

Building Sustainability with the Arts

Building Sustainability with the Arts:

*Proceedings of the 2nd National
EcoArts Australis Conference*

Edited by

David Curtis

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TABLE OF CONTENTS

Preface	ix
---------------	----

Acknowledgements	xi
------------------------	----

Section I: Overview

Chapter One.....	3
------------------	---

Building Sustainability with the Arts: Introduction

David Curtis

Chapter Two	19
-------------------	----

Exploring Paradigm Shifts in Environmental Art to Find a Definition

Megan Marks

Section II: Rattling the Cage

Chapter Three	37
---------------------	----

'May the Long Time Sun Shine upon You': A Short History
of Eco-Arts in the Northern Rivers

Vanessa Bible

Chapter Four	49
--------------------	----

The *Veloscape* Project: Cyclists Sensing the City

Laura Fisher and Volker Kuchelmeister

Chapter Five	63
--------------------	----

Climate and Culture: Reflections on the Artistic Response to Climate
Change

Guy Abrahams

Chapter Six	71
-------------------	----

Site, Participation and Materiality: Eco-performance in the UK and Europe

Lisa Woyinarski

Chapter Seven.....	87
'Global Warning': Beautifying the Discourse	
<i>Marty Branagan</i>	
Chapter Eight.....	105
Art and the Bomb: Exposing the Legacy of British Nuclear Testing Through Atomic Survivor Stories	
<i>Paul Brown</i>	
Chapter Nine.....	117
A Rubbish Article and Some Rubbish Art	
<i>Dell Walker</i>	
Section III: The Arts in Environmental Education	
Chapter Ten	149
The Boy and the Sunflower: The Role of Theatre in Communicating Ecological Processes through the Creation of Living Stages	
<i>Tanja Beer</i>	
Chapter Eleven	161
A Conspiracy of Imagination: Theatre in Environmental Education at a Botanical Garden	
<i>Michael Connor</i>	
Chapter Twelve	167
Storytelling: Little Acts of Love for Our Earth	
<i>Lillian Rodrigues-Pang</i>	
Chapter Thirteen.....	177
Character of the Bush	
<i>Patrick Shirvington</i>	
Chapter Fourteen	187
Can Interdisciplinary Teaching Led by the Arts Contribute to the Debate on Contemporary Environmental Issues?	
<i>Louise Fowler-Smith</i>	

Chapter Fifteen	211
'Running Through Our Veins': A Longitudinal Study of the Agentic Role of Arts-Based Practice in Nature Attunement	
<i>Tonia Gray and Cameron Thomson</i>	

Chapter Sixteen	229
Inquiry Arts Pedagogy and Experiential Nature Education: Econnection in Early Childhood	
<i>Kumara Ward</i>	

Section IV: Art and Science Working Together to Inform and Create Empathy for Nature

Chapter Seventeen	247
Biome: A Collaboration of Dance and Rainforest Science	
<i>Nalini Nadkarni and Jodi Lomask</i>	

Chapter Eighteen	255
How Green Was Your Schopenhauer?	
<i>Greg Pritchard</i>	

Chapter Nineteen	265
Artistic Use of Photomicrography in Communication Issues Related to the Ecological Management of Groundwater	
<i>Anastasia Tyurina</i>	

Chapter Twenty	277
In the Photic Zone	
<i>Carolyn Lewens</i>	

Chapter Twenty One	303
The Hidden Beauty: Visual Art Inspired by Australian Native Plants Under Microscope	
<i>Svetlana Trefilova</i>	

Chapter Twenty Two	329
Biochromes: A Visual Metaphor for the Transformative Action of Medicinal Plants	
<i>Renata Buziak</i>	

Section V: Connecting us to Nature

Chapter Twenty Three	349
Swimming in the Anthropocene	
<i>Penny Sadubin</i>	
Chapter Twenty Four.....	353
The Sleepers	
<i>Kassandra Bossell</i>	
Chapter Twenty Five	355
Ephemeral and Ephemera	
<i>Greer Taylor</i>	
Chapter Twenty Six.....	361
Gaia's Daughters	
<i>Paula Tura</i>	

Section VI: Connecting Us to Land and Country

Chapter Twenty Seven.....	377
I Wonder ... Indigenous Corroborees and Masked Dances in Northwest Australia	
<i>Dominique Sweeney</i>	
Chapter Twenty Eight.....	385
We All Stand on Sacred Ground: Promoting a Sustainable Environmental Ethic	
<i>Julie Collins</i>	
Chapter Twenty Nine	401
Transformed by the Land: Ecolution of an Arts Practice	
<i>Catherine van Wilgenburg</i>	
Contributors.....	415

PREFACE

Environmental art or 'ecoart' is a burgeoning field and includes a wide variety of practices — from sculptures or installations made from discarded rubbish to intimate ephemeral artworks placed in the natural environment; from theatrical presentations incorporated into environmental education programs to socially critical paintings; from artworks made by a solitary artist working alone to collaborative artworks that involve many from the community.

The book provides examples of all of these and more besides. In some cases the artworks aim to create indignation in the viewer, sometimes to educate, sometimes to create a feeling of empathy for the natural environment, or sometimes they are built into community building projects.

This book brings together 29 contributors who examine different roles of the arts in building ecological sustainability. There is wide range of practitioners represented here, including visual and performing artists, scientists, social researchers, environmental educators and research students. All the contributors participated in the Second National EcoArts Australis Conference in February 2016 at the University of Wollongong, New South Wales, Australia¹. Most made oral presentations, while some ran workshops or presented visual art (including video art) or posters.

The book is timely as the world's ecosystems groan under human impact. We, the contributors to this book, are united in believing that the arts are vital in the building of sustainability — in the way that they are practiced, but also the connections they make to ecology, science and Indigenous culture.

¹ See <http://www.ecoartsaustralis.org.au/events-and-projects/conference-2016-building-sustainability-with-the-arts/> Accessed 26 March 2017

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I would like to sincerely thank all the practitioners who have contributed to this book. There is a wonderful range of people who have made contributions, including artists, performers, scientists, social researchers and community facilitators and their passion for their craft and commitment to ecological sustainability is appreciated.

The book arose from the second National EcoArts Australis conference in February 2016. I would like to thank the Ecoarts Australis board: Dave Carr, Juliet Scrine, Andrew Parker, Thor Blomfield, Lindsay Sharp, Garry Slocombe, Theresa Huxtable, Imogen Ross and Steve Harris. Thanks also to others who worked hard to make that conference a success: Alex Mowbray, Anh Nguyen, Karen Stone, Julie Wright, Laszlo Szabo and Rowan Huxtable.

Thanks to all the reviewers of the contributions in the book. All papers were reviewed by two reviewers in a blind review process.

Sincere thanks to Cambridge Scholars for their support in the process of producing this book, and in particular Victoria Carruthers and Amanda Millar.

Finally a personal thanks to my wife Fran for her support and assistance.

SECTION I: OVERVIEW

CHAPTER ONE

BUILDING SUSTAINABILITY WITH THE ARTS: INTRODUCTION

DAVID CURTIS

Changing the behaviour of a diverse population may at times call for one to enlist the participant's creativity, enhance an individual's discovery process, or provide clear and firm guidance. (De Young, 1993)

We know the arts have the potential to create profound effects. Such memorable events may only constitute a small proportion of the plays I have seen in my lifetime, but certain dramatic experiences remain firmly in my mind in ways that continue to influence the kind of human being that I am. (Somers, 2004)

If sustainability were a house and we were building it, many would say the role of the arts would be just to select the colour of the wallpaper and provide the decoration. However, read this book and it will become apparent that the arts would have a role in many aspects of building that house: from the planning phase and selecting the size, shape and style of the house; the materials it is made from; the energy that powers it; the landscaping; and, of course (!), the colour of the walls and the decoration.

How can I justify such a wild assertion? What we see in reading the following contributions is that the arts have a role in shaping values and beliefs (the size, shape and style of the house); in providing information; in creating empathy for nature (the landscaping); in helping us think more deeply about our consumption, energy choices and the way we travel; and in opening us to Indigenous perspectives on connecting us to the land and Country. All such roles are important in building a 'house' called 'Sustainability'.

Moving our society towards ecological sustainability has never been more important. With the gathering clouds of climate change, biodiversity loss, land degradation, over-crowded cities and polluted oceans, we find

ourselves at a turning point and the insights of artists in collaboration with scientists and the community have never been more important.

Pathways to environmental sustainability through the arts

There are three pathways through which the arts promote pro-environmental behaviour (Figure 1, Curtis, 2007; Curtis *et al.*, 2014).

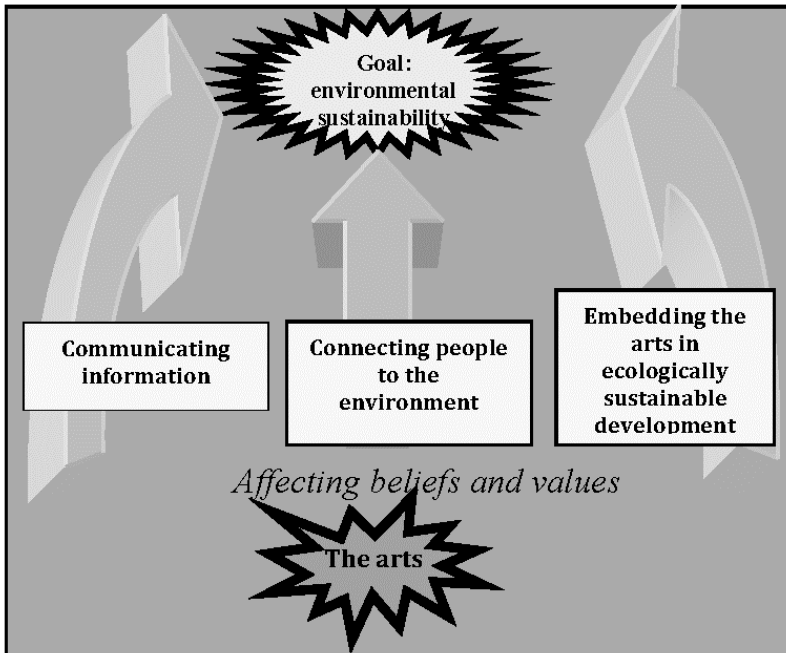


Figure 1: Three pathways in which the arts can be used to help achieve ecological sustainability.

The first pathway is where the visual and performing arts are used to synthesise complex ideas and to communicate them to non-specialist audiences in an engaging form. This makes the arts valuable in enhancing the teaching of scientific or environmental material and raising awareness about environmental issues in a wide range of contexts. The arts have been used because of these qualities by practitioners, in Australia and overseas and examples in this book include the chapters in Section III ‘The arts in environmental education’ and Section IV ‘Science and art working

together to inform and create empathy for nature'. The arts are also a medium for articulating a dissenting or critical voice, which prompts people to look at issues in new ways. Some artists are at the forefront in challenging dominant social paradigms and are active participants in attempts to improve the environmental behaviour of individuals and of society. Examples of these are in the Section II 'Rattling the cage'.

The second pathway is where the arts and particular artists connect their audience to the natural environment through thoughtful or evocative representations of the environment or by being in the natural environment itself (see Section V 'Connecting us to nature', and Section VI 'Connecting us to land and Country'). Modern life in Western society has disconnected most people from the natural environment, and the arts provide a way of re-establishing this link. The art described under this pathway exemplifies the important role of artists in aiding an understanding of the Australian natural environment and its native flora and fauna, complementing the role of ecologists. Through experiencing artistic explorations a community can develop empathy toward the natural environment, and this is vital in developing a caring relationship for it. A vitally important aspect of connecting us to land is recognising and celebrating Indigenous connections to the land and to Country (see Section VI).

An emotional affinity with nature is as powerful to predict pro-environmental behaviour as indignation and interest in nature (Kals *et al.*, 1999; Figure 2). A significant amount of emotional affinity with nature can be traced back to direct experiences of the natural environment. Several of the articles in this collection point to the ability of the arts to enhance an emotional affinity with nature also (Curtis, 2009), for example, see papers by Patrick Shirvington, Tonia Gray & Cameron Thomson, Louise Fowler-Smith, Tanja Beer, Kumara Ward, Paula Tura, Greer Taylor, Penny Sadubin and Nalini Nadkarni & Jodi Lomask. Other articles focus on the ability of the arts to provide a cognitive interest in nature, say through enhancing environmental education (for example the article by Michael Connor). Art can also increase an emotional indignation about insufficient nature protection or can increase a cognitive interest in the environment (for example see contributions from Dell Walker, Marty Branagan, Lisa Woynarski, Guy Abrahams and Vanessa Bible).

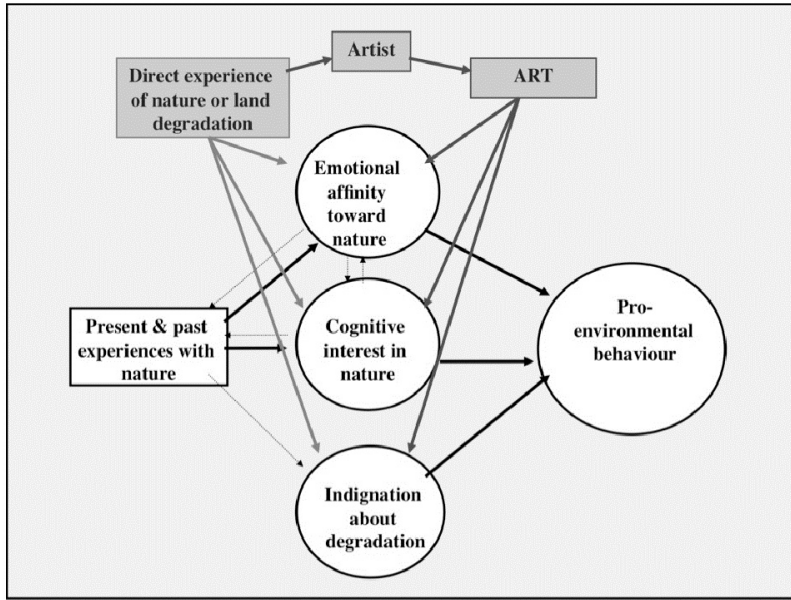


Figure 2: Model to show how the arts affect environmental behaviour, by increasing an emotional affinity towards nature, generating a cognitive interest in nature, and provoking emotional indignation about insufficient nature protection (Modified from Kals *et al.*, 1999 — the model of Kals *et al.* has been expanded to depict the ways in which the arts shape environmental behaviour).

The third pathway is where the arts are embedded in ecologically sustainable development, through the combined effects of community development, economic development, and changes in the patterns of consumption. Examples might include public and community art that is integrated into urban planning which was designed around improved active transport modes (see Laura Fisher & Volker Kuchelmeister' chapter). Australia's environmental impact is driven by consumption that is high in embodied energy, water and resources. Because the arts industry is low in embodied energy and resources and high in embodied labour (Foran, *et al.*, 2005) it will be an important segment of the economy in a 'post-consumer' society that has lower levels of environmental impact (as highlighted by the contribution by Dell Walker). The arts can be integrated with ecologically sustainable development in rural areas. Examples include the links between landscape architecture and landscape aesthetics

and the farm planning and landcare movements, as well as the linking of ecological art with ecological restoration (see chapter by Greer Taylor). The community and participatory arts have an important role in catalysing ecological sustainability, particularly through their ability to foster altruism. Community arts events have a strong community-building role and can be linked with celebrations of ecologically sustainable behaviours and aspirations (see chapter by Tanja Beer).

The three pathways described here are not mutually exclusive and any single art event, artwork or artist might operate simultaneously in one, two or all three pathways. For example Paul Brown highlights an issue in Chapter 8 (nuclear power) which might be considered to fall into the first pathway, while the community development benefits might be considered to be part of the third pathway. Similarly, the chapters in Section IV on art and science working together overlaps between communicating information and connecting us to nature (first and second pathways respectively).

A model for how the arts help shape environmental behaviour

Below is a model to provide an overall framework to describe the ways that the arts might help shape environmental behaviour (Figure 3). The work of individual artists can influence the behaviour of citizens through the three pathways described above, which impact on a person's values, beliefs, knowledge, attitudes, self-identity and habits, and through these, on social norms. The arts can also influence physical structures (through the third pathway), which in turn influence behaviours. The degree to which a person responds to the arts will depend on personal characteristics (e.g. gender, class, etc.), situation, institutional factors, as well as the type of art. The accumulated result of individual behaviours leads to macro-level impacts on the environment. Knowledge of these impacts may in turn influence individual artists and their practice.

It is hoped that the conceptual framework provided in Figure 3 will enable the reader to see how the widely varying eco-art practices described by the different authors in this book may help build ecological sustainability more broadly. Whether it be art that creates an emotional response to nature or Country, whether it be art that challenges or creates indignation about an issue, whether it be art that is linked to science to reveal the beauty of nature, or whether it be simply to enrich an educational message — all of these approaches and more will be discovered here.

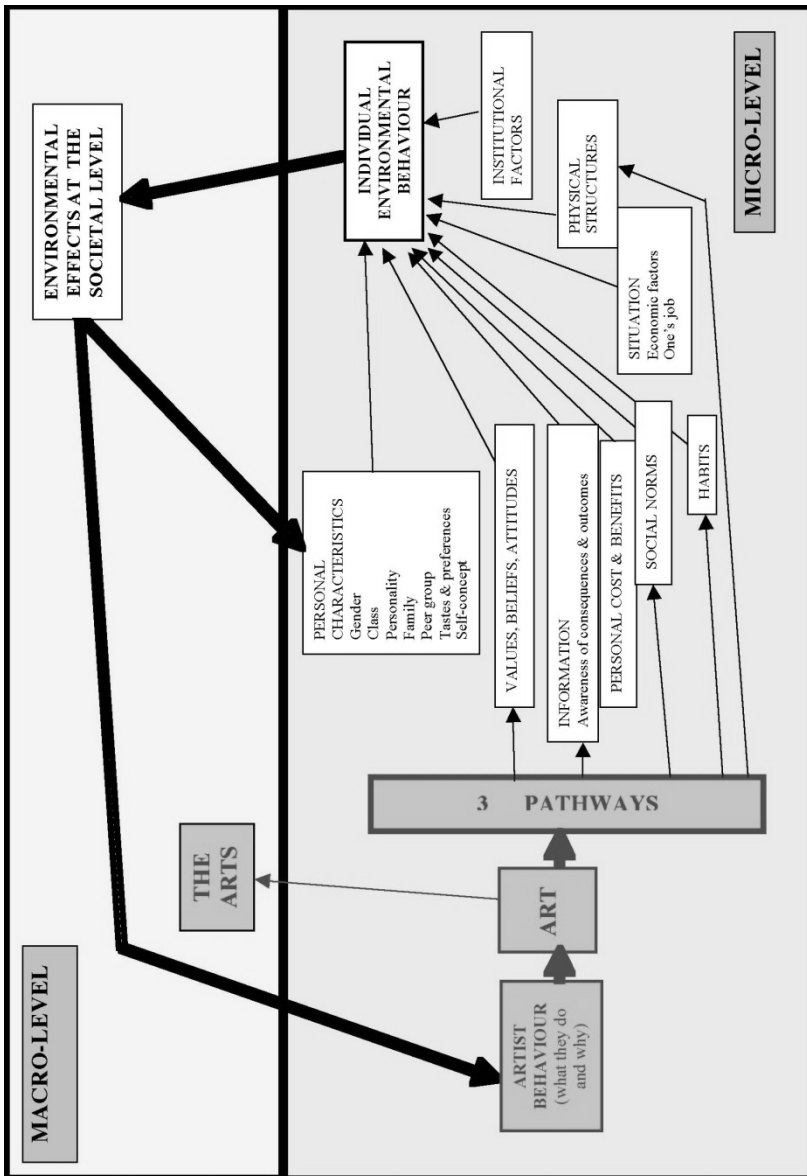


Figure 3: Model of how environmental behaviour can be shaped by the arts (from Curtis *et al.*, 2014).

The papers in this book

The book has brought together 29 contributors. All participated in the Second National EcoArts Australis Conference in February 2016 at the University of Wollongong, New South Wales, Australia¹. Most made oral presentations, while some ran workshops or presented visual art (including video art) or posters. There is wide range of practitioners represented here, including visual and performing artists, scientists, social researchers, environmental educators and research students. The papers have been arranged using the basic structure offered by the pathways model described above with offerings mostly falling under the first and second pathways (with considerable overlap between the two).

Section I: Overview of environmental art

In the first section, **Megan Marks** provides an excellent review of environmental art and how it has evolved over time (Chapter 2). She defines environmental art as any artwork that aims to stimulate discussion and/or action around nature to contribute to solutions to environmental problems:

It can be made of many different media such as natural and recycled materials, light and sound, and can come in many different formats, such as installations, photography, writing, and performance. It can be ephemeral works ... that decompose with natural processes, or permanent structures such as public art installations. It can be created by an individual artist but is increasingly becoming a more participatory form of art that engages communities. The point of difference for environmental art is that the intent is to foster pro-environmental awareness, attitudes and behaviours. Therefore the definition of environmental art is not based on the work itself, but on the rationale behind the work — to create environmental awareness, discussions and/or solve environmental problems (Marks, this volume).

Examples of all the different forms of environmental art that Megan lists above are found within these pages.

¹ See <http://www.ecoartsaustralis.org.au/events-and-projects/conference-2016-building-sustainability-with-the-arts/> Accessed 26 March 2017

Section II: Rattling the cage

The second section of the book comprises seven papers that describe art that draws our attention to particular environmental issues. These include examples of where the artists have sought to create indignation about certain issues and thus sought to affect attitudes and beliefs. Issues tackled include climate change, waste packaging, transport, nuclear power and conservation.

In Chapter 3, **Vanessa Bible** traces the history of use of the arts in the dynamic, innovative and influential environmental protest movements of the Northern Rivers region of New South Wales. She explores how the arts have contributed to the success of environmental protests by framing the issues in creative and non-threatening ways; by reaching broad audiences by way of colour and entertainment; by keeping spirits high during often-tense environmental campaigns, and by acting as an effective tool of nonviolence.

In Chapter 4, **Laura Fisher** and **Volker Kuchelmeister** describe a socially-engaged art/research project that investigated the emotions and sensations of cycling in the city. Hooking cyclists up to a range of monitors they were able to chart the different responses as they rode through the city and they depicted this in film and imagery. Through the creation of their participatory artworks they celebrated the lyricism of the bike riding experience, the sense of freedom it can give a rider in any context, and bicycles as a 'dissident object' and grassroots creative force.

The engagement of artists with climate change was the focus of Chapters 5-7 (as well as Chapter 21)

Guy Abrahams attended the Climate Conference in Paris in 2015. The conference integrated a large number of extraordinary responses by artists to climate change. His paper provides an overview of the many creative ways that the arts were used to create an emotional response to climate change (Chapter 5). Guy concludes that the cumulative effect of these cultural influences is sometimes hard to see, and even harder to measure, but cannot be underestimated.

Lisa Woynarski continues the international perspective in Chapter 6, focusing on the performing arts and four case studies in the UK and Europe. Analysing these site-based participatory performance works, she suggests that it is through engagement with site, participatory practices and materiality, that performance can reveal the way we are all entangled in multiple ecological relationships. She suggests that theatre and performance have the opportunity to problematise, reframe and re-imagine some of these pervasive images we often see of climate change, opening up new ways of thinking about the natural world.

Marty Branagan also deals with climate change but from the personal perspective of an individual artist as he describes a group of artworks that he created as a response to climate change and over-consumption (Chapter 7). His intention was to create an exhibition that brought together large groups of people to reflect on and discuss climate change and the Paris climate summit, while being in good company. It was his hope that this would be a small but nevertheless significant catalyst in the process of climate change mitigation and adaption, particularly when considered in tandem with myriad similar initiatives around the world.

Paul Brown comes from a community arts perspective. His ambitious multi-arts collaboration *Nuclear Futures* was a three-year Community Arts and Cultural Development program that linked creative artists and atomic survivor communities across several countries. Through collaborative processes, stories circulated and knowledge was produced, enabling communities to better negotiate agreed understandings of their own history, and towards their own social development goals. The effort to involve atomic survivor communities in deliberative processes has already seen certain tangible outcomes, through the content of the artworks themselves and in the messages delivered into government-sponsored initiatives. The stories told by affected communities bore witness to the legacies of the atomic age. They are relevant and illuminating within the contemporary controversy over ongoing development of nuclear weapons, and the local debate on expanding further the already nefarious industry and politics surrounding the nuclear fuel cycle.

Dell Walker's focus is on rubbish (Chapter 9). She is an artist who is fascinated by the waste and detritus of our consumer culture. What began as an individual quest to make art, and use materials that came readily to hand (waste packaging), became a political act in bringing the issue to the attention of the general as she started to make huge installations made from truck loads of styrofoam waste.

Section III: The arts in environmental education

The third section of the book comprises seven papers that describe visual and performing arts that have been used in the environmental education context. These include examples of where the artists have sought to help explain particular topics to students (such as Michael Connor's article on theatre in education). Sometimes it is more about providing an emotional connection to nature (such as the articles by Tonia Gray & Cameron Thomson and Patrick Shirvington). Creating an emotional connection overlaps with some of the papers in Section V, but in this section the

authors are particularly concerned with environmental education of school and university students.

Tanja Beer is a theatre designer who builds ‘living stages’ with the people who end up becoming the audience. These are stages made out of growing plants — vegetables, herbs, native plants. In Chapter 10 she describes how the co-creation of a ‘living’ stage design connects young audiences to ecological processes. She highlights how collaborative design and storytelling can assist in engaging children in developing a greater understanding and appreciation of the living world.

Michael Connor is an environmental educator at the Wollongong Botanic Gardens, with a penchant for drama and theatre. He has successfully incorporated extremely entertaining theatre performances into the education programs of the Botanic Gardens. His article (Chapter 11) provides a description of these performances and some of the effects the education staff have noticed from these lively performances.

Lillian-Rodrigues Pang is another storyteller. In her article (Chapter 12) she provides a practitioner’s guide to story-telling, drawing on her long experience of combining stories from different ethnicities. Lilli chooses stories that teach that all things are interconnected. When she is telling these stories she feels that interconnectedness with her audience, and that she in service to the earth and the spirit of story. For her, the beauty of storytelling is that it offers a fun, memorable method of teaching. It is teaching without moralizing.

Patrick Shirvington is a visual artist who is a visual storyteller, telling stories through the act of drawing (Chapter 13). His overwhelming drive is to connect school students with nature, something very sadly that is becoming increasingly uncommon with increased urbanisation. In collaboration with environmental education programs he takes students into bushland and shows them how to observe and draw the Australian native plants found there. He encourages them to convert their drawings of plants, flowers and fruits into characters. For him observing nature in this directed contemplative manner is a powerful way for children to learn about the natural world and to gain the values necessary for environmental stewardship.

In Chapter 14, **Louise Fowler-Smith** addresses the question: Can interdisciplinary teaching led by the arts contribute to the debate on contemporary environmental issues? She takes university students from a cross-section of disciplines (fine arts, design, media arts, architecture, engineering, science and environmental humanities) into a field situation near the outback town of Broken Hill. There they are encouraged to think about the environment in ways that are not discipline based. Each student

brings their particular knowledge to the problem at hand, then through discussion and practice-based experimentation they discover solutions that many of them admit they would never have thought of prior to this experience. Students who belonged to disciplines that tend to favour a more linear way of delivering information were encouraged to think more laterally, and in doing so surprised themselves with their solutions to the problems set. Similarly, students from the arts and design gained knowledge from students outside of the arts that enriched their experience and led to more considered outcomes.

Tonia Gray and **Cameron Thomson** are education researchers. Their paper describes results from research they undertook, in which senior high-school students were taken into bushland and encouraged to express their learning about ecology in writing, poetry, drawing, painting, performing dance, music, and digital film-making (Chapter 15). They investigated whether there was a longitudinal effect upon the students from their year-long nature-infused experiences. Four years after the experience, the longitudinal results indicated an enduring and positive impact on pro-environmental behaviours, nature connectivity and appreciation of the arts-based curriculum.

Kumara Ward is also an education researcher interested in the synergies between nature-infused experiences and arts-based activities (Chapter 16). She interviewed thirty international experts in arts, sustainability education and/or early childhood education. The analysis of these interviews resulted in a pedagogical tool for early childhood educators to support them in engaging in sustainability education through the arts. Her research integrates arts and sustainability curriculum areas in early childhood with the aim of promoting accessible, place-based and meaningful Early Childhood Education for Sustainability.

Section IV: Art and science working together to inform and create empathy for nature

The fourth section of the book comprises six papers in which scientists and artists have worked together to create artworks. To some degree these papers fall into the first pathway (using art to help increase understanding of the environment) and to some degree they fall into the second pathway (where art connects us to nature).

Nalini Nadkarni is an ecologist who studies the canopies of rainforests and she has a special interest in communicating the results of that research to the general public using art forms of different types. **Jodi Lomask** is a modern dance choreographer. Both are based in the USA and

in their paper (Chapter 17) they describe their collaboration on a dancework called *biome*. The dancers went to the Central American rainforest where Nalini was working and spent time in the canopy of the trees with her gaining an understanding of the ecology. The collaboration was mutually rewarding. As they say, artists thrive on experiential and intellectual material and freedom — it is best if they have the room to respond, personalize, and generate their own perspectives on material. This realization made their collaboration rich and engaging for each of them, and for the participants and audiences who viewed the performances they created together.

Greg Pritchard is writing as a performer, writer, and conceptual visual artist (Chapter 18). He was inspired by the German Philosopher Arthur Schopenhauer, who he believes provided a philosophical basis for a contemporary environmental ethics. Greg suggests that his writing provides the basis of how art can address environmental issues. Schopenhauer's theory was that art, and especially music, gave us an intuition of the real world, away from perception, because the aesthetic act allows us to enter a 'will-less state.' He describes some of his theatre productions and visual artworks, which attempt to help people 'see the world anew'.

Chapter 17 to 22 are by artists who have used science to reveal different aspects of the natural world, which they have then expressed through their different art methods.

Anastasia Tyurina is undertaking research in the interdisciplinary field of Artistic Photomicrography (Chapter 19). Her artistic practice aims to address the artistic potential of scientific photomicrography and its social and cultural impact. Reflecting the chemical composition of water and interpreting photomicrographic images of it, her practice seeks to provide insights and awareness, and to encourage behavioural change, transdisciplinary relationships and innovation. Her aim is for artistic manipulation of a scientific process through experimenting with the Scanning Electron Microscope and the fusing of science and technology with art in the hope that it provides a new meaning for what such images can say about water to a viewer.

Carolyn Lewens is a visual artist. In Chapter 20 she delves into aspects of her art practice, referencing research and images from her PhD project, *In the Photic Zone*. She presents facts and stories of climate change through a cameraless art practice that is powered by the sun. Photosynthesis means making things with light. Her project connects photic zones — those of her photographic practice where images are made in her studio's sunlit backyard with the marine environment where

photosynthesis mainly occurs. It has been her intention as an artist, that *In the Photoc Zone* will allow for reflection on the regenerative potential of nature that, like the transformative power of art, can lift the spirit and bring hope out of despair when facing our current ecological predicament.

The Australian landscape has been a great source of inspiration for many artists. However, the human eye can only observe a limited amount of information. **Svetlana Trefilova** is a visual artist who examines the microscopic world of Australian nature (Chapter 21). Her work is about analysing internal and external systems, and creating visual graphic equivalents of these systems. Her paintings, photographs and videos are systems of imagining — an imagining system in much the same way that science is. The resulting abstract phenomena allow viewers to see and perceive the invisible world surrounding us. She uses the philosophical theory of the ‘rhizome’ to demonstrate the strong interconnections between art and science and among all living organisms.

Renata Buziak (Chapter 22) is a visual artist interested in linking art, sciences, and community involvement. She provides a visual articulation of the actions of decay and regeneration. She works with the Quandamooka community of Minjerribah on North Stradbroke Island, Queensland collecting medicinal native plants. She uses the biochrome art process which is a camera-less, physical, and biological process, where the plant material and an emulsion are in direct contact, allowing nature to ‘imprint’ itself through its own decay. Her connection with plant material and science is helping to reframe a focus on the importance of nature and natural order in the realm of art. It is her hope that an expansion of public awareness of medicinal plants and the significance of microbial activities through art exhibitions helps to build environmental sustainability through increasing breadth and depth of public appreciation for the environment.

Section V: Connecting us to nature

The fifth section of the book comprises four papers by artists who are inspired by their experiences of nature. The aim of their art is to foster empathy for the natural environment in the viewer.

Penny Sadubin is a visual artist whose motivation is her deeply held desire to connect to and reflect the landscapes that she inhabits (Chapter 23). She provides one example of this work — a sculpture made from objects found on her nearby beach — some of them natural, and some of them discarded plastic rubbish.

Kassandra Bossell is a visual artist who uses sculpture and installation to address the fragility of natural environments and the interdependence of

life forms. Working alongside scientific exploration, she traces patterns and states of transformation shared by different life forms, linking micro and macro worlds. In Chapter 24 she presents *The Sleepers* — a series of ceramic sculptures about our slow awakening to the unity and interdependence of all life forms. They are totemic beings, reminding us of ancient knowledge, bringing back awareness of the transformative power of having respect for nature.

Greer Taylor's art practice is deeply influenced by nature, most especially wild places. In Chapter 25 she describes the ephemeral artworks that she creates in natural areas, and in particular a project by EcoArts Australis in which she participated which employed several artists to create ephemeral artworks in conjunction with a community music festival.

Paula Tura is an artist and researcher whose work seeks to connect with nature with a very primal way (Chapter 26). By placing herself in natural rainforest settings and being photographed with water, among trees etc. she aims to connect to the earth, to Gaia.

Section VI: Connecting us to land and to Country

The sixth section of the book comprises three papers by researchers and an artist who discuss the important role of artists in opening the minds of non-indigenous Australians to the Indigenous concept of 'Country' and through that building empathy for the natural environment.

In Chapter 27, **Dominique Sweeney** provides a living example from the northwest region of Australia of Indigenous masked dance performances that foster connection to Country. His ongoing research interest explores the way dreams and performances make sense of the world through masked corroborees. When one looks closely into the designs of masks and other performance objects and the dancing bodies, connections can be made to the stars, the rivers, the mountains and trees. The dancers extend into beings while they dance and bring into the performance those places, those entities, their ancestors and their progeny.

In Chapter 28, **Julie Collins** describes the Indigenous concepts of Country and the spiritual connection to the land that they feel. Her chapter examines the possibilities inherent in our social ecology for promoting a sustainable land ethic and the significant role that artists can play. She contends that a deepening understanding of Aboriginal 'caring for country' and how that intersects with non-indigenous ways of relating to land, will promote a more inclusive and unified approach to land management. For her, healing the land is closely intertwined with the

healing that must occur between Indigenous and non-indigenous Australians. It requires non-indigenous people to open their minds to Indigenous ways of relating to ‘country’, perhaps to accept that there are more things in heaven and earth than are dreamt of in our philosophy? This is territory that artists have a crucial role in traversing with imagination and empathy.

In Chapter 29, artist and ecological restorer **Catherine van Wilgenburg** takes us on a very personal journey — from her birth in the UK, to her journey to Australia, to her discovery of feminism which emphasized how the personal is the political, and finally her discovery of both Australian Indigenous culture as well as restoration of natural vegetation communities. Her journey as an artist was from the artist alone in the studio making individual artworks, to a community artist collaborating in with community stakeholders in creation of artworks that both restored ecosystems, but also highlighted their beauty.

Catherine’s journey is prescient and one that is relevant, not only to the way that the arts are practiced, but also how the connection of ecology, science and Indigenous culture with the arts is so vital in the building of sustainability.

References

- Curtis, D.J. 2007. *Creating Inspiration: How visual and performing arts shape environmental behaviour*. PhD Thesis, University of New England, 500p.
- . 2009. Creating inspiration: the role of the arts in creating empathy for ecological restoration. *Ecological Management and Restoration* 10(3), 174-184.
- Curtis, D.J., Reid, N. and Reeve, I. 2014. “Towards ecological sustainability: observations on the role of the arts.” *S.A.P.I.E.N.S. Surveys and Perspectives Integrating Environment and Society* 7(1), 15p.
- De Young, R. 1993. “Changing behaviour and making it stick — the conceptualization and management of conservation behaviour.” *Environment and Behavior*, 25(3), 485-505.
- Foran, B., Lenzen, M., & Dey, C. 2005. *Balancing Act: A Triple Bottom Line Analysis of the Australian Economy, Volumes 1-4*. Canberra: CSIRO, University of Sydney.
- Kals, E., Schumacher, D., & Montada, L. 1999. “Emotional affinity towards nature as a motivational basis to protect nature.” *Environment and Behavior*, 31(2), 178-202.

Somers, J. W. 2004. "The therapy of drama: an intervention in rural communities in trauma." Paper presented at the IDEA 2004 5th World Congress of International Drama, Theatre and Education Association, Ottawa, Canada, 2-8 July 2004.