms part of a major regional corridor linking the Mount Royal Range to the Great Dividing Range. Tomalla Nature Reserve is significant as it forms part of a regional corridor that links Back River Nature Reserve and Ben Halls Gap National Park and also provides linkages to the Hanging Rock/Nundle/Dungowan and Tuggolo areas.\textsuperscript{226}

Since 1964 the Forestry Commission has harvested plantation pine in the country immediately to the north east of Hanging Rock and further back, towards Nowendoc on the Forest Way, native forests are logged. This activity precludes the possibility of protection for native animals in these areas. Wombats, Kangaroos, Echidnas and native birds are often killed by traffic on the roads passing through the forest. Hunting is permitted in some areas. Hunters are restricted to killing feral animals such as pigs, deer, rabbits and foxes. Unfortunately not all hunters abide by the rules. In the Tomalla and Back Creek Reserves there is evidence that hunters are encroaching on protected areas. According to the report:

\textit{Evidence of trail bike riding and pig hunting is present in the Reserves. Anecdotal evidence indicates pig hunters frequent the Reserves. Vehicle use has caused erosion and degradation to the Reserves, and in particular to the northern boundary trails in Back River Nature Reserve.}\textsuperscript{227}

There is positive change; because of recent developments and initiatives by government bodies and some of the local people at Hanging Rock, the environment is being re–evaluated. Although it has taken some time to happen and there is much to be done to redress the balance, the future looks more hopeful than the past proved to be for the protection of this unique place. The main focus of interest at Hanging Rock for many years was gold. Now that the gold is depleted it would be wonderful if the emphasis for the future of the district was on the environment. There are opportunities for eco-tourism in the area surrounding Hanging Rock. At Hanging Rock there are walking trails and places to fossick as well as a wealth of beauty to be found in the surrounding country.

Besides studying the historical aspects and larger ecological picture I wanted to investigate the small world that supports life at Hanging Rock, the microbes in the soil, the organisms in the leaf litter, the algae in the water, the fungi and lichen so often overlooked. There is beauty in the small things that frequently go unnoticed. These

\textsuperscript{226} Back River and Tomalla Reserves: Plan of Management, p.5.
\textsuperscript{227} ibid p.15.
organisms also play an important role in the health of any environment. Without them eco-systems break down and eventually can not sustain life.

In their book *New Insights into Environmental Education*, Ashton and Laura examine the educational problems inherent in the ‘scientific method’ which has prevailed for so long. They echo both Rupert Sheldrake and David Suzuki when they voice their concerns about the natural world. They say,

‘The challenge of contemporary science is to restore our environment for we have all but destroyed the earth. We need to re-educate ourselves, to value nature and her life support systems, to understand her diversity and become stewards of her resources rather than exploiters and poisoners of her provisions’

For me, the natural world has been a constant source of wonder and a wellspring of inspiration for works of art. The way in which patterns are repeated in nature is remarkable; for example, aerial views of river deltas resemble water patterns on sand as the tide ebbs and flows, or veins on a leaf; these in turn resemble microscopic images of the smallest blood vessels inside the body. Without the development of lenses, the microscope and the telescope the limits of knowledge about the world would have been confined to what could be seen with the naked eye.

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Chapter 6 Invisible Worlds

This chapter contains a short history of the invention of the microscope with particular attention to the contribution of Anton van Leeuwenhoek and Robert Hooke. Hooke also invented the telescope. Developments in science and technology, eventually led to powerful telescopes like the Hubble Telescope and to Scanning Electron Microscopes; over time they have benefitted science and inspired artists by allowing access to worlds which would have remained unseen. In the past two decades there has been an increase in the number of artists working in the field of art and science, George Gessert’s artworks based on genetic engineering are discussed here as are some of the ethical issues raised. Barbara Maria Stafford also raises ethical issues regarding the use of microscopic imagery.

Scientific processes and imagery have been central to my artwork for some time. A Scanning Electron Microscope was accessed to examine samples from Hanging Rock and a large part of the work for the exhibition Plexus is founded on microscopic imagery. Ernst Haeckel (1834-1919) in particular has been influential; his detailed drawings of diatoms and radiolarians inspired me to investigate diatoms to see which of these organisms might be found at Hanging Rock.229

Microscopy

Microscopy plays a part in the methodology used to study Hanging Rock. I am looking at the minutiae as part of a complex mesh (the rhizome). The images accessed through the scanning electron microscope have enabled me to see in great detail what otherwise would have remained obscure in the layers (or plateaus) that comprise the story of Hanging Rock.230

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229 Haeckel was a supporter of Charles Darwin’s theory of evolution, promoting it in Germany. It is interesting to note that there is a link to Darwin between the colonial artist Conrad Martens, who sailed as an artist on the Beagle voyage with Darwin, and geologist Reverend W. B. Clarke who surveyed Hanging Rock (Chapter 4). Clarke sent rock samples to Darwin from Australia for examination. Both Clarke and Martens were acquainted.

230 Deleuze and Guattari say that ‘a plateau is always in the middle and not at the end of a rhizome, that a rhizome is composed of directions in motion…has neither beginning nor end, but always a middle from which it grows…’ Deleuze, G., Guattari, F., A Thousand Plateaus, p. 21.
As Barbara Maria Stafford has observed, ‘microscopes...fulfilled the long-standing human yearning for visually entering entirely different realms.’\textsuperscript{231} She noted that some early visual investigation using the microscope was dedicated to spectacle or illusion—‘the mindless activity of looking without thinking.’\textsuperscript{232} In her analysis of enlightenment vision and the use of the microscope she questioned whether microscopy was ‘a scientific enterprise or an aesthetic one?’\textsuperscript{233} Her point was that the moral task of scientific enquiry was sometimes overtaken by mere curiosity — ‘the desire just to see’\textsuperscript{234} — and that in our recent art imagery has often been ‘sham bricolage’.\textsuperscript{235} Her call is for art and artists to be aware of this fraud and to reassert what she calls an ‘aesthetic humanism’\textsuperscript{236} — in other words, to recover what we have lost in terms of ethical vision. This is my intention with the use of microscopic images to draw attention to the micro as well as macro worlds of Hanging Rock; to understand that the use/misuse of the land and its fragility is evident in all layers.

The invention of the microscope in the late sixteenth century allowed glimpses into a fascinating and previously unimagined universe. Over time, the use of microscopy had a profound influence on the way people in the developed world perceived the environment both inside and outside the body and on the fight against disease.

As it became possible to see the micro-organisms that surround and live inside us scientists realized that some of those organisms may be responsible for disease. In 1862 Louis Pasteur discovered that bacteria in cow’s milk caused illness; by heating the milk [pasteurizing] the bacteria were destroyed. By the end of the nineteenth century scientists had discovered microbes that caused tetanus, anthrax, tuberculosis, typhoid fever, leprosy, diphtheria, cholera and bacterial pneumonia.\textsuperscript{237}

In the nineteenth century, enlargements of amoeba and protozoa adorned the walls of an aquarium in Berlin which was dedicated to microscopic sea life. Amateur naturalists purchased pocket microscopes to enable them to view specimens. The public attended lectures on science where projections of microscopic organisms were shown.\textsuperscript{238}

\textsuperscript{232} ibid, p.95.
\textsuperscript{233} ibid, p.105.
\textsuperscript{234} ibid, p.106.
\textsuperscript{235} ibid, p.128.
\textsuperscript{236} ibid.
\textsuperscript{237} Gamwell, L., \textit{Exploring the Invisible}, p.45.
\textsuperscript{238} ibid, p.48.
Artists of the time were influenced by the forms which were new and exciting. In the late nineteenth century, Odilon Redon made works based on the microscopic realm and in the twentieth century, abstract artists Hans Arp and Joan Miro used biomorphic shapes. The fascination with what can be seen beyond the range of normal vision has not waned. Ever more powerful microscopes have been developed that open new vistas to us. The pioneers of microscopy are responsible for the first glimpse of the invisible world.

Anton van Leeuwenhoek (1632-1723)

Anton van Leeuwenhoek was not a scientist but, through his keen interest in using and manufacturing microscopes, he was responsible for bringing the wonders of the microscopic domain to the attention of the world.

Although the first microscope is believed to have been invented by Zacharias Janssen in 1590, interest in viewing small creatures was indicated at least two centuries earlier. In the early fourteenth century medieval philosopher Gerschom stated that it would be possible to magnify insects by looking through a flask of water or a concave lens known as a burning glass. In 1508, a physician named Alexander Benedictus is said to have seen ‘wormlets’ in skin, cheese, teeth, kidneys and lungs with the aid of a lens.

Anton van Leeuwenhoek made two hundred and forty seven simple microscopes during his lifetime. Because of his innate curiosity he discovered many wonderful things. When he learned that Lake Berkel, close to where he lived in Holland, had a green cloudy appearance (algae?) he took a water sample and placed it under his microscope. He found tiny organisms of various colours and shapes. In 1675 he became the first person to describe the appearance of red blood cells; two years later he observed and described human spermatozoa. During his lifetime he wrote hundreds of letters to scientific societies informing them of his discoveries. Some were sceptical. In 1693 an observer was sent to Delft, Holland by the Royal Society of London. The subsequent report confirmed van Leeuwenhoek’s claims. As a result of his sensational

\[239\text{ibid.}\]
\[236\text{ibid.}\]
achievements van Leeuwenhoek was visited by the Queen of England\textsuperscript{243} and Peter the Great of Russia\textsuperscript{244}

The observer from the Royal Society of London who travelled to Delft was Robert Hooke, a respected pioneer of microscopy. Hooke had been named Curator of Experiments when the Royal Society was first formed in 1662. When at Oxford University, Hooke’s skills at designing experiments and making equipment were impressive.\textsuperscript{245}

\textbf{Robert Hooke (1635-1703)}

Robert Hooke was exceptionally ingenious; he had an open and enquiring mind which led him to explore many subjects. He was very interested in geology and the fossils to be found in the rocks, realising that they were the remains of once living organisms. Hooke was the first person to examine fossils with a microscope. Long before Darwin, he observed that these organisms had changed over time and that many had become extinct.\textsuperscript{246}

Hooke used a primitive compound microscope,\textsuperscript{247} stating that the simple microscope produced by Anton van Leeuwenhoek gave clearer images but ‘were difficult to use’.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{fossil.png}
\caption{Fossils R. Hooke \textit{Micrographia} 1664}
\end{figure}

\textsuperscript{243} \textit{Leeuwenhoek’s World of Microbes}, http://www.aichi-gakuin.ac.jp/~jeffreyb/dental/micro.html 14/8/2012
\textsuperscript{244} Peter the Great was an avid collector of fossils, artifacts, bones, archaeology and ethnographic objects. These were housed in Cabinets of Curiosity. He was also keen to find out about new scientific discoveries. Cabinet of Curiosities en.wikipedia.org.wicka/cabinet_of_curiosities 15/8/2012
\textsuperscript{246} roberthooke.org.uk [accessed: 1.34 pm 1/11/2012]
\textsuperscript{247} Early compound microscopes were quite rudimentary. Hooke suggests how they could be improved in the preface to \textit{Micrographia}. 124
Hooke confirmed van Leeuwenhoek’s claims of seeing small animals in the water from Lake Berkel and facilitated the wide acceptance of van Leeuwenhoek’s discoveries.²⁴⁸

His publication, *Micrographia*,²⁴⁹ includes microscopic observations of many things such as the tip of a small needle, the edge of a razor, various fabrics, hoar frost, feathers and frozen urine, all of which Hooke described in minute scientific detail. In one experiment Hooke viewed a sliver of cork under a microscope. He described air filled sections which he likened to honeycomb and later called cells.²⁵⁰ Hooke’s exactitude and enthusiasm are palpable throughout the book.

Throughout the twentieth century, advances in microscopy were enormous. The pioneers of microscopy such as Hooke and van Leeuwenhoek began a study that would eventually develop into a whole new way of understanding life. Microscopic images allow access to an ever expanding natural environment. It is not only scientists who can access the invisible world; new developments benefit the general public as well. The vistas to be seen at microscopic level are spectacular matched only by what can be seen through a telescope. In the preface to *Micrographia*, printed in 1664, Robert Hooke wrote that:

"We have not yet overcome one world when there are so many others to be discovered, every considerable improvement of telescopes or microscopes producing new worlds and Terra Incognitas into our view."²⁵¹

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²⁴⁹ www.ucmp.berkley.edu/history/hooke.html  Robert Hooke (1635-1703)
²⁵¹ Hooke, Robert, *Micrographia*, p.1
Fortunately Hooke’s prophetic statement was realised to the advantage of many of us who have lived since then. The development of both microscopes and telescopes fired the imaginations of many creative people as well as scientists. Without the development of lenses, the microscope and the telescope the limits of knowledge about the world would have been confined to what could be seen with the naked eye.

**Expanding Vistas**

The Hubble telescope reaches into deep space producing images that are awe inspiring; microscopes reveal ever more about unseen worlds. There is an image which was taken by the Hubble telescope in 1995 called *Hubble Deep Field* which shows the vastness of the cosmos as viewed through that powerful telescope. The image invites comparison to clusters of organisms viewed through a microscope.

![Hubble Deep Field Image of Space, NASA 1995](image)

When viewing these images my imagination takes me on a journey into the vastness of space in the same way that I journey into the microscopic world. Rupert Sheldrake writes of that experience as ‘a disembodied journey’ when he compares the shamanic journey to the ability of the scientist’s mind to travel ‘far up into the sky: he can look back from the heavens and observe the earth, the solar system and the entire universe as if from outside. He can travel in the other direction down into the most miniscule recesses of matter.’ It is through the continued development of technology that many of these imaginary journeys are possible. Hooke was aware of the exciting potential of those instruments.

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253 Sheldrake, Rupert, p.55.
Anselm Kiefer made work influenced by telescopic images. His artist’s book, *The Secret Life of Plants*,\(^2\) contains images that were produced for a book titled *The Cosmos Poems* by Frederic Seidel\(^3\) According to Lynn Gamwell:

> In all twenty eight images from this series, dried plants are superimposed over photographs of galaxies and star fields, suggesting the stellar origin of the carbon atoms that are the building blocks of all organic molecules\(^4\)

The images are relevant to my work because they demonstrate the link between the elements formed in the stars and all matter on earth, which was deliberated on at the beginning of the exegesis. Kiefer’s use of dried plants (dying weeds), photographed against images of the distant galaxies suggests an awareness of the immensity of the universe and the connection to the small and commonplace plants so often unnoticed. The process of death, decay and regeneration is also referenced; dying matter is the foundation for new life. Anselm Kiefer’s work, *The Secret Life of Plants*, appears simple at first glance, however when one considers the inferences to be drawn from the work, it is profound.

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Ernst Haeckel (1834-1919)

The work of scientist, philosopher and artist, Ernst Haeckel, explored the vastness of the infinitesimal world which is accessed through a microscope. Both Kiefer and Haeckel benefitted from the inventive work of pioneer inventors such as Robert Hooke whose discoveries allowed visions far beyond what could be seen with the naked eye.

Haeckel was one of the scientists who participated in the documentation of the samples collected on the historic four year scientific voyage of the H.M.S Challenger (1872-1876). The Challenger expedition was proposed to the Royal Society by naturalist Charles Wyville Thompson (1830-1882). The purpose of the expedition was to map the ocean's floors in an effort to measure the depth, temperature, chemical composition and marine life. The scientists aboard the Challenger collected samples and, after the ship returned, Haeckel was invited to analyse the radiolarians, microscopic marine protozoa with a silica exo skeleton similar to diatoms. His comprehensive report took ten years to complete.257

Haeckel was a strong supporter of Darwin's theory of evolution and much of his research as a natural scientist was geared towards promoting Darwin's revolutionary new ideas. Haeckel published his research into Darwin's theory in two books, General Morphology (1866) and History of Creation (1868).258

Between 1899 and 1904 Haeckel produced a beautifully illustrated set of one hundred lithographs published under the title, Art Forms in Nature. Some of the plates were previously published in Die Radiolarian in 1862. These publications influenced many artists of the time and continue to inspire artists today. The images of microscopic organisms are particularly exciting. Haeckel was a not only a scientist but also a gifted artist.

I first became aware of Haeckel in the late 1970s when I purchased a copy of his book, Art Forms in Nature, first published in 1900. Since then I have used this book as inspiration for many works of art and it is partly because of this that the fascination I have for microscopic organisms developed. Radiolarians, like diatoms, have intricate forms comprised of a silica exo-skeleton; some look like creations from science fiction.

258 Gamwell, L., op. sit, p. 94.
As a potter, I could see possibilities for the development of thrown and decorated forms based on the diatoms and radiolarians drawn by Haeckel. The top left hand radiolarian in the image above left is a beautiful vessel when viewed upside down. The piercings are exquisite on porcelain vessels when light is used to accentuate the translucency. Several of the diatoms in the image on the right could be adapted for the decoration of bowls or platters. Some diatom forms are comparable to the vesica Pisces, vagina dentate, boat and shield forms prominent in my work over the years. The images below demonstrate how all of these influences coalesce. I have used all of the concepts, including the thorns I have been working on recently, and the Buddhist philosophy of death, rebirth and interconnectedness in the sculpture below. The influence of nature is ever present in my work, even from a microscopic level.
**Scanning Electron Microscope**

My methodology incorporated a range of scientific methods. For example, the view through a Scanning Electron Microscope (SEM) is a doorway into an incredible universe unlikely to be imagined by the average person twenty years ago. Samples from Hanging Rock were examined under a Scanning Electron Microscope by Dave Phelan, Professional Officer in Medical Sciences at the University of Newcastle. He scanned the samples that I gave him and found diatoms amongst the detritus from a pond. I watched as he searched the samples in awe of both the technology that made this possible and the wonder of the natural world. Even the tiniest fragments of diatoms were visible. They were breaking down into ever diminishing particles of matter, a reminder of the inexorable process of decay that all things experience.

Scanning Electron Microscopes are capable of 300,000x magnification. They offer almost three dimensional images and can also provide the chemical composition of the object because of the capacity to see beyond the surface. Unlike optical microscopes that use light to illuminate the sample, SEMs use electrons.\(^{259}\) By using the SEM to view the samples from Hanging Rock it was possible to see the types of diatoms to be found there in minute detail. The freshwater species of diatoms from Hanging Rock had not been studied previously. Although diatoms are ubiquitous, occurring in both fresh and salt water, there are still many that have not yet been classified.

Because the detail to be seen through the SEM is so clear, the forms of the diatoms, placement and shapes of the piercings may be appreciated in a way that is unavailable through optical microscopes. Because of that view, I was motivated to make ceramic enlargements of some of the detail for works of art based on diatoms and other microscopic organisms. See image below.

\(^{259}\) [science.howstuffworks.com/scanning–electron- microscope/html](http://science.howstuffworks.com/scanning–electron- microscope/html) [accessed 10.53 am 16/1/2013]
It was clear that the exo-skeletons of the diatoms, when viewed under the SEM, were similar to fired Southern Ice porcelain clay. The forms that are made from that clay have similar qualities to the diatoms in that they are fragile in appearance but also quite strong.

Diatoms

Diatoms are commonly found in both marine and freshwater environments. Some are free floating whilst others cling to surfaces such as shells and rocks. They may be found in ditch water, soil and moss. These tiny organisms are a major source of oxygen for our planet and a good indicator of water quality. Diatoms were utilised in a study of the salinity of the Murray River and wetlands; the organisms are so sensitive that they can detect differences in salts in drinking water. Adelaide University researchers were able to map changes in the salinity of the Murray River as far back as 20,000 years by sampling the diatoms in the mud.

Diatoms come in many different shapes from rectangular to disc to lozenge. Some of them group together forming long strings. Other species cluster in large colonies which are visible to the naked eye. Although diatoms are single celled some of those living in colonies appear to communicate with those adjacent to them so rapidly that they

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261 ibid, p.3.
Diatoms have been studied extensively by biologists and microscopists. Thousands of species have been discovered and there are believed to be many more yet to be found. There is an amazing variety of forms and patterns to be found in diatoms. They have fascinated those who have been enabled to view the world they inhabit through the lens of a microscope.

In the past twenty years, both in Australia and overseas, there has been an increase in diatom research. Diatoms make strong, lightweight structures; engineers are studying how diatoms are formed to see if there is a possibility of adapting the information for use in the aerospace and car industry. Diatomaceous earth is used for insulation. It makes lightweight bricks, some of which I have used in my own kilns.

In the exhibition are many paper cuts and porcelain artworks which allude to the forms and patterns of diatoms and other microscopic organisms. Some are similar to Haeckel’s drawings, some similar to the diatoms from Hanging Rock, and others are more fanciful; elements have been combined in an imaginative play on the structures of the actual organisms. This is intended to convey the myriad forms and large numbers to be perceived in these organisms.

**Artists Influenced by Microscopic Imagery and Scientific Discoveries**

Some of Ernst Haeckel's detailed lithographs of microscopic organisms, published in his book *Art Forms in Nature*, were utilized by German, French and Belgian designers and architects in the creation of Art Nouveau design. Art Nouveau designers made use of microscopic imagery and biomorphic forms in dynamic abstract patterns. Rene Binet designed a gateway to the Paris Exhibition of 1900 using Haeckel’s illustrations of radiolarians as inspiration.

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268 Ernst Haeckel first published his Radiolarian images in 1862.
In 1913 Haeckel published a set of photographs titled *Nature as an Artist*. These were intended to counter criticisms that his illustrations could be misleading. Although Haeckel was clearly a genius, hugely successful and famous, he was also outspoken. He antagonized the church by his support of Darwinism and some of his scientific colleagues accused him of speculative science. Haeckel was one of a succession of philosophers who believed that humans, nature and universe are joined by a common spirit. This philosophy resonated with many artists of the period.

Darwin’s theory of evolution was widely accepted in Russia and Germany. This was in sharp contrast to the controversy his ideas provoked in Britain. Russian and German artists were fascinated by the concept that the human mind was evolving according to Darwinian tenets. To express this evolution of consciousness, early twentieth century avant-garde artists such as Malevich and Kandinsky developed an abstract art which expressed the spiritual.

> The first generation of abstract painters, including Wassily Kandinsky was steeped in theosophy and mystical nature worship. The artists studied the Russian mystic Helena Blavatsky and read theosophy and occult texts.

In 1911 Kandinsky postulated that the future of art and science ‘belonged to those who used intuition and indirect detection to explore the invisible.’ Since then there have been incredible advances in science and medicine as well as the exploration of space. Images from space are now flashed around the world through the media and on the internet allowing broad access to the latest scientific discoveries. Through the development of technology, today it is possible to access the universe in ways that few would have dreamed of a century and a half ago. A hundred years after the advent of the new abstract art, which integrated scientific images and spiritual concepts, Kandinsky’s 1911 prediction is validated. Artists can not only view these images but many now work with scientists to produce art by utilising the available technology.

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269 ibid, p.332.
271ibid, p.p.95, 96.
Art/Science

At various times throughout history, art and science have appeared incompatible. In the mid-twentieth century this was apparent. Scientists were often unsympathetic to ideas which could not be proved by empirical means. Even today there are some scientists who think that way. The essays in the book The Elusive Synthesis: Aesthetics and Science, edited by Alfred Tauber, explore the commonalities between art and science. There are clearly many scientists who think creatively as well as many artists who have a keen interest in science. The Sciences and Arts Share a Common Creative Aesthetic, an essay in the book by Robert Root-Bernstein, postulates that science and art were once thought to be very similar in ways of understanding the world. He states that this is no longer the case and, that it is necessary to challenge the prevailing attitude that exists today; which places sciences and arts as being diametrically opposed. Science is said to be analytical, objective and rational; art intuitive, emotional and subjective. Both scientists and artists work intuitively. The intention of each is to make a mental concept visible to others in an aesthetically pleasing way. According to Robert Root-Bernstein ‘the work of science is both driven and sustained by an appreciation of beauty and a feeling of awe.’ This statement is equally applicable to art.

Root-Bernstein writes that ‘aesthetic sensibility underlies the most significant creative endeavors in science.’ and that ‘by hiding the aesthetic dimension of science...students of science are mis-trained.’ he states that; 'We must train whole people who can draw upon the best of all disciplines if we are to solve the important multi-faceted and multi-cultured problems of the future.' Artists can bring a different perspective to ventures normally outside their domain. Both science and art benefit from closer collaboration; perhaps some of the perceived differences will be dispelled.

It is clear that there has been an important shift towards the integration of art into scientific and technological research. In the six years that elapsed between the publication of The Elusive Synthesis edited by Alfred Tauber and Information Arts by Stephen Wilson much had changed. Wilson wrote a survey of artists who incorporate technology and scientific research into their work. Information Arts examines the work of artists researching in the areas of biology, astronomy, medicine, engineering,

275 ibid, p.2.
276 ibid, p.p.49, 50.
architecture, ecology and social and information science to name a few. In the forward to the book, Joel Slayton writes that 'by operating outside the conventions of traditional practice, unique and significant research enterprises can and will unfold' The development of research partnerships that encourage interaction between artists and those working in other fields addresses the concerns of Robert Root-Bernstein regarding the need for a change of perception by some members of the scientific fraternity.

Stephen Wilson asks an important question when he asks 'how are biology based theory and research important to the arts?' The dissemination of new scientific innovations through the media means that our culture is influenced more than ever by science. Food is genetically modified, babies are produced by IVF, lives are extended by technological means and by new drugs, plants and animals are cloned. These developments raise important ethical issues that must be addressed. Artists often question the narratives surrounding new developments and utilise their art to raise cultural awareness. Wilson writes 'The best way artists can explore these ideas is by mastering the research worlds from which they originate.'

George Gessert: art and biology

George Gessert is an example of an artist who has examined the ethical dilemmas resulting from genetic engineering. In the early 1990s Gessert received grants from New Langton Arts and the Oregon arts Commission to produce genetic art works. In 1995 he was artist in residence at the Exploritum in conjunction with the exhibition Diving into the Gene Pool. Later he became the editorial advisor for art and biology for Leonardo magazine. As a result of that position, Gessert interacted with a number of artists working in the new field of genetic engineering. That raised concerns about using living beings in that way.

George Gessert pioneered genetic art. In 1988, as a result of his interest in plant breeding, he exhibited Iris Project which referred to the practice of hybridising plants. Later works looked at breeding plants for particular traits such as colour and petal

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277 Wilson, Stephen, Information Arts; intersections of art science and technology, MIT Press, Massachusetts USA, 2002, Contents.
278 ibid, Forward by Slayton Joel.
279 ibid, p.88.
280 ibid.
282 ibid, p.194.
forms; this work provoked further investigation into the way that breeders have shaped animal characteristics since the Age of Enlightenment. Eugenics, the idea that animal breeding methods could be applied to humans is said to have led, in the early part of the Twentieth Century, to the extremes of the Nazis' racial purity doctrine.\textsuperscript{283}

Gessert continues to concentrate on the breeding of plants. He says that ‘Plant breeding is the slowest art...it involves repetition, variations on themes, and incremental change...The slow arts survey the scheme of things...The slowest art opens into vistas of evolutionary time.’\textsuperscript{284}

Many artists have found inspiration at the interface of art and science. The field in which they work opens possibilities for a deeper understanding between artists and scientists. There are also numerous artists whose work is predicated on scientific imagery and the natural world; these are of particular relevance to my work.

Humankind has longed to understand those distant or inaccessible places which can only be accessed by scientific instruments. Through science it is now possible to learn more about those realms. It is not surprising that artists in the past and those in the present find fertile ground for their work.

\textsuperscript{283} Wilson, Stephen, citing, Suzanne Anker, \textit{Information Arts; intersections of art science and technology}, p. p. 97, 98.

Chapter 7  Influential Artists

There are elements in my work that are similar to the work of some of the following artists; these selected contemporary artists are those whose philosophy or methodology resonates in some way with mine. I have employed scientific techniques, environmental and personal archaeologies, historical research and photography to actualize my interpretation of Hanging Rock from an artist’s perspective. This makes it unique. As far as I know no other artist has combined all of these methodologies in the same way that I have to achieve the goal of bringing the story of this place to the attention of the public.

Sadashi Inuzuka and Shona Wilson are both concerned with environmental issues and have used microscopic imagery in their work. Inuzuka has also communicated a philosophical outlook that I relate to. Although I have only recently discovered the work of Herman de Vries, his methods of displaying material found in the environment are similar to the way I have displayed some of my work. Wim van Egmond’s photographs of microscopic creatures are inspirational; they reinforce the sense of awe that can be experienced when looking into the microscopic realm. Mark Dion’s methods of gathering and displaying natural and manufactured objects and his interest in natural history resonate for me. Richard Long, Andy Goldsworthy and the Australian artists who participated in the travelling exhibition, Walk are important; they immerse themselves in the landscape, producing works of art that are a reflection of their experience.

Sadashi Inuzuka and Shona Wilson are both ceramists who are using other materials as well. Wilson’s clay work comprises strong three dimensional forms that allude to vessels, buildings and niches. Some of the objects have inclusions of found natural material. Both Sadashi Inuzuka and Shona Wilson express their environmental concerns in ways that are gentle yet potent; the way that the work speaks is not by proselytization, but by allowing contemplation and connection. I am drawn to Sadashi Inuzuka’s tacit Buddhist philosophy. Both artists have found inspiration in microscopic imagery, there is a scientific component to their work.

Wim van Egmond is a photographer whose work is accessed mainly on the internet. His method of collecting samples from ponds and ditches for examination then making images from what he finds appeals to me; that is part of my process. Wim van Egmond
and Shona Wilson both find inspiration in material that is usually overlooked, Wilson in the detritus on the beach, van Egmond in ponds and puddles. I also am exploring that zone; there is so much beauty to be found in places not always considered worthy of investigation such as ditches, swamps, ponds and in the matted material such as leaves, sticks and lichen to be found in the environment.

Mark Dion’s methods of collecting samples and displaying them are of particular interest. Dion’s archaeological digs uncover many strange treasures; his interest in natural history and classification and his method of displaying eclectic groupings of objects in more conventional ways appeals to me. I have collected discarded material and placed it in boxes for perusal. The groupings are not strictly systematized. This process is based on aesthetic considerations rather than scientific accuracy, for example brown rocks of different types are grouped together with rusty metal in some of the shadow boxes purely because they look interesting together. In my case I am collecting material to place in the exhibition to introduce Hanging Rock to the viewer. There is a more detailed explanation in Chapter 2 My Work, Shadow Boxes.

Sadashi Inuzuka

Early in 2007 Inuzuka was invited to be one of the Master Artists at a ceramics conference called Clay Edge at Gulgong NSW, which I attended. Each of the Masters produced clay works during the conference, gave a slide presentation and participated in an exhibition of their previous work. Inuzuka made an installation; a perfect circle of approximately five meters diameter was dug into the earth where there was a slight depression. Inuzuka then went to a clay pit close by and sourced some of the white clay normally dug from the site to make a commercial clay body. This clay had a higher shrinkage rate than the earth over which it was placed. The white clay was laid several centimetres deep then dampened and smoothed. Over the week long duration of the conference the circle of white clay slowly dried and cracked. It was a subtle yet profound work, referencing the moon and also demonstrating how time and elements change the earth.

Inuzuka’s bizarre white organic forms in the Masters exhibition at the Cudgegong Gallery, Gulgong NSW were meticulously crafted. One of them had an animated mouth saying silently ‘help me’; a particularly engaging piece, it caused a lot of comment amongst the delegates. This work is typical of the way that Inuzuka conveys his
message of concern for the environment. He engages the viewer in a gentle way that makes them stop and think about the issue.

When Sadashi Inuzuka gave his presentation at the conference, he revealed himself to be an outstanding and compassionate person. Instead of speaking of his own work and accomplishments, he talked about his involvement with a group of disabled young people to whom, along with some of his students, he taught art. He was obviously very fond of those people and proud of them.

The natural environment and our place in it is a recurring theme in his work. The following quote by Susan Jefferies encapsulates his philosophy of engagement with the viewer.

> The places where human endeavor touches and disrupts the natural world inspire his work. He maintains a certain detachment from the topic so as not to appear to be preaching to the viewer…Rather than using grotesque imagery to challenge the viewer he focuses on the serene qualities of a natural order based on harmony. This beauty through order seems to transcend death but does not exclude solitude, loss and destruction.\(^{285}\)

By using an understated approach Sadashi Inuzuka invites the viewer into the work in a way that replicates the experience of actually being in nature. A connection is made at a deeper level; people are more likely to respond to environmental problems in a compassionate manner when given time to contemplate the implications of inaction.

For his 1995 installation *Nature of Things*, Inuzuka made 600 organic forms from earthenware clay. These were coated with terra-sigillata surfaces. When he spoke at a lecture in the series *Nature of Art and Science* he displayed some of the forms; the lecture titled *Spirals, Stars and Spineless Wonders*, paired Sadashi Inuzuka with Peter Kaplan, a palaeontologist specialising in invertebrates. The concept of the lecture series was to have artists who focus on natural objects or materials join a scientist studying similar species. When making the work, Inuzuka said that he allows his hands and subconscious to take over trying not to think too much about each piece. He doesn’t model his forms from photographs or drawings but relies on memories.

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Ceramic Arts and Perception-Technical, 18/9/2009, p.1
At the end of the lecture, Kaplan remarked on his fascination with Inuzuka’s organic forms. When commenting on how he and Inuzuka approach their work Kaplan said: ‘the essence of the problems we approach - the forces behind structural, morphological differences and the creation of unique forms – is the same’. Inuzuka stated that ‘although scientists and artists approach their work from two different directions, they should learn to appreciate the insights that each perspective can provide’.²⁸⁶

These comments by Inuzuka and Kaplan are interesting because they echo what some of the essayists in The Elusive Synthesis: Aesthetics and Science edited by Alfred Tauber suggested; that there are commonalities between artists and scientists.

In 2000 Inuzuka produced an installation called Maple as part of an exhibition titled Omoide/Memory at the Canadian Embassy in Tokyo, Japan. On the floor was a large circle of rice which had concentric circular furrows formed by a notched wooden arm. Behind the rice was a large vertical panel made up of an assortment of maple wood squares which referenced the Maple leaf on the Canadian flag. On each square was placed an individual photo transfer image of a variety of beetles to suggest migration. The installation combines East and West and the movement between both. ²⁸⁷

Sadashi Inuzuka lives in Michigan USA. The company, Perrier pumps hundreds of litres per minute of water from the environment there to sell as bottled drinking water. To voice his concern and draw attention to this practice, Inuzuka made an installation

²⁸⁶ Halvorson, Britt, Ceramicist, Paleontologist explore the parallels in their work. [http://www.umich.edu/~urecord/9900/May08_00/2.htm](http://www.umich.edu/~urecord/9900/May08_00/2.htm) [accessed: 12.14pm 14/5/2007]
called Water Trade in which a video of a waterfall is projected onto a wall of 500 porcelain bottles. In his understated way, Inuzuka allows the space for the viewer to ponder the result if the practice continues.

The following artist's statement allows a glimpse of both the material and spiritual nature of Inuzuka's art making process. It is clear that he is transported through and beyond the physical aspect towards a desire for connection with the viewer. He shares his belief that human beings are linked both to each other and to the natural world. Inuzuka says that:

‘in making an installation I am concerned with the transformation of a given space into a more spiritual one which allows for meditation or reflection. The aesthetic of multiple units is intrinsic to my repetitive, obsessive working process where I am completely absorbed by the power of material and the momentum of making. It is this merging of self with the whole which I experience as an artist, which I see parallel in human society and the natural world, and which I wish to share with the viewer standing in the space of my work’

This way of merging ‘self with the whole’ is prevalent in Eastern countries such as Japan, where Inuzuka was born. It is essentially a Buddhist philosophy that has infiltrated Western thinking over the past century. When Inuzuka was a young artist in Kyoto Japan, during the 1960s and 1970s, a movement (Mono-ha) was begun as a reaction against the Western idea of individualism that was seeping into the culture. Japanese art was less about the ego of the artist; more about creating a mood or space to appreciate the work. A Mono-ha declaration is; ‘The function of art is to produce a structure that elicits an encounter with being.’ (Translation)

Sadashi Inuzuka (1951- ) was born in Kyoto, Japan. He moved to America in 1981 eventually becoming a Professor of Art and Design at the University of Michigan. When comparing America and Japan Inuzuka said: in Japan they try to ‘create the essence of nature, make it small and present it….we have much more of it [nature] in America but we must make sure that we don’t destroy it.’

Susanne Jeffries puts it succinctly when she says of Inuzuka that;

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288 http://www.dobhecarrenogallery.com/sadashi_statement.htm 18/9/09  
290 Jefferies, Suzanne, Natural Beauty through Order., p.1.  
291 Fried, D., River, p.60.
he identifies the inherent beauty and fragility of nature and it is up to the viewer to take the next step, hopefully recognizing the potential loss of beauty, diversity and indeed life itself unless these serious questions are addressed.292

Sadashi Inuzuka’s concern for the environment extends to even the smallest creatures. His work has a timeless, meditative quality which invites reflection on our place in the natural world and the impact of development upon it. There is balance and order evident in all of his work; the beauty and fragility of nature is revealed.

In 2000 Daisy Fried reviewed River, an installation by Sadashi Inuzuka at the Clay Studio in Philadelphia; the health of the Delaware River was the inspiration for the large installation which covered the whole of the fourth floor. Fried described the motivation behind the work and the physical aspects such as the vast expanse of cracked clay on the floor and the catwalk for viewing the works on the far wall; bio-morphic black forms arranged in circular groupings as if seen through a microscope.

Fried wrote, ‘Inuzuka’s wall forms told a …story of the intersection of human and animal life… each was different to all the others… amoeba like shapes fuse with human body parts…’ She observed that ‘they also resembled diatoms…that come in thousands of shapes and sizes…scientists have recently discovered how useful they can be for understanding what’s going on in bodies of water…’ 293

Artists such as Sadashi Inuzuka are important advocates for the natural world. Through sensitive and thoughtful work, environmental concerns are brought to the fore. The work is not confrontational, yet can have a powerful impact. Shona Wilson is an artist whose work fits into that category. Both Inuzuka and Wilson have an awareness of the role diatoms play in monitoring the health of water bodies. I also have had an ongoing fascination with diatoms, finding the myriad forms, and the uses to which they are put, an endless source of wonder.

The images below are of some ceramic forms I made based on diatom imagery. The microscopic realm is a rich source of inspiration for works of art. Although the work of Sadashi Inuzuka is based on microscopic organisms and environmental concerns there is a difference in the concepts behind his work and mine; my work addresses both of those issues yet also looks at how layers of time impact place.

292 Jefferies, Suzanne, Natural Beauty through Order, p.4.

Shona Wilson

Shona Wilson’s delicate assemblages from found objects are a reminder of the fragility of the natural world. Wilson crafts exquisite objects from the detritus she encounters as she explores places where remnants of once living organisms collect.

"Shona Wilson’s art of the small and fleeting - a bundle of broken twigs are stitched together, a bee trapped in wax, a weather worn archway becomes a conduit to the eternal, the sacred and the awe inspiring. Trawling the wastelands, re-kindling the dead, everyday objects are made miraculous, the discarded is elevated and the overlooked is revealed as precious."

Wilson collects driftwood, feathers, bones, twigs, leaves, seedpods, seaweed and any other natural materials that appeal to her for use in assemblages.

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294 Dell’oso, Anna Maria., Wandering the wastelands, re-kindling the dead: The Art of Shona Wilson, July 2005, p.1.
Wilson spends many painstaking hours making her assemblages using tweezers and glue to fasten the carefully sorted material. When making the twig pieces Wilson became aware of a sinuous, wave like pattern developing as she carefully fitted each stick alongside the last. She observed that the pattern echoed the way that trees grow, reliant upon the water in the wood.  

Wilson reveals the beauty in the small things so often disregarded. She says: ‘I might put it together but it’s the beauty of nature that excites people when they see the work’.

Macroscope, Wilson’s 2009 exhibition, at the King Street Gallery, William Street Sydney was particularly interesting to me as the whole exhibition consisted of complex and delicate diatom forms. Because I had previously been aware of the amazing forms and intricate patterns to be found in diatoms, I was curious to see what techniques she would use to create the works. In her artist’s statement from the exhibition catalogue she says:

‘Diatoms are a sub group of planktons – the most abundant life form and food source in our oceans. Magnified, these wondrous structures reveal universal patterns and forms which are seen in cross cultural indigenous imagery and new scientific theory. In this sense these organisms are metaphors for the building blocks of life itself- appearing like the skeletal remains or fossils of some imagined past or future.’

Shona Wilson clearly finds the forms fascinating and is also aware of the ecological significance of the organisms. There is also an awareness of the ways in which the patterns and shapes are replicated in indigenous art forms. The inclusion of plastic in the works in Wilson’s exhibition highlights a ‘disturbing discovery, recent research shows that plastic has infiltrated planktons.’ How sad that pollution has even invaded the invisible world. The negative effect of humans on nature is evident even at the microscopic level.


296 ibid.


298 ibid
Wilson’s art has a spiritual quality which reminds one of the impermanence of existence for all living things on earth. This awareness arises partially from the way in which we are drawn into her work. The complexity of the assemblages and the painstaking way they are composed, encourages contemplation. Through her work, Wilson reminds us that everything matters and that all life is precious.
The works of art produced by the two preceding artists have resonances with each other and with aspects of my work. The use of microscopic imagery combined with concern for the environment and the spiritual quality present in the work are a common thread. My work differs in that it is a broader investigation into what has influenced the development of Hanging Rock and the surrounding area. I have also gathered natural material from that particular site to reveal the beauty to be found there.

The art produced by the following artist, Mark Dion, is still aligned with environmental considerations; however, his methodology is based on scientific classification, resulting from the interest he has in nineteenth century naturalists. There is a parallel between facets of my work and his, mainly in the way material is collected and displayed.

**Mark Dion: Natural History, Science, Ecology, Collections**

American sculptor, Mark Dion, became absorbed with methods of scientific classification as a result of his interest in nineteenth century naturalists. Charles Darwin and Alfred Russell Wallace were co-founders of the theory of natural selection. It was partially through Dion’s curiosity about the processes they followed that his contemporary method of working evolved. 299

Dion frequently displays his natural history finds in drawers contained in cabinets that are evocative of the Wunderkammers used to house early collections. Wunderkammer, or cabinets of curiosity, were utilized by wealthy private collectors to display all sorts of natural and manmade objects. These objects were gathered and displayed in an eclectic manner according to the whims of the collectors. Skulls and bones sat alongside shells and bottled fetuses; knives and stuffed birds were displayed beside butterflies, bones, rocks and two headed snakes. These objects could be added to whenever necessary, they were not classified, in fact they could be quite chaotic. The collections sometimes served as a means of demonstrating to others the sophistication of the owners. They were often filled with objects collected on trips to other countries. 300

Carl Linneaus formulated an ordered method of classification for the samples taken from the natural world; he devised a taxonomical system, *Systema Natura*, which

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classified specimens according to genus and species. The specimens were labeled, catalogued and displayed in an orderly manner becoming a precursor of the museums of the eighteenth, nineteenth and twentieth centuries.\textsuperscript{301}

In 2007 Mark Dion was asked by the London Museum of Natural History to create an exhibition to commemorate the 300\textsuperscript{th} anniversary of Carl Linnaeus. The resulting show, called \textit{Systema Metropolis}, incorporated multiple photographs of Carl Linnaeus displayed on the wall in one section; in another a marble bust of Linnaeus sat atop a cabinet surrounded by butterfly nets and other paraphernalia. Part of the museum collection of specimens housed in old wooden cabinets gave an historic perspective to another piece. He then added his own take on taxonomy by collecting specimens from three diverse London environments with the assistance of the employees from the museum. He considered the people who work there to be ‘a great asset’ and wanted to involve them in the project.\textsuperscript{302}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{Fig160.png}
\caption{Mark Dion and Bust of Carl Linnaeus \textit{Systema Metropolis} 2007}
\end{figure}

Firstly invertebrates were collected from around the graves of three people from the Victorian era who Dion considered to be ‘champions of the under-class’. These were catalogued and displayed in one group. Next, plants were collected from two sites at  

\textsuperscript{301} Neville, Daniel, \textit{Mark Dion}, p.3.
\textsuperscript{302} Brown, Matt., Mark Dion \textit{Systema Metropolis}
\texttt{http://network.nature.com/hubs/London/blog/2007/06/15/mark-dion-systema-metropolis.htm}
what is now (2012) the Olympic Stadium. Lastly insects were caught in fly nets and on sticky paper as the team drove west along the A40 in an electric car. These were analysed and displayed in another section. All of these sections were exhibited inside the museum.

The final exhibit was housed in a large tent on the lawn outside the museum. It comprised samples collected from intake filters and trawl nets along the Thames River. Various fish were quirkily arranged on a table, cans and bottles were arranged in like groups, bones in a box on the floor. In a corner was a group of rubber ducks.

Dion had asked the staff of the Natural History Museum to work with him on the project. As a result they were able to scrutinize parts of the nearby environment that they would not normally study. The team found a parasitic wasp, only the second to be collected in London, and other insects that were not expected in the area.

Dion makes links between what seem disparate objects. By using processes and methods of display that are normally in the realm of science, he elevates commonplace objects, inviting us to see them in a different way. This is evident in the image below which engenders a smile at the careful way that Dion has arranged swizzle sticks that some would consider rubbish. He plays with the concept of classification, the need to put things in order so as to better understand them.

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304 ibid, p.3.
305 ibid.
When commenting on the archaeological digs that he engages in to find the objects on display Mark Dion states that ‘These digs are not interested in objects at their point of production but rather are obsessed with producing meaning through reanimating objects after the end of their use.’ The New England digs required ninety volunteers to dig, clean and sort the objects. The exhibition occupied two rooms of the David Winton Bell Gallery in Providence. The objects were arranged by:

*form, colour, texture and pattern… in a mosaic that blurs the histories of each dig site into an enigmatic jigsaw puzzle. The objects were gathered in a Post-modern methodology and assembled in a modernist tradition according to formal design elements.*

By displaying his finds in beautifully crafted cabinets Dion references the Victorian past but, by classifying the objects in a subversive way, he raises questions about the conventions of museum display.

When first I saw Dion’s work I thought the groupings were somewhat chaotic and eccentric. It was difficult to see what he was communicating by just looking at the work. After more research I began to understand what he was doing and could see parallels between some aspects of his methodology and mine. Science, ecology, natural history and collecting are the foundation of his work and of mine.

In her book *The Lure of the Local*, Lucy Lippard wrote that:

*‘Contemporary avant-garde artists are learning to work the interdisciplinary peripheries. While a number of artists have made drawings of, or drawn inspiration from, the poetic aspects of archaeology, and every so often an installation that imitates a dig turns up, few have really gotten dirt under their nails, except metaphorically.’*

Mark Dion incorporates aspects of archaeology, taxonomy and ecology into his work. He has also undertaken several expeditions, as did explorers of the past. Dion actively engages in practices followed by previous scientists and explorers but the outcomes are very different. He takes an unorthodox approach that allows a more poetic interpretation of the objects he finds.

Although the methodology used by me has some similarities to those of Mark Dion in that I have gathered artifacts from the past, natural material and employed an

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307 Cochran, Michael, Review of *Mark Dion : New England Digs*
archaeological approach; mine is more an archaeology through imaginary space and time.

Wim van Egmond

In 2007, when researching for diatom forms on the internet, I found the *Micropolitan Museum of Microscopic Art Forms*\(^{309}\) established by Dutch photographer Wim van Egmond. I felt as if I had been transported to another world populated by strange and beautiful creatures I had never imagined. Wim van Egmond has established a website that is a portal to a world of minute creatures which are beautifully photographed to reveal not only the science but also the poetry present in these organisms. His *Microscopium Museum* is organized into groupings that are similar to the classification system established by Carl Linneaus, but the concept of virtually entering into the museum and following the directions to each floor to discover the exhibits is unique.

Wim van Egmond uses dark field illumination for his photographs. He prefers subtle and natural images which show aspects of the biology of the organism.\(^{310}\)

\(^{309}\) the Micropolitan Museum of microscopic art forms


\(^{310}\) ibid
When young, van Egmond was interested in paleontology and natural history. He grew up close to where Anton van Leeuwenhoek (1632-1723), one of the pioneers of microscopy, lived. When displaying the images of the life forms he discovers he says that ‘there is no need to deform reality’ \(^{311}\)

In October 2012 Wim van Egmond exhibited images of what he called *Magnified Landscapes* at the Van Kranendonk Gallery.\(^{312}\) He found miniscule compositions that, to him, resembled landscapes. In the publicity statement for the show it says; Van Egmond ‘finds beauty in small creatures, the insignificant world’ and the ‘whimsicality of form and colour.’\(^{313}\) By wandering in places where natural detritus collects, such as the edges of ponds and ditches Wim van Egmond is privy to a world many would overlook.

Wim van Egmond’s photography reveals a microscopic world that is normally out of bounds. It is not until this world is made accessible and is interpreted in such a sensitive way that the wonder of that world is revealed. Wim van Egmond finds beauty in what is more often overlooked. That is what I also endeavor to do; while there are only small resonances between his methodology and mine they are significant. Both use microscopy to view organisms and are enchanted by the miniscule world to be found in ponds and swamps.

**Herman de Vries**

Martin Kemp is a British writer who was invited to write a series of articles on art and science for *Nature* magazine. This eventually developed into a book titled *Visualizations: the nature book of art and science*.\(^{314}\) Kemp wrote about science and image but was keen to look at ‘shared motifs in the imaginative world of artist and

\(^{311}\) ibid

\(^{312}\) Wim van Egmond  www.vankranendonk.nl... 25/1/2012

\(^{313}\) ibid  25/1/2013

\(^{314}\) Kemp Martin, *Visualisations: the nature book of art and science*, Oxford University Press, UK 2,000 preface.
Kemp thought that many of the projects between art and science which were happening at the time were ‘operating at surface level.’ Kemp wanted to ‘look at some deeper structures which found mutual expression in some kinds of art and some kinds of science.’ One of those selected by Kemp was Herman de Vries, Dutch philosopher, poet and artist, collector of natural things.

Herman de Vries has been exhibiting collections of natural material for over forty years. According to Kemp he has a collection of more than 2,400 samples of earth. Kemp states that Herman de Vries’ collections ‘often resist the process of separation which denomination entails. The traditional scientific systems of classification are challenged by the way de Vries displays his finds. He sometimes exhibits strongly scented herbs to stimulate the senses and also records the sounds of nature. Kemp says de Vries has been writing without capital letters for 20 years to indicate an ‘anti-hierarchic expression’. Herman de Vries also says ‘why should a tree be more important than a diatom?’ This non-hierarchical philosophy is an echo of the writing

315 ibid
316 ibid
317 ibid
318 Kemp, Martin, Visualisations: the nature book of art and science, p.156.
319 ibid, p.157.
style of Deleuze and Guittari in *A Thousand Plateaus*, which I have adopted as a methodology for my research; my world view is also inclined towards an anti-hierarchical philosophy. It resonates with the process used by Wim Van Egmond; who is fascinated by material from ponds and ditches and Shona Wilson in the way that detritus is collected for her constructions.

In his artworks Herman de Vries utilises natural material, taxonomy. The outcome is similar to the effect of Sadashi Inuzuka and Shona Wilson’s creations; because it is somewhat subdued it invites people to consider the marvellous beauty and diversity of nature and what is at stake if the environment is not valued.

**Artists and Place**

**Walk**

An exhibition titled *Walk*\(^{320}\) toured nationally between the end of 2007 and 2009. Eight artists walked along the Great South West Walk in Victoria; they documented the walk and made artworks in response. The resulting exhibition showed a wide diversity of sensitive works. The catalogue essay by curator, Martina Copely, touches on several of the points raised throughout this paper. She writes of walking being about ‘recurrence, interconnection and rhythm’, that ‘Indigenous song cycles and dreamings are like invisible interlocking pathways’ [rhizomes?] and writes of the ‘expansive feeling of oneness with the landscape’. She also suggests that ‘sometimes the land exposes itself in a spiritual way… a mysterious inviting realm in which to explore the unknown…’.One sentence in the catalogue essay really touched a chord within me. It is the way I perceive the connection to place and each other, hence the title of the exegesis, *Plexus*. ‘Resonant with the life energy operating within that particular place, encountering these works is like pulling threads - leading us into the landscape.’\(^{321}\)

Eight artists took part in the project, responding to what they discovered in various places as they walked. Carmel Wallace found fragments of craypots at Discovery Bay. They were faded red and weathered after lying in the salty water and sand at the water’s edge. Some had holes, all had fractured edges. They had been transformed by time into simple yet appealing objects. Ilka White exhibited a journal extract showing various seeds, plants and insects, delicately drawn and annotated, as well as fibre

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\(^{321}\) ibid, Copely, Martina, *Cadence*, Catalogue Essay,
sculptures of worm casings. John Wolseley collected lichen as he walked and later made energetic watercolour images for the show. Nicky Hepburn produced exquisite metal sculptures from silver and copper. Nicky Hepburn and Ilka White collaborated on some of the delicate fibre and metal works. Peter Corbett made a video of Discovery Bay when a storm was brewing. The grey tones of the storm clouds are contrasted against the pale horizon above the ocean; the patterns of the pale foam on the dark green ocean as the waves beat against the almost black rocks all contribute to an impending sense of doom. Brian Laurence made a soundscape of the walk which was played in the gallery. Jan Learmonth made strong vessel shaped sculptures from weathered wood, metal, bitumen and twine, some precariously balanced on twig-like legs, others containing casuarina leaves.322

Indigenous artist, Vicki Couzens, writes that ‘the lands that we walked on are my Grandmother’s country…The walk was a time of re-connection to ancestral lands and I experienced some powerful moments on the journey…’323 Vicki Couzens made etchings about the landscape and the changes she perceived as she moved across the country. She wrote that ‘the journey was across both the outer physical landscape and her inner spiritual landscape.’324

Being in the landscape is the way that a place enters into the psyche. Something changes when a place is experienced through all of the senses. It is possible to be moved by a beautiful image but that is really only an abstraction; by being in the landscape we become a part of it, landscape permeates our very being.

The artists who participated in Walk produced works that are clearly very different from each other’s but there is a common thread throughout the exhibition and that is a strong sense of place. Each artist has obviously been affected by being together in time and place. When I read how each artist has responded I feel validated in the methodology I have adopted for making art about Hanging Rock.

There are several well-known artists whose work is focused on the landscape in ways other than by the painting of traditional images. British artists Richard Long and Andy Goldsworthy are two of these.

322 ibid
323 ibid, Couzens, Vicki, artist’s statement.
324 ibid, no pagination.
Richard Long

In the publication, *Richard Long: walking the line* is a paragraph that resounds with meaning. It explains the concept of lines manifest in much of Long’s work;

> Our world is made up of lines, from comet tails to DNA. Everything is sequential. Everything that moves, from a snail to a lava flow, leaves a line, a trace of its passing. Some lines are well trodden paths, some intersect, some pass at a distance, some return to their origins. We all walk the line. We have an end and a beginning which is joined to a much longer invisible line in the past and in the future.

Long has walked in Ladakh in Northern India, in Great Britain and America. These walks are not simply rambles; they have specific functions such as placing a rock every mile along the way. Of his interactions with nature, Long is quoted as saying ‘it’s the touching and the meaning of the touching that matters.’ He clearly has a reverence for the land, recognizing that the land is sacred. One of his walks took place on the longest night of the year when the moon was full; linking the event to the cosmos.

![Walking a Line in Peru by Richard Long](image)

Richard Long has demonstrated that interacting with the natural world to produce art allows possibilities that are ever changing yet have a timeless quality. By walking through the environment he becomes intimately linked to the land. One of his walks

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327 ibid, p.8.
328 ibid.
was in the Shirakami Mountains in Aomori, Japan in 1997. In Long’s book, *Mirage*, the section titled, *A Walk in a Green Forest*, contains notes of his experience. To me this demonstrates the way place enters our being and we enter into place. Long writes in a way that almost resembles a Zen Koan,

> two snakes…a double halo around the sun…croaking frogs …summer air condensing over winter snow…no-moon blackness…glow worms…the footpath passing through a cleft tree…the milky way shining between the crests of a ravine…a family of monkeys…breaking camp and breaking a circle…a windless walk…tadpoles and lilac

Perhaps it is the combination of the simple and the profound that creates a healing of the human spirit in nature.

Impressive yet simple sculptural forms are produced from the natural materials Long finds in the environment. Some of the work is made by collecting rocks of similar type such as slate, chalk or granite which are then placed to form unpretentious geometric creations; Long makes large circles, crosses, spirals, lines and rectangles. A number of these sculptures are placed in the area from where the material originated, photographed, and then later exhibited in a gallery setting. Other works are formed by removing the rocks to reveal the bare earth underneath. They clearly show that whatever is done to the environment leaves its mark. Another way that Long has utilised natural surroundings is by taking mud from various rivers which is then applied by hand onto gallery walls. With the mud, Long makes similar geometric shapes to his rock and stick sculptures. Each of these materials gives a different quality to the form. The mud works are light, clearly showing the gestures used by Long as well as the splatter of the mud around the form. Sometimes mud circles are echoed in stone on the gallery floor.

When asked about the transient nature of some of his work, Long described a spiral of seaweed that he formed below the tideline on a beach in Cornwall. Long said that he liked the idea that the work would only last for one tide and that "often the transient is

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330 ibid. no pagination.
closely related to the eternal in nature’. Perhaps that is why it is important to experience the natural world, to remind ourselves of impermanence.

The aspect of time is integral to the work of Long. He says that;

*Time is the fourth dimension in my art. It is often the subject of a walk - time as the measurement of distance, of walking speed, or of terrain…the sculptures contain the geological time of the stones*.

There is a contemplative quality to Long’s work which comes from a deep connection to nature. Nature is both the subject of Richard Long’s work and the source of the materials he uses. Some of the inspirations are similar of those of Andy Goldsworthy; whatever material is at hand, rock, stick, clay or snow is used to make works of art in situ. Long once rolled a snowball across snow covered grass to make a drawing. Both Long and Goldsworthy immerse themselves in the environment to make work that reaffirms the importance of the connection to nature for all of us.

**Andy Goldsworthy**

Richard Long and Andy Goldsworthy both make works that allude to place; while they may not use historical references, the sites where the works of art are created are documented and remembered. Some of the work is similar yet each artist approaches the work from his own unique perspective. Andy Goldsworthy utilises leaves, sticks, rocks and flowers that he finds in the landscape to make simple yet very engaging works. Goldsworthy has also made works that depend on moisture and the sun for their evolution; frost shadows are made by casting his shadow form on a patch of grass as the frost melts in the morning sun. The place where the shadow remained holds the frost long after the rest has melted. The remaining image dissolves as the sun warms the earth. Rain shadows are made when Goldsworthy uses his body as a template to shield the ground from the precipitation. These works are ephemeral, showing the effect of time on the natural world. The work is photographed as soon as it is completed. There are many images of his work in books and on film that no longer exist in situ.

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332 ibid.
334 ibid.
Goldsworthy writes that ‘time and change are connected to place. Real change is best understood by staying in one place.’ Goldsworthy lives in Penport, Dumfriesshire, United Kingdom. Many of his works evolved in that environment. Writing of the place where he lives and works he says;

‘I work in a landscape made rich by the people who have worked and farmed it. I can feel the presence of those who have gone before me. This puts my own life into context. My touch is the most recent layer of many layers that are embedded in the landscape which in turn will be covered by future layers-hidden but always present’

The layers Goldsworthy is aware of exist in any place that has been settled for a long period of time. By digging through the physical layers much can be learned about the way our predecessors lived; archaeologists have uncovered rich histories by digging through layers of time. It is also possible to imagine how our ancestors lived and connect to them through our shared humanity.

A sense of place is important for many reasons. It may serve as an anchor for our lives, somewhere to hold to when feeling lost; a refuge and perhaps a final resting place. Place can serve as inspiration for creative endeavours, also provide sustenance and peace. It acts as a repository for all that has occurred there. It is the stage upon which lives are played out, where memories are made. Place can exemplify the people we become. Intimate knowledge of place imparts an awareness of what is of value and

336 ibid, p.7.
what has been lost. Place is where beings connect. Place may serve as a crossing point where we may become one with the surroundings and each other; a sacred place. Lucy Lippard writes that, ‘the intersections of nature, culture, history and ideology forms the ground on which we stand…our land, our place, the local.’337 Through art, many of these concepts can be expressed and people may be encouraged to think more deeply about what place means to them.

Conclusion

Because place-specific (as opposed to drive-by art) begins with looking around, the artist needs to understand far more about a place...S/he also needs to know what her/his attraction or relationship to the place consists of. Artists from different backgrounds and foregrounds can bring out multiple readings of the places where they live that mean different things to different people at different times instead of merely reflecting some of the beauty back into the marketplace or the living room. But to do all that the artist has to know the place...

...demonstrates a keen awareness of the way in which history piles up on the land, of the way terrain absorbs and recalls history, of the way narrative is an unstated component of any map and thus of any landscape.

I began this project with a concern about what I perceived as neglect of a unique environment to which I feel intensely connected. I wanted to reveal the beauty of Hanging Rock in a way that encouraged a re-think of the value of the place beyond an economic one. I became aware that, except for the odd negative comment, the Indigenous people had largely been ignored in the telling of the history of Hanging Rock. I wanted to address that. In this exegesis I have endeavoured to weave many threads into a whole that reflects the experiences of many people. It looks at how multiple events shape environment over time and how environment impacts upon those who are drawn to a particular place. At first I concentrated exclusively on Hanging Rock but as the research expanded I could see that what had happened in the region was an important part of the story that extrapolated to what was occurring throughout the history of Australia around the time of the British invasion.

There are diverse aspects to this exegesis: history, art, science, spirituality, environment, social history and personal narrative. Each has a place and adds to the whole. What makes me the person I am informs what I perceive; therefore no one else will have the same viewpoint. I have nevertheless been able to find resonances between other artists, scientists and theorists that helped support my research. The writing about place by Lucy Lippard, Rupert Sheldrake, and David Suzuki's heartfelt pleas for the environment and the sensitive and thoughtful art works of Sadashi Inuzuka, Shona Wilson and Mark Dion have been of particular importance, as has the

338 Lippard, Lucy, R., p.28.
339 ibid, p.76.
writing of philosophers Deleuze and Guittari. Lynn Gamwell is an author whose work has been influential in helping to clarify themes in my work relating to art, science and spirituality.

In the prologue I described the journey to Hanging Rock and what I see along the way, what the environment consists of and why I chose to focus on that particular place. I have also written briefly about the history and my connection to Hanging Rock; the fact that I have land there and have been visiting the area for decades. There is a brief description of how I explore the area and what remnants of the past I have found. It is not simply the physical aspects of Hanging Rock that are important to me but also the transcendent nature of the place. When I am there my consciousness expands and the connection I feel towards all creatures is profound. I introduce the Buddhist philosophy that underscores much of the writing, particularly the concept of interdependence or interconnectedness.

Chapter two introduces my work, describing some of the art works I have made in response to the research embarked upon over the course of the study, also the field work undertaken. Throughout the exegesis, my work is included to show how particular places and topics connect to the works of art I have produced. These parts have been written in a different font to the rest of the section.

Chapter three, Social History, examines various interrelated topics. The social history of Hanging Rock has been included in this chapter. There is a section about Ashton’s circus, Nathan Burrows, Jack Wright, and William Telfer Jnr., who were pioneers at Hanging Rock. Captain Thunderbolt and the Governor Brothers were active in the country surrounding Hanging Rock; there is a brief description of their exploits. In this chapter the history linked to Hanging Rock is expanded; it covers the gold rush and its effects on Hanging Rock. The Chinese, Germans, Danish, Americans and British arrived in search of gold.

In Chapter four, place and spirituality is examined, particularly in relation to Rupert Sheldrake’s ideas about morphic resonance and sacred places. David Suzuki’s writing on the sacredness of the world ecology is also mentioned here as both Sheldrake and Suzuki are biologists who argue for the cherishing of the natural world. Lucy Lippard is cited at the beginning of chapter four in relation to the way place is perceived. As mentioned previously, her book *The Lure of the Local* has been significant as
theoretical framework for the exegesis. This chapter examines the impact of the incursion of Europeans into the country. The 1817-18 explorations of Oxley in the region are mentioned as is the 1825 Dangar expedition which passed close to Hanging Rock. Walcha is important to the story of Hanging Rock and is mentioned in relation to geologist, the Reverend W.B. Clarke who surveyed the Walcha and Hanging Rock district in the mid - 1850s. He was moved also to write of the natural beauty of the area. Colonial artist Conrad Martens was a contemporary of Rev. Clarke. He visited Walcha in 1852 and made sketches of scenic sites as he travelled back to Newcastle from Moreton Bay. Alexander and Frederic C. Terry (who later became another well-known colonial artist) were at Hanging Rock at roughly the same time that Clarke and Martens were in the area. Deleuze and Guittari’s theory of lines and rhizomes is utilised to weave the stories together.

Chapter five examines the ecological aspects of the region, the impact of previous land use on Hanging Rock and the hope for a more positive future.

A large amount of my work is based on microscopic imagery; I wanted to illustrate the fragility and beauty of these strange organisms and discover which of them could be found at Hanging Rock. Chapter six covers a brief history of two of the pioneers of microscopy, Anton Van Leeuwenhoek and Robert Hooke and introduces the work of Ernst Haeckel. Haeckel was a German scientist who embraced Darwinism and whose magnificent images of microscopic organisms published in his book *Art Forms in Nature* in 1900 have inspired artists, including myself, since the late nineteenth and early twentieth centuries. The links between art and science have a long history and, when Darwin produced his theory of evolution in the nineteenth century, it not only stirred controversy but stimulated artists to incorporate his ideas into their work. More recently some artists have become partners in research with scientists; there is a section in chapter six that examines the outcomes of these partnerships and the issues raised by artists and scientists working together.

Included in chapter six is a section about diatoms, organisms which I find fascinating for several reasons, visually, for their diversity, ecologically and their possible application for technology. There is a description of the Scanning Electron Microscope (SEM); some of the images included in the exegesis were taken under the SEM by Dave Phelan, Professional Officer at the University of Newcastle.
In chapter seven the work of artists to whom I can relate some aspects of my own artworks and/or philosophy are described. Sadashi Inuzuka is of particular importance because of his compassion, concern for the environment and use of microscopic imagery. Shona Wilson has been inspired by diatoms and also creates her work from detritus that is reinvented to show the beauty of nature. Wim van Egmond photographs microscopic organisms and exhibits them in a virtual museum; his work demonstrates the diversity to be found in the world of small creatures. Mark Dion is an artist whose work encompasses natural history, archaeology and scientific classification, all subjects that have links to my work. There are similarities to his methodology in the way in which I have gathered and displayed historical artifacts and natural objects. Herman de Vries arranges natural materials in simple but beautiful ways that make one ponder the usual scientific methods of classification. He has also adopted a non-hierarchical world view which appeals to me; it echoes Deleuze and Guittari’s writing style which was utilized in *A Thousand Plateaus*.

For many years I have used organic forms in my ceramic sculptures. I have sometimes been inspired by illustrations of microscopic images, particularly the lithographs by Ernst Haeckel made in the late 19th and early 20th centuries. My finalized works of art demonstrate that there is more to Hanging Rock than the obvious or the known. It highlights and introduces the fantastic unseen world that supports life there in an attempt to draw attention to the importance and interconnectedness of all living things.

To position my work in a contemporary setting means discussing artists whose work has some relationship to facets of my work rather than those that work in precisely the same way. There are elements of place, microscopy, geology, history, ecology and spiritual connection to environment which have been explored. The exegesis is auto-ethnographic as my experience of Hanging Rock is part of the research.

Samples were collected from various sites in the environment close to Hanging Rock for microscopic examination. Some of the organisms that were found have been used as inspiration for the development of ceramic sculptures and paper cuts. Although these organisms have not been the only material used as the basis for works of art they comprise a large part of the study.
I am particularly interested in microscopic organisms both because the forms are visually remarkable and because these organisms also make an important contribution to the health of the planet. In his book, The Sacred Balance, David Suzuki writes that microscopic organisms were the only life forms on earth for millennia and that they now have a biomass equal to or greater than all the forests, birds, fish, insects and mammals living on earth today. We depend on these organisms for our very existence upon the earth.\(^{340}\) I wanted to make people aware of the fantastic unseen environment at Hanging Rock that sustains all the larger life forms there. My fascination with microscopic imagery led to the process that I have followed, taking samples from various sites which were then studied as a source for form. The work of contemporary artists Sadashi Inuzuka, who makes forms based on bacteria and installations centered on his environmental concerns is inspirational.

I have collected rocks from various sites at Hanging Rock, not for the purpose of a geological study but mainly because the variety of shapes and colours appeal to me. They are a personal archaeology. Of course I am interested in the minerals to be found in the rocks. As a potter, it is interesting to find rocks containing iron, quartz and copper, all of which are used in the production of ceramics. In the Hanging Rock region there are several sites that I have searched for man-made traces of the past as inspiration for studio work. One such site is where the blacksmith lived and worked. I have included some of the metal objects found there in the shadow boxes.

What makes this project unique is that I have studied a specific place by incorporating local history, and scientific processes to produce artworks that are personal yet are overlaid with social and environmental concerns. No one has done a project of this sort at HR; the method of research is both wide ranging (connecting to universal concepts) and is also focused on a particular site that has not been examined in this way before. Because of the way I have investigated Hanging Rock it is possible that a different way of comprehending the many facets of the place will emerge. By linking all of the concepts together in a way that has not been done previously in relation to Hanging Rock, hopefully the multiple features that comprise this remarkable location will be re-examined from a more holistic viewpoint.

Possibilities for Future Research

The Aboriginal history of Hanging Rock needs to be documented in more detail. In these times it seems remiss that there seems to be so little scholarship directed towards the subject. Hanging Rock is a small place but is clearly part of a broader story that is important to all Australians.

There is information available regarding the European settlement of the region but there seem to be some gaps as well. Although Henry Dangar explored the region in 1825, when looking for pasture for settlers, all that remains of his passing is a gully named after him. In much of the literature about Nundle and Hanging Rock that I have seen so far there is no mention of him having been at Hanging Rock. I intend to do further research on that subject.

I would like to find more information about the impact of colonial attitudes on the local Gamilaroi people. When I contacted the University of New England by phone to ask if they had any history records about HR, I was told there was not much available. I don’t know if that is because it has not been documented or because it is hard to find.

There is still more studio work that can be done using Hanging Rock as inspiration. Ideas keep coming and no doubt they will demand attention. I would like to make large framed works that show the layering of history over land. These ideas have come a little late to be included in the exhibition; I have been researching ways to implement the ideas.

This project has engaged me for the past seven years. It is unlikely that the finalization of the PhD will be the end of it. The methodology could be applied to other places although for me the connection would not be as strong. Hanging Rock has entered into my being in a way that nowhere else has.
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Maps


Google Earth Map of Hanging Rock

Diagram of Aboriginal Lands NSW - from *The Red Chief* by I.L.Idriess  p7

Atchison, Grey, Scone and Upper Hunter Historical Society, Henry Dangar’s Exploration via Hanging Rock

Map of Northern Tablelands

Appendix

i. Personal anecdotal account by Robert Swab

ii. Alexander Terry Diary, State Library NSW, Mitchell Library, MLS 1880 CD

iii. Mineral Deposits in the Nundle Area, NSW Department of Primary Industries