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TREADING LIGHTLY: AN ECOLOGY OF HEALING

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PROLOGUE

On Wednesday 16th February 1983, fire broke out in several areas of the drought-stricken and vulnerable State of Victoria. For a day and a night the fires raged unchecked despite the efforts of a team of 15,000 firefighters, 700 tankers, 9 helicopters, 5 planes, and an RAAF Hercules fire fighter.

The lack of winter and spring rains caused restrictions in water supply at the same time as creating a ground cover of dead undergrowth in the bushland. All that was needed was the spark and the wind to urge that spark to life, to create the fire reported to be the worst in living memory (newspaper report 1983).

Wednesday 16th February 1983

It was mid afternoon when a tractor backfiring in a field of dry grass started a small fire. It was a rather insignificant fire at first, if there is such a thing in a hot Australian summer, but the land was tinder dry and the area remote. It took some time before help arrived. Local farmers worked hard to contain it, but the fire quickly took hold. Before long it was burning out of control, destroying farms and bushland. Twelve homes were burnt before the fire headed toward the coast. With seventy-to eighty-kilometre winds, the fire raced across ridges from hilltop to hilltop in the forest ranges.

In a little over an hour the fire reached the northern aspects of a large holiday town, where it destroyed forty homes. Before it spread further into the town, a blustery cool change hit, turning the fire to the east and saving the main part of that township. However, with a twelve-kilometre front the fire threatened several small towns dotted along the winding coastal road to the east. They were crowded as usual in summer, their normal sleepy ambience changed as holiday home owners and tourists joined permanent residents in searching for respite from the heat on the beaches of this beautiful strip of coastline.

A drama began to unfold for four families who, along with countless others, lived in the path of the oncoming fire.

In her home close to the sea, Margaret Ford was enjoying a brief rest. Margaret had spent the morning preparing food at a local club. She was getting ready for her daughter's wedding, to be held two days later. The family planned to have the wedding ceremony in a lovely little chapel in a garden, followed by the reception in the club dining room.

Margaret was managing the catering herself. All the tables were set and she was well ahead in her careful planning. Turkeys were in the oven. There were to be three meats, with vegetables, seafood and all sorts of delectable goodies.

Margaret's peace was interrupted as her son rushed in, saying ‘Mum, there's a fire down the coast! I'm going to help.’ Rick had been a volunteer fire fighter for years, although he was only nineteen. Margaret answered, ‘Be careful Rick.’ It was a kind of perfunctory answer. She wasn't worried: Rick had fought many fires and although the day was hot, the club was air conditioned and she had not noticed the heat. She had not listened to the radio. She was not really aware of any fire.

Meanwhile, in another small town close by, Elizabeth Arnold was pottering in her garden. She was laying a brick pathway. She liked old bricks, although she didn't consider the end result of her work particularly artistic. Her husband Frank was up a ladder fixing the gaps at the top of the windows. This was a job he had been meaning to do for a long time.

The day was very hot. After a while, Elizabeth and her daughter Sue took Sue's children to the beach for a cool off. While they were there they saw a dark cloud in the west. Elizabeth thought it was a dust cloud; there had been one like that a fortnight before. Sue said, ‘Mum, that is not dust, it is smoke. There is a fire. I think we had better get home and see what is going on.’ They headed back to the house. Elizabeth said to Frank ‘Have you seen the smoke?’ ‘No’, he replied. They took him outside to see. He was startled at how big the fire looked.

Elizabeth and Frank were burnt out in a bushfire in another town years ago. They had formulated a plan for future fires after that experience. Elizabeth was to leave taking the car, the caravan and certain possessions which they had identified. Frank would stay behind and look after the house. Frank was a volunteer firefighter and had learned a lot about fire behaviour since their last home burned. His plan was to hose the house, fill the gutters, shelter inside in long-sleeved warm clothing until the front passed and then manage the remaining spot fires which he knew to be the main culprit in property loss. They were calm. They knew what they had to do.

Just a couple of streets from the Arnolds, Phil Docherty rang Melbourne. He was looking for Yvonne, his wife. He was concerned that she would have heard about the fires and he wanted to reassure her that he had everything under control at home. He and his mate Don Williams were going further down the coast to get the horses and move them to a safer spot. The horses belonged to Yvonne and she loved them almost as much as she loved her own children. Phil told her to stay in Melbourne until the threat was over.

When the horses were safely in their new paddock, Phil and Don went to Phil's home to watch the progress of the fire from the living room. Phil's home faced west and the fire was clearly visible, though still a distance away.

Don thought he should ring his family. No one answered at his home so he tried some friends across the road. His wife Jo was there with the children. He told her about the fire and that he was with Phil and had helped with the animals. She said, ‘For goodness sake be careful! Don't try to be a hero.’ Don was inclined to be a bit "macho".

Margaret Ford went back to the club, and took the turkeys out of the oven; they were cooked to perfection and she quietly congratulated herself on how smoothly everything was going. She returned home and found David her husband, at the front of their home watching the progress of smoke from a bushfire. David said ‘I don't like the look of this: it looks big.’ He was a volunteer ambulance driver and rang the ambulance to see if he was needed. He was: someone had been injured further down the coast. He left quickly.

Phil and Don, watching the progress of the fire, saw the wind suddenly shift direction - turning the fire toward them. Phil had a truck and they were hurrying to load it with some possessions when the wind storm that precedes the fire hit them. They dived under the truck and held on to the wheels while the wind roared around them.

When they emerged, the house was gone. There had been no fire. The force of the air pressure imploded the house. There was a concrete slab with carpet on it and that was all. Phil stared at it, dumbfounded. Don shook him saying, ‘Come on mate, there's nothing left to be here for now, we'd better get out.’ By this time the fire was very close. They made it to the creek, jumped from the truck and sheltered under the bridge, chest high in water. They were forced to stay there until dawn. It felt too unsafe to come out in the dark, even after they sensed that the fire front had passed. There were spot fires everywhere.

Jo Williams had been waiting for Don to return. The police came to tell Jo and her children to evacuate. They said, ‘Don't try to save anything, don't do anything, just go. You have about ten minutes.’ She was frightened at the thought of going without knowing where Don was, but she knew she had to act; she had to look after the children and get them to safety and besides, she always was a "coper". Jo returned home, packed a few things including drinks, blankets and warm clothes for the children and drove to the home of her parents-in-law, Eric and Betty Williams. She convinced Betty to come with her, but she had a much harder task with Eric. He said, ‘You're bloody mad; you are all mad. We'll be alright.’ Jo replied, ‘Well we may be bloody mad but we're going and Nanna's coming with us. Come on, you come too.’ ‘No no’, he said, ‘I'm not bloody coming’. Jo and Betty both knew they were not going to be able to budge him. In the end they had no choice but to leave him there and go. Jo, Betty and the children drove east. They were redirected from every town they arrived in because that town was also being evacuated. The fire was close behind them and the air was full of dense, orange–grey smoke. The road was packed with a slowly moving stream of traffic. Every car had headlights on. Every car was loaded with people, pets and possessions. Some were towing caravans and trailers that had caught fire. The fire had been extinguished but some were still smoking; many had large burnt areas. The oncoming lane was being used for emergency vehicles that flashed past them with tremendous urgency. Jo watched the progress of the fire through her rear vision mirror. She prayed that there would be no accidents on the road, that people would not panic or do anything silly. Any delay, she knew, would mean that the fire would catch up with them. She could see the flames on the ridges behind them. She was terrified. They ended up in a safe town some forty kilometres away, at the home of a friend.

The evening newspaper had a picture of Eric hosing down the house. He was wearing shorts, a singlet and thongs. He was telling firemen and reporters that no one was going to move him, he was 'bloody well staying put' and he was going 'to beat the bugger!' The reporter wrote that he hoped that he would be alright. He wished him well.

Back at their ridge–top home, Elizabeth and Frank Arnold had filled buckets, soaked towels and blankets. Elizabeth packed the car. Frank attached the caravan and drove the lot out of the driveway and left it facing the direction that Elizabeth would need to take to get out. By now the phone was out and the electricity was off. They sat watching the smoke from their living room window; it was going out to sea and did not appear to be getting any closer.

A police car arrived with police and CFA people in it. They urged Elizabeth and Frank to leave. Elizabeth told them that when they were in smoke she would go but that Frank was staying. One fireman replied, 'Anyone who stays up here will die.' They left. When Elizabeth told Frank this he looked at her and said, 'So what?'. Elizabeth couldn't comprehend what he was saying. She said 'Oh Frank ...' but there was no time to argue; all she could do was trust that he had worked out just where to be when the front came through.

Elizabeth was taking the last box of photographs out to the car when she looked up and saw a towering grey black cloud of smoke, and a roaring noise that was deafening. She ran back to Frank saying, 'My God Frank, look at this! We've got to get out!' The fire was coming in on a second front to the north, which they hadn't seen. They rushed to the garage to where the blankets were soaking, grabbed one between them, Wringing it out as they ran for the car. Elizabeth had it in her mind that if she could just get Frank to the car, she may be able to convince him to get in. Half-way to the car, Frank thrust the blanket at her, saying 'Get going, quickly!' and he disappeared back toward the house.

Elizabeth drove the car and caravan down to the town. She felt as though she had been switched on to autopilot. 'Dear God, how can this be happening? Oh Frank ...'.

She couldn't afford to feel.

She collected Sue's children and drove on. Sue was a nurse and was staying to help. After being redirected several times as fires cut off various roads, Elizabeth and the children ended up at her son's farm some kilometres away.

Further back along the coast, Rick Ford drove up in the fire truck. He parked and ran in to his home yelling, 'Mum, for God's sake you have to go. Things are bad!' Margaret replied, 'Don't be silly Rick, I have far too much to do for the wedding.' He literally yelled at her, 'Mum, for God's sake, you've got to go, it's really bad!' Her two daughters Pat and Anne arrived, saying 'Mum, we have to go, we have to get out!' Margaret at last was convinced.

They thought quickly about what to grab. They chose the wedding clothes, the bridal frock and veil, the bridesmaids dresses, the men's suits. Margaret ran to her room and emptied the underwear drawer onto her bedspread, bundled it up. They struggled to get the bundle down the stairs to the car. They laughed about that later.

The bundle went on top of the wedding clothes and everything got squashed.

They grabbed water, juice and blankets. They climbed into the car and headed for the river. It was not possible by this time to drive out of town, the fire had entered the town on several fronts and had now cut the only road out of the town.

When they reached the river and got out of the car, they were literally snatched from the car and blown along by the fierce wind. Pat told everyone they were to stay together. There was ash and roaring wind, it was frightening. The wind sounded like many aeroplanes, it was so loud. Margaret wanted to go to the ambulance station to look for Dave, but Pat wouldn't let her go. The girls insisted that everyone must stay together. They were very strong. They heard the ambulance and fire brigade sirens. They wondered if their men were alright. By now they had Dave with the ambulance, two sons and Pat's fiance all in fire trucks. Four of their men were out in the inferno somewhere. They did not see them until the next day and spent the night terrified for their safety.

An order came to the people on the river bank, 'Get into the river. The fire is racing down the dunes to the water!' Another order came shortly after to get out of the river and get down on to the floor of their cars while a helicopter fanned the flames away from where they were sheltering.

Behind them houses were exploding in the dark. It was like some diabolical fireworks display, all over the town, in every direction. It felt as though the whole town was on fire.

An order came to move down to the beach. There was a chance that the petrol tanks in the nearby service station would explode. People started to move, but the helicopter was landing on the beach. It was dark but lights were flashing. The noise of sirens as trucks rushed up and down the road added to the terror.

All over the river bank and beaches there were people: old people, young people, children, people in wheelchairs, people being carried. And animals: horses, dogs, cats, birds in cages, goats, even a cow that had followed some people to the beach. There seemed to be no free space anywhere. People were quiet, watching, too fearful for their loved ones back fighting the fires to voice anything at all. The animals were quiet. There were no fights. There was some comfort in being together.

Eric Williams, staying to protect his home, was watching the cars go through from other towns that had been evacuated further down the coast. He was watching for Don's car. He knew it had not gone through. He started to worry and decided to go searching for him. He drove west as far as he could before the fire turned him back. He did not know that he had driven over the bridge that was sheltering his son. He turned east but could not find him. He turned once again and became disoriented in the dense smoke and ash. He drove forward but his car hit a roadside barrier. He jumped from the car and started to run. Behind him, the car teetered and slowly went over the cliff, landing on the beach many metres below, to the horror of people sheltering there. He ran with his breath tearing at his throat and his chest constricting, 'You bastard, you bastard!' he sobbed at the wind, the smoke and the approaching fire. He was a big powerful man, but this time the adversary was bigger and more powerful. The fire caught him.

Margaret's father, who was also on the river bank, returned twice through the night to check on his home. It was very dangerous: he was not supposed to go, but he slipped along back roads. When he returned each time he told people 'yes, sorry, your home is gone.' 'No, yours is ok'.

They were not allowed to return home until morning. When they finally let them go, the police quietly wished everyone good luck.

When Margaret and her two daughters eventually arrived home, the fire had burnt to the back fence. The house was not burnt. Sometime in the night Alan, their second son, had come home and hosed it down. He probably saved their home.

Eric Williams' house remained standing. Jo and Betty both knew someone had died; it was on the news. Jo felt certain it was Don, he was always trying to be a hero. Betty was quiet; somehow she knew.

Elizabeth Arnold did not return until Saturday. Sue had rung her to say that Frank had died in the fire. Frank was found on the ramp between the house and the garage. He had not had time to get into the house, nor to put on his firefighting clothing before the fire swept though.

Gone too were the horses, so carefully moved for safety. One badly burnt, the others dead.

Thursday 17th February 1983

The next day the Ford boys still worked, mopping up and putting out spot fires. They returned home filthy from time to time to rest for a few hours, and then returned to more work, leaving their beds black with soot that seeped through everything and was impossible to remove.

The family had a weird feeling of guilt that they were even thinking of a wedding in the midst of all the devastation, but it was organised so it would go ahead. The club house where the reception was to be held, was intact, but the little chapel was burnt. They located a marquee to put up in the grounds for the wedding ceremony.

There was no electricity. They located a generator.

The best man's home had gone. His hired suit was safe in the car.

Many friends, invited guests, lost everything: they had no clothes to wear to the wedding. People loaned their best.

All day Thursday, Margaret and her daughters worked to prepare food for the firemen and for people who had lost their homes. Working for others helped their feelings of guilt a little.

Friday 18th February 1983

The wedding went ahead on a part of the golf course that was not burnt. The reception room had no fire scars either. The food was fine. People said the wedding was lovely, but it was hard to remember much about it in later years. It was hard to remember anything, much later, about those couple of days.

> *The Premier of Victoria declared a stage three disaster, the highest level in the State Disaster Plan in the wake of the Victorian fires which left forty five people dead, many badly burned, over 1700 homes destroyed, 171 other buildings including schools, churches, convention centres, 6600 cattle and 13,500 sheep, farm lands, fencing, 330,000 hectares of land including 125,000 hectares of the states best farm land, $45 millions of state forest.*
>
> (newspaper report 1983)

TREADING LIGHTLY: AN ECOLOGY OF HEALING

CHAPTER **PAGE**

Prologue i

Summary of the Thesis 1

Statement of Originality 2

Acknowledgements 3

Preamble 4
- The Questions 5
- Situated Knowledges 5
- The Theoretical Framework 6
- An Ecological Cosmology 6

Organisation of the Thesis 7

CHAPTER 1 RESEARCHING AN ECOLOGY OF HEALING: GENESIS OF AN ECOLOGICAL POSTMODERN COSMOLOGY 16

- Background to the Study 18
- Designing the Study 19
- The Constructionist Perspective 20
  - *A Constructionist Ontology* 20
  - *A Constructionist Epistemology* 21
  - *Constructionism Guiding Method* 22
  - *Interactive Processes* 23
- Ethical Considerations 24
- Research Processes and Strategies 26
  - *Gathering the Narratives* 28
  - *Exploring the Narratives* 30
  - *Interpreting and Reconstructing* 30
- Components of the Ecological Postmodern Perspective: An overview 32
  - *Myths and Cosmological Underpinnings* 32
  - *Affirmative Postmodernism* 33
  - *Process Philosophy, the Implicate Order and Ecocentrism* 34
  - *Systems Theory, Thermodynamics and Entropy* 36
- Summarising the Reconstruction 37
- An Ecological Postmodern Perspective for Nursing 38

CHAPTER 2 WILDFIRE: THE UNCERTAIN LIFESPACE 40

- Myths of the Origin of Fire 41
  - *Aboriginal Myths of Fire* 43
- Natural Disasters 46
- Bushfire Disasters of Victoria 47
  - *Black Thursday* 47
  - *Red Tuesday* 48
  - *Black Sunday* 48
  - *Black Friday* 49
- Ash Wednesday 50

CHAPTER 3 ENTROPY: DISORDERING THE LIFESPACE 54

Stressors: Ubiquitous ... Omnipresent 55
Ash Wednesday: Entropy and the Resident Groups 57
    Preparing to Evacuate 57
    Sheltering from the Firestorm 58
    The Aftermath 58
        Loss of Homes and Possessions 59
        Loss of Animals and the Environment 60
        Guilt; Resentment; Anger ... and Grief 61
Entropy and the Relief Workers 65
    Sensitive Helping 66
    Experiencing Conflict 68
    Work Overload 71
    Role Conflict 73
    Environmental Devastation 74
Voices in Tribute:
    Omens 77
    My Patch of Dirt 78
    Earth Soul 79
    The Cairn 80

CHAPTER 4 NEGENTROPY: REORDERING THE LIFESPACE 81

The Sense of Coherence (SOC) 82
    Comprehensibility 83
    Manageability 83
    Meaningfulness 83
Boundaries of the SOC 84
The Community, Negentropy and the SOC 85
    Comprehending the Event 85
    Managing the Event 86
        Managing the Ongoingness: Families and Learning 87
        Managing the Ongoingness: People and Organisational Resources 88
        Managing the Ongoingness: Humour and Having Fun 90
        Managing the Ongoingness: The Environment 92
    Locating Meaning in the Event 94
The Disaster Relief Workers, Negentropy and the Sense of Coherence 97
    Comprehending the Role 97
    Managing the Role 98
    Locating Meaning in the Role 101

CHAPTER 5 ANCIENT MYTHS AND COSMIC STORIES: HUMANS IN AN ENCHANTED COSMOS 104

Cosmology — Pondering the Universe 105
Mythology as Expression 107
Ancient Myths and Cosmic Stories 109
Ancient Stories of Aboriginal Australia 114

CHAPTER 6 METAPHYSICS TO SCIENCE: DISENCHANTING THE WORLD 119

- Cosmology at the Dawn of Western Philosophy 120
  - *A Single Substance Cosmology* 120
  - *All as Flux* 121
  - *Something that Is and Something that Is Not* 121
  - *Plato and Aristotle: Forms, World Soul and a Hierarchy of 'All That Is'* 122
  - *Neoplatonism: God, the Soul and Transcendence as Purpose* 124
- Medieval Cosmology 124
  - *Christianity and the Triumph of Reason* 124
- Exploring Modernity 126
  - *The Renaissance* 126
  - *The Enlightenment* 128
- The Emergence of Science in Modernity 129
- Science as Disenchantment 133
  - *Critique of Modernity: Reason, Mastery and Progress* 133
  - *Critique of Modernity: Loss of Soul* 136

CHAPTER 7 NEW COSMIC STORIES AND CREATION MYTHS: RE–ENCHANTING THE WORLD 139

- Affirmative Postmodernism: A Revisionary Perspective 140
- Postmodern Myth and Cosmic Story Telling 142
  - *Myths of the Running-Down Universe* 143
  - *Negative Entropy: Order in Open Systems* 143
  - *Physical Cosmogony: Tall Tales but True?* 144
  - *Postmodern Tales of the Origins of Life* 145
- Postmodern Science: Dualism and Materialism to Organicism 147
  - *Alfred North Whitehead and Process Philosophy* 148
- Bohm and the Implicate Order 150
- Wisdom Traditions: Holding Sacred Space 153
- Ecological Postmodern Cosmology: Highlighting the Spirit 154
- Living with Nature in Humility 158

CHAPTER 8 ECOCOSMOLOGY: A LEITMOTIF FOR NURSING 163

- Thinking about Nursing 164
  - *Nightingale: Theoretical Beginnings* 164
  - *Nursing into the Quantum Age* 166
- Summarising the Ecological Postmodern Position 169
- Ecological Postmodern Cosmology and Nursing 170
  - *Person* 171
    - *Person as Mutually Influencing Occasions of Experience* 172
    - *Person as Quantum Consciousness* 173
  - *Environment* 175
  - *Health* 176
    - *Panexperientialism and Health* 177
- Suffering and Humans in Search of Wisdom 178
  - *Nursing* 180
    - *Nursing and Quantum Healing* 180

CHAPTER 9 ECOCOSMOLOGY: CONTEXTS AND PRACTICES IN CARE AND HEALING 183

Spaces, Places and Human Energy Fields 184
  Dwelling in the Lifespace 185
  Encountering the Fields 187
  Loss of Dwelling 188
Nursing in the Disrupted Lifespace 193
Nursing Lifespace: Places of Care and Healing 194
Reaching Out from a Quiet Place 197
Nursing Practices: Working in Quantum Healing 200
  Era One: Allopathic Medicine 200
  Era Two: Mind–Body Interaction 200
  Era Three: Energetic Healing 202

CHAPTER 10 THE WHOLE, THE PARTS AND THE THESIS: REFLEXIVITY AND NURSING AS ECOPRAXIS 206

Reflexivity and the Researcher 207
Summarising the Study 208
  A Construction of the Construction 208
  Locating a Dominant Theme 209
  Exploring Cosmology 210
  Informing Nursing 211
Constructionism to Ecological Postmodernism: An Evolving Paradigm 212
  Constructionism 213
  Constructing Postmodernism 214
Examining the Reconstructions 218
Researching in Nursing 219
The Thesis: Nursing as Ecopraxis 221

BIBLIOGRAPHY 225

SUMMARY OF THESIS

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This research explores the constructions that people in a particular Victorian community held in respect of healing from the experiences of the 1983 Ash Wednesday bushfire. It is hoped that insights from these constructions will inform nursing in its mandate to healing work.

The theoretical framework is one of continual processes of construction, deconstruction and reconstruction. Constructionism is argued as ontologically relativistic and epistemologically subjective and interactive. Methodologically, it is hermeneutic in so far as methods aim at eliciting deep meanings, and dialectic in so far as individual constructions are juxtaposed critically in order to create more informed reconstructions. Forty people were interviewed. Of these, twenty-six were residents, two of whom had a relative killed, eleven of whom lost their home and/or businesses and personal possessions, and a further thirteen did not experience physical loss but were deeply affected by the devastation to their community. The remaining fourteen people in the study were disaster relief workers: local doctors and community health nurses and various professionals who came to assist people in their recovery process.

Embedded in the fire narratives were themes about stress and coping, about role expectations, about loss, emotion and conflict. By far the most dominant however, was the theme of attachment to space and place and a non-instrumental love of nature which has, in this work, been identified as a cosmology. The thesis explores this notion of cosmology historically from ancient myth to postmodern science, finally constructing an 'ecological postmodern cosmology' incorporating Whiteheadian organicism, Bohm's implicate order, ecological environmentalism and contemporary thought about spirituality. Nursing's philosophy is then reconstructed through this ecological postmodern lens, and ideas about how this might inform contexts and practices of care and healing are proposed. Nurses work in disrupted lifespaces, and who they are and what they bring to their work is informed by their belief system. Those who practice from a cosmological belief in the connectedness of all things identify themselves as in and of the environment of another and will search for ways to reach out to that other, creating holding, sustaining and balancing environments of care and compassion.

STATEMENT OF ORIGINALITY

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

Signed........ ....

Date........8. 1. 1997........

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PREAMBLE

Researching nursing, as Martha Rogers (1990) so eloquently argued, is not about examining nurses, how they learn, or what they do, any more than the study of biology is a study of biologists and what they do. Nursing's mandate is about healing work in caring moments. The focus of nursing's concern is the human–environmental energy field: the experiencing human individual who is interconnected with all that exists and all that has ever existed in the universe, affecting and being affected by everything that is. This experiencing human is at the centre of 'pure' nursing research, and from an understanding of this person, 'applied' nursing research may ponder how best to address the role of nursing, the education nurses require and the tools that they may find useful as they pursue their healing work.

This thesis describes a study undertaken in a particular community where people experienced a significant life event: a bushfire. The study examines the people, the event, the ways in which they constructed understandings and meanings of it, to 'order' it so that they could move forward in their lives. An outcome of the study is a reconstruction generated from these meanings and further informed through dialogue with multiple texts. This reconstruction is then examined for the ways in which it might inform nursing contexts and practices.

The Questions

The study examines the experiences of a particular community of people who survived the Ash Wednesday bushfires of February 1983, in a coastal area of Victoria. As a resident who has come into the town after the fires, I have looked out through my windows to a paddock where the trunks of all the trees are blackened with fire scars, and wondered how it is that people who do have a choice about where to be, would choose to remain in this place where they have experienced such trauma, and which remains as vulnerable to fire on a hot summer's day as it was in 1983. My knowledge of many of the people in this community leads me to certain constructions about the fire: what it was like on the night the fire went through; what destruction, including loss of life occurred here; and how the community went about managing its own recovery. I wondered how my constructions would compare to those of the community who went though this experience. In particular, I was interested in whether they see themselves as healed and if so, what helped them to heal; how did they make sense of and manage the experience that so disrupted their lives? Finally, I wondered what their constructions of the fire experience and their healing might offer to nursing in its mandate to healing work. These questions fascinated me then and have continued to fascinate me through the years of the study to its completion.

Situated Knowledges

The thesis commences with a prologue telling a true story of the fire from the perspective of four families from the region. It appears as a unified story, a whole, but there is no single story that tells of the Ash Wednesday bushfire. If we thought that there should be, which story would be the right one to tell? Is the right story that of the prologue, or of any particular family or individual who appears in the prologue, or the one told by way of overview and summary by newspapers? The coherence in the prologue is an illusion. Still, the impulse to narrate as Roland Barthes (1977:79) notes, is 'simply there like life itself'. It is through narrative that we share and refine our understandings; it is the link between our experiences and the ways in which we struggle to make sense of and describe that experience and the meaning that it holds for the teller. It sequences real events for someone who is listening and presumably who cares to know; a kind of text organisation. As Barthes indicates, the refusal to recognise narrative as legitimate to modern Western intellectual work is a refusal of meaning itself. Narratives however, are always versions, retelling of events from particular perspectives. As such, a narrative is never independent of the teller and of the context in which it is being told, or of the context in which the event originally occurred, so narratives tell of local contextual knowledges. In addition, the purpose or interests of the listener may well filter the narrative as much as those of the teller.

The Theoretical Framework

Narratives tell of social constructions — the ways in which people make sense of their social reality, and it is constructionism that provides the theoretical framework for this study. Various processes are enlisted to help uncover the deep understandings and meanings that people have, individually and collectively, about the fire experience, and those constructions are informed by dialogue with others who help in the creation of a new, more informed construction. In this study, the processes involved multiple dialogues: initially a dialogue with myself, then with people who experienced the fire in this region, then with the texts of a variety of scholars — philosophers, scientists and theologians who added insights to the meanings embedded in the participant narratives. The new construction that emerged from the dialogues and that is carefully woven throughout the pages of this thesis is called an ecological postmodern cosmology, and this construction is then offered in dialogue with nursing, so that constructions of nursing and healing work might in turn be enriched.

An Ecological Cosmology

Through exploring people's constructions of the time of the fire and of their subsequent recovery, a cosmological perspective emerged which tied these people to their environment of bushland and ocean. This, coupled with my own developing interest in matters ecological, led down a path that was not evident at the time of commencement of the study. In a sense, this thesis is a cosmic story told by certain people in a particular area. The story tells of how these people experienced a catastrophe, how they coped with fear, with loss and grief, and how they reconstructed their lives. The story can be unravelled and its various threads followed to their origins to reveal the fundamental ecological connections which drive and sustain these people, and which play a remarkable but unrecognised role in their health and wellbeing.

Organisation of the Thesis

The thesis is presented in ten chapters. This introduction and overview provide the bridge between the story in the prologue, which reveals the tensions experienced by the people of the area as the Ash Wednesday bushfire went through the town, and the unravelling and subsequent reconstruction of that story to reveal the greater cosmic one.

No detailed literature review on disasters commences this study, since from a constructionist perspective origins are only important in so far as they stem from experience and develop in a social milieu. They do not stem from an independent 'reality'.

Chapter One gives a description of how a significant event that happened in this community is to be examined as a piece of research. The chapter commences with some background information and locates me as the researcher in a dialogue with myself, acknowledging particular constructions of the fire experience and with a particular question that is the focus of the study. Following this, an explanation is given of the theoretical perspective of constructionism which is the paradigmatic perspective for inquiry.

Constructionism is argued as being ontologically relativistic, epistemologically subjective and interactive, and methodologically hermeneutic and dialectical (Guba 1990). From a constructionist perspective realities are multiple mental constructions which are formed and refined through social processes and interactions. The task of the inquirer is to elicit the constructions that individuals or groups hold about an event in question and juxtapose these and others dialectically in an effort to create new, more informed constructions.

Chapter one then details the processes and strategies for research, including locating the participants, outlining who the people in the study are, how they were selected, and how and why they were located initially in one of three groups: those who experienced loss; those who experienced the fire but sustained no physical loss; and the disaster workers, either present in the community or brought in to assist. The chapter then describes the processes of gathering narratives for exploring constructions, including details of the interview settings, questions asked and how ethical commitments were maintained. The data were explored in two ways: initially through a computer software package for analysing qualitative data and then manually, since problems in the computer analysis quickly became apparent. Stories are wholes, greater than the sum of their parts, and using a computer package fractured them into parts so that some of the spirit was lost. There was some benefit however, in sorting through narratives in this way and this is mentioned.

Chapter one also gives an overview of the reconstruction that was generated. This was considered important to discuss at the outset, because unless the work is overviewed in this way it may be seen as containing three separate and unconnected sections: the narratives which are the focus of chapters three and four; the reconstruction, generating the ecological postmodern cosmology which stems from meanings embedded in the narratives and develops over chapters five, six and seven; and the reconstruction of nursing contexts and practices viewed from this ecological postmodern perspective, which occurs in chapters eight, nine and ten. These are deeply connected and it was my intention to present them in brief in chapter one so as to help the reader clearly to see this.

Chapter Two explores aspects of the literature about fire, but not in the sense of a traditional literature review which might examine aspects of disaster. In a sense this chapter engages in a dialogue with texts that locate fire in Australia and in 'life event expectation' constructions of people who live outside cities in this land. The chapter commences with ancient mythological stories about the origins and uses of fire, including an explanation of the photograph that has been selected to preface this thesis. Chapter two then moves to the fire history of Aboriginal Australia from the perspective of myth and Dreamtime stories. The inclusion of Aboriginal myths and legends is considered an important element of this thesis and of the reconstructions that are generated in it. There is a recognition of Aboriginal spiritual connection to the land, and it is suggested that white Western people, in particular, have to relearn that such connectedness with the land belongs to everyone.

Chapter two then proceeds to a fire history of Australia since colonisation, with emphasis on the major catastrophic bushfires from Black Thursday 1851 to Ash Wednesday 1983. Some insight into Australia's fire history helps to explain the apparently stoic Australian attitude to bushfire, often commented on in newspaper reports and certainly evident in the constructions here. It is clear that fire is intrinsic to the land and that part of being Australian is having to come to terms with this and incorporate it into ways of life. The attitude that fire 'makes sense' and of seeing fire as natural impacts on the ways people view vulnerability and loss.

Whereas the prologue told the story of four families, in all, forty narratives of the Ash Wednesday fire were gathered. ***Chapter Three*** deconstructs the prologue and restores the individual voices narrating their experiences. Some stories are full of courage, admiration for others, and positive perspectives. Others are full of anger and bitterness. Disasters are never homogeneous in the ways in which they are experienced. The voices in chapter three are those of twenty-six residents and fourteen people loosely described as disaster relief workers, and both the residents and the relief workers explain what, for them, was entropic: what was stressful, caused energy depletion and created hurdles which they had to strive to surmount. The entropic perspective comes from a model created by Aaron Antonovsky, a medical sociologist (1979, 1987). The model is introduced here and elaborated further in the next chapter. From the perspective of entropy, constructions were grouped firstly around the actual event of the fire (the terror of evacuation and watching the fire destroy much of the town) and then around the aftermath (the losses, the destruction, and the conflict that occurred in the community). Chapter three concludes by adding text in the form of poetry which attempts to distil what, for me, seemed the essence of the entropic sequelae. The poems are written by me and are an expression of my own reconstructions after listening to these people.

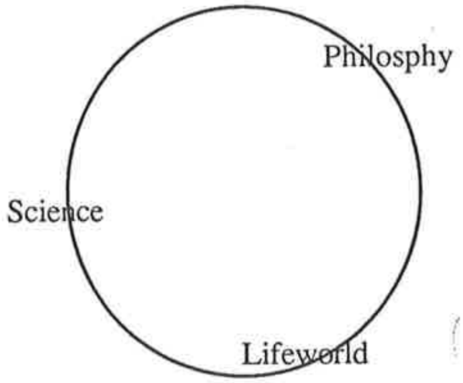
The focus then shifts to how the people in this study managed the ongoingness of their lives: how they were able to put the trauma behind them and move forward. Science explains how negative entropy (negentropy) restores energy to an open system, restoring balance and harmony. ***Chapter Four*** continues the description of the fire narratives with reconstructions around the negentropy principle. A further reconstruction commences here, also from Antonovsky, but this time around selected aspects of his salutogenic approach (1979, 1987). Such an approach examines salutary or at least neutral effects of significant life events, rather than negative, pathological ones. Salutogenesis is seen as stemming from one's sense of coherence, which is composed of three aspects: comprehensibility; manageability; and meaningfulness. Chapter four describes each of these and then presents the multiple voices of the residents and relief workers explaining what, for them, was negentropic: what restored their energy and assisted them to recover. There is a clear sense, in this chapter, that bushfire in this area is quite comprehensible. Bushfire has occurred here before and will no doubt occur again. There is a stoicism in the people of this community who chose to stay and rebuild, in so far as they construct their relationship with nature as one of connectedness, which appears to offer them a sense of order. This attitude is perceived, by them, by the media, and by me, as typically Australian.

The resources which helped the members of the resident groups to manage the event are many and include the support of their families and friends through the grief experience, and the sense of shared experience amongst those who went through the fire, although this shared experience created its own problems and this is explored here. Many other resources are identified, amongst which are humour and having fun, and feeling a shift in tension through the regreening of the environment. Locating meaning from the event for the resident groups, once again, is related back to being Australian and having a relationship with nature which occasionally does things such as devastate communities. One needs simply to learn to live with it.

Negentropy is also examined in this chapter from the perspective of the various disaster relief workers. Their words are examined firstly to locate their constructions of the community as it sought to restore energy for healing, then to explore the ways in which they tried to restore their own energy for the work that they had to do and the healing they needed to engage in afterwards. There are several interesting and sometimes contradictory features which emerge in this chapter. One is about the ways in which mental health nurses perceive their work and how it is perceived by others. Another is the difficulty that occurs when a person normally in the role of helper is thrust simultaneously into the role of victim.

Chapter four completes the exploration of the transcripts around the notions of entropy and negentropy. Antonovsky's salutogenic construction allowed the interweaving of multiple concepts to produce an explanation of how it is that people and communities can manage their world of chaos and the tensions that result from a major community trauma. The framework gives a cogent explanation for how people move forward with their lives, drawing energy from their inner core and from their environment in order to maintain health and harmony with their world. Searching through the narratives, however, it becomes clear that Antonovsky's notion of salutogenesis, whilst useful for a beginning framework, is limited in terms of incorporating all that is embedded in the narratives. From time to time throughout chapters three and four, points of contact for theoretical exploration are flagged and over the next three chapters this exploration occurs, all the time building to a new construction, not dismissing, but adding to, that offered by salutogenesis. Over these next chapters, changes in the ways in which humans have experienced their lifespace are explored from the perspective of cosmology: a dominant theme which was signalled in the narratives. These changes have arisen through philosophical contemplation and scientific discovery. Versions of cosmology, from ancient mythological perspectives to those informed by postmodern science and environmental philosophy, are the focus of chapters five, six and seven.

Dieter Steiner has an elegantly simple way of depicting these changes which is adopted for the purpose of this introduction (1993:50):



Using the images of a circle, Steiner argues that humans experience their world in three connected ways: through the lifeworld, through philosophy and through science. The development of the circle parallels the development of Western humanity through history, from the ancients to modernity and now, to postmodernity.

Chapter Five commences an exploration of Steiner's model by examining the cosmology of an ancient lifeworld where humans experienced themselves as a part of nature, subject to sacred forces which must be appeased. Whilst humans had a philosophy in that they thought enough about their world and the place of things in it to construct explanatory myths and cosmic stories, and they knew of science in so far as they could construct, create and manufacture primitive things, philosophy and science in the formal sense did not exist. The circle really closed around a lifeworld which was self referential. Myths governed how life was seen and religious rituals were intrinsic to how life was lived.

Chapter five presents some of these myths which have particularly to do with creation. Cosmogonic myths from ancient Greece, from Babylon and Assyria, from China and India are given, followed by creation myths of Aboriginal Dreamtime in Australia. The similarities in cosmological constructions are quite apparent. One of the constructions which emerges from this chapter and which becomes a leitmotif in this work is that of mythology expressing cosmological understandings about the universe as enchanted. This persists throughout the work, interrupted for a while — three or four centuries perhaps — by the construction of science as disenchanting, but argued here as a persistent human construction, stubbornly refusing to accept that science needs to be disenchanting. One of the reconstructions of this work is a version of the universe as evolving toward care and compassion in which humans are co-creators, entrusted in part with the continuation of enchantment.

As societies became more organised and people began to reflect on the nature of the world around them, philosophy, in the formal sense, began. ***Chapter Six*** engages in a dialogue, again with text, this time those (to borrow Renee Weber's (1986) term) of 'scientists and sages', following the history of cosmology and locating versions being constructed today. The chapter explores some of these early beginnings of philosophy, from the ancient Greek perspective (Thales and Anaximander) to modernity. Philosophy without connection to science was concerned with knowledge for its own sake. Early philosophy had to do with the cosmos: from whence it came and of what it was composed. Later speculation turned to the nature of humans and their place at the centre of the cosmos. The centrality given to humans and the earth was to be displaced, however, through early scientific revelation which removed the earth from the centre of the cosmos, showing it to be merely one planet among many circling the sun. The perception of humans as the pinnacle of creation remained but that too is now in the process of being deconstructed by new versions from evolutionary science and astrophysics.

The chapter explores the rise of science and moves from the excitement of discovery to the realisation of the problems of the Enlightenment inheritance. There is a dawning realisation of the destruction that is human driven and which threatens the survival not only of humankind, but of the planet and beyond: this is the disenchantment. Lyotard (1989) critiques the justification and legitimation of science and the faith it has engendered in modernity. He describes the narratives by which science is legitimated — emancipation and autonomy — arguing that it is these narratives, and the myths which have grown around them, which have lost credibility in the twentieth century. As a direct result of the critique of Enlightenment, of notions of rationality, reason and progress in a world beset with problems, a new, postmodern worldview is emerging. Postmodernity is briefly explored in chapter six, and a particular strand of postmodernism is detailed as the view which particularly informs the reconstructive work of this thesis. Throughout this chapter the history of cosmology is pursued. In a sense, the chapter provides a bridge from mythology to the postmodern. Steiner's circle has moved from the lifeworld closed in on itself, then outward to philosophy and to science. Affirmative postmodernism adds a new dimension to Steiner's circle — a new view of the lifeworld — and so the circle becomes a spiral of increasingly sophisticated reconstructions.

Chapter Seven pursues a variety of sources of theoretical insights where the fire narratives have indicated that some exploration may illuminate the work of reconstruction. The ecological postmodern perspective that develops over this chapter is a composite of Whiteheadian organic process philosophy along with aspects from postmodern science (particularly Bohm's implicate order, thermodynamics and entropy theory) and aspects from ecocentric environmental philosophy (interrelatedness and wholeness). From the constructions explored in this chapter, a shift of focus is seen, from the traditional view of the universe as made up of particles which are separate and relate to each other externally through cause and effect principles, to an ecological postmodern view of a world of processes or events, also called occasions of experience. These occasions are both internally and externally related and constituted by those relationships. This is a difficult concept, but as Birch writes, "it is the deep meaning of thinking ecologically" (1990:76). The picture of unity and wholeness of the universe that is painted in new physics is captured in a poem by Francis Thompson quoted by Birch (1990:81):

> *All things by immortal power,*
> *Near or far,*
> *Hiddenly*
> *To each other linked are,*
> *Thou canst not stir a flower*
> *Without the troubling of a star.*
> *Francis Thompson, 'The Mistress of Vision XXII'*

In this re-emerging picture, the universe is a web of interrelationships, at every level, from the giant macroscopic to the most minute sub-atomic. There are no parts that are independent of other parts and anything that affects one part of the web affects the whole. Humans are now seen as embodied in the universe and inseparable from it and everything within it: a new and yet a very old view of the lifeworld.

There is a spiritual aspect to this ecological philosophy that is inevitable when one is viewed as deeply and intrinsically related to everything else. Sally McFague argues for necessary alterations to human thinking about the sacred and the spiritual. She points out that if one considered a world clock which put time to evolution, human existence would appear at just a few minutes to midnight. In other words, the universe was unfolding for fifteen billion years before humans made an appearance, and she argues that the "whole show could scarcely have been put on for our benefit" (1992: 51). This alone, in her opinion, ought to put a brake on anthropocentrism. On the other hand, the fact that it took fifteen billion years for human life to evolve is in itself important and suggests a view of an ordering force, which some may call God, as continuing creator; that evolution is still in process and humans may be placed so as to understand that process. Humans are deconstructed as the pinnacle of creation, but reconstructed as co-creators and as active participants in the evolutionary process. This aspect of the work also signals a shift in the constructionist underpinning: a world that existed prior to humans is an entity independent of human knowledge of it — a realist view; a world of objective reality guided by an ordering force is a theistic view and when that force is immanent in all things, a pantheistic view. None of these 'fit' with the constructionist perspective as initially described, yet all are intrinsic to the affirmative postmodern view called reconstructionism. It is becoming apparent that the research paradigm view is being reconstructed at the same time as a reconstruction of the fire experience is occurring.

The constructions of many postmodern scientists, philosophers and theologians explored in chapter seven may be described as postmodern myths in so far as myths explain and instruct from the basis of what is known in the moment. An affirmative ecological postmodernist position continues to move through philosophy and postmodern science to instruct and guide the lifeworld. Following a reconstruction from the dialectic of aspects of the narratives, juxtaposing aspects from the various texts and from my own constructions, the way such a construction might inform nursing is explored.

Chapter Eight commences the part of this work that has to do with nursing, suggesting that ecological cosmology may be a leitmotif for nursing. In chapter eight the focus is on what a philosophy of nursing might look like if constructed from this ecological postmodern cosmological perspective. The chapter commences with a brief mention of Nightingale, mainly to establish the four pillars on which nursing's philosophy has traditionally been constructed: person; environment; health; and nursing. Martha Rogers' work on the science of unitary human beings (1990), illustrates the ways in which these pillars might be constructed and at the same time establishes some of the ways in which nursing has previously been conceptualised from what was at the time, amongst other disciplines, the very cutting edge of science.

Chapter eight then looks at ways in which ecological postmodern cosmology would inform a new construction of the pillars, introducing *person* as occasions of experience, unfolded from the implicate order, connected to all that is and ever has been, and evolving in quantum consciousness. *Environment* is seen as all that has unfolded and all that remains in the implicate order, with some ordering force, called here the Silent Intelligence. *Health* is a pattern in the unfolding, but is something that can be, and is, influenced positively or negatively at every level, from the sub-atomic to the psyche, and from one entity, across space, to another. There is a belief expressed in this chapter that struggle and suffering are part of the unfoldment as human, and that the path through suffering is toward wisdom and love. *Nursing* engages with the suffering of unfolded humans at moments on their journey. Nurses act as resource to others, working with both the individual and the environment in order to affect healing.

Chapter Nine continues to explore reconstructions of nursing, this time moving away from person/ environment fields to contexts and practices of care. The chapter commences with contexts in terms of places and spaces, revisiting the disrupted lifespace of the bushfire and tracing the 'loss of dwelling' through the experiences of one particular resident. The chapter then examines the ways in which nurses experienced the disrupted working space of the bushfire community and then moves to examine nursing lifespaces more broadly. There is a suggestion that nursing lifespaces are sometimes places of pain and procedure when they should and could be places of care and healing. Dossey's (1993) three eras of medicine are used to explore how lifespaces are constructed according to paradigm view and intention, and the third of his eras is posited as that which best engages with the ecological postmodern view.

From contexts the chapter turns to practices that promote healing from the paradigm view and intention laid bare in Dossey's three eras. The suggestion is made that the recent (in the Western world) constructions of energy fields and multilevelled consciousness gives a completely different scope to nursing practice than do the traditional ways in which nurses have perceived their role. Finally, chapter nine recognises that nurses are themselves open systems subject to entropic events both in their personal and professional lives. The ways in which nurses recognise and manage this determines in part how available they can be to others. A suggestion is made that there is a need for balancing, for creating 'holding environments' and for sustaining and being sustained (Karl 1992), both in the ways in which nurses manage their own struggles as well as in the ways in which they act as resource for others. The theme that winds through chapter eight is that cosmology and consciousness determine how one will construct a caring environment, the concerns that one will bring to it, the intention behind what occurs there and finally the practices themselves. From an ecological postmodern cosmology constructed to inform nursing, a philosophy, contexts and practices could be introduced that would be as far removed from traditional modernist constructions of nursing as to render these unrecognisable.

Chapter Ten is the final chapter of the thesis and is reflexive in so far as it turns the thesis back on itself to examine all of its component parts. The chapter examines the journey that I have taken as the researcher, recognising that I am embedded both in the world that I have studied and that which I have created. There is an acknowledgement here that the aspects that were selected for theoretical examination and the ways in which the reconstructions developed were directed in part through the self that is me, with my history and preferences.

The study is then summarised, pulling all of the threads together to show how the work proceeded from step to step. The constructionist paradigm is reexamined and there is comment about how, as an important part of the work, the paradigm itself evolved, from a constructionist perspective to an affirmative postmodern perspective, called here a reconstructionist view.

Finally, chapter ten considers the reconstructions as they have informed nursing, recognising the limited power of individuals to effect change and the political nature of the social world, but suggesting that this work might prove useful for nurses in practice into the new millennium. It was not the intention of the work to develop a new model or conceptual framework for nursing, although this may well be a conclusion that a reader draws. If this is truly a postmodern text, whatever constructions the reader makes are given greater legitimacy than those of the writer. There was a particular intention, a particular quest, in this work, however, and whilst the work might aim at being postmodern in the affirmative sense, researching and writing in traditionally accepted ways, for purposes of academic accreditation, combine to make this a modernist exercise, and since the aim of the exercise was to reconstruct my own constructions of the fire experience, of people–environment connections and the ways that these inform nursing, I do claim that my intention cannot be entirely discounted.

CHAPTER 1

RESEARCHING AN ECOLOGY OF HEALING: GENESIS OF AN ECOLOGICAL POSTMODERN COSMOLOGY

My own suggestion is that we tell stories — in particular, that we tell the many stories that comprise the great cosmic story. I am suggesting that this activity of cosmic storytelling is the central political and economic act of our time. B.Swimme *The Cosmic Creation Story.*

Researching the lifespace through the perspectives of people in a particular community who experienced the Ash Wednesday bushfires, juxtaposed with exploration of narratives in newspapers and other texts, and my own perspective as situated researcher, has been a fascinating journey and has led to the construction of a distinctive perspective that informs nursing as healing work in caring moments.

As the first chapter in this thesis, chapter one pulls together what might otherwise be seen as three separate components of the thesis: the fire narratives; the construction of an ecological postmodern cosmology; and the ways in which both of these inform nursing's healing work. This is done in an effort to weave, from the outset, a coherent work that moves from the 'big picture' of the prologue, to its component parts, to reconstructions and on to its conclusions. The work has been conceptualised from a constructionist perspective, which takes both the researcher and participant constructions of a phenomenon and, through reflection and dialogue, creates a reconstruction that is more informed than any that preceded it. The phenomenon of fire was considered to be a specific and bounded entity about which the community has created shared cultural understandings and meaning which can be explicated, which informs action and which, because knowledge is fluid and shifts with continued information and dialogue, may alter with time.

The gathering of constructions occurred through interviews, by participant observation and by exploring narratives presented in the media. I prefer to consider these data-gathering methods collectively as dialogue, since there is a deliberate attempt in this work to share in a participant role rather than to give an impression of the researcher as distant and uninvolved. The dialogues gave rise to the narratives from which the prologue was constructed and forms the focus of the two narrative chapters: entropy and negentropy. Following this, the work turns to the painstaking reconstruction of the embedded cosmologies of the researcher and various participants, informed by dialogues with people whom I consider also to be participants in this work: philosophers, scientists, theologians and others, although the dialogue engages with their written works rather than with themselves. The eventual construction is the detailed perspective given the title *ecological postmodern cosmology*. This is only one of countless possible reconstructions, but one which offers some interesting insights for nursing's continuing constructions of itself, for constructions of healing and for the ways that these interconnect.

In this chapter I also locate myself as the researcher with a preferred view of the world. Because chapter one becomes my voice locating my perspective and my personal involvement, I have felt free to adopt the use of the personal pronoun in this section, and from time to time, in other parts of the work.

Background to the Study

The aim of this section is to overview enough of the study to permit a comprehensible description of the perspective that has developed and then to outline how the work was approached in terms of research. It is important from the outset for the reader to identify clearly whence this perspective came and how it is relevant to the study. The perspective, which is described as an ecological postmodern cosmology, was not constructed in advance of the study. It occurred initially from the ways in which I experienced the words and the emotions of the participants, the ways in which they made sense of what had happened to them and to their community. This was explored for synchronicity with my own observations from living in this community, from my personal view of the world and my engagement with a wide range of scientific and philosophical literature. Thus it was constructed alongside the data analysis stage. It is presented as theory construction which indicates the ways in which the fire, the recovery and the meaning-making can give useful messages to healers, whether those healers are engaged in healing themselves or helping in the healing of others.

The study was conceived from my experience of living in a community that was devastated by the Ash Wednesday bushfires. In this particular area two community members died and in excess of 700 homes were destroyed. Scars of the fire remain in the black trunks of trees and in the ruins of burnt homes, where chimneys stand alone in otherwise empty clearings. In the main, the bush has regenerated and is thick around rebuilt homes. The community is bordered on three sides by forest. To the south is the ocean. Anywhere one looks, except out to sea, it is clear that this is a place that remains vulnerable to fire. Yet many of the people who were burnt out in the Ash Wednesday fire have remained. Even relatives of those who were killed in the fire remain in the community. These are not people who are bound to the place by work, family or financial commitment. Most have chosen to live in this place; many have family elsewhere and relocating was an option.

Of particular interest to me as a researcher, was to explore with various people in the community what sense they have made of the fire and its personal and community sequelae, and what they consider helped them not only to manage the 'ongoingness' of their lives after their dreadful experiences, but to rebuild and continue to live those lives in this same vulnerable place, surrounded by scars that will never entirely heal and threatened each hot summer with recurrence. I am aware that the natural environment, that is, the bushland and the ocean, play an important part in people's lives here and I was interested to explore what constructions people had about their relationship to their chosen environment and what part that played in their fire experience and understandings. Finally, I hoped that something would emerge from these explorations that would be useful to nursing: just what that might be I had no idea, but at the very least I hoped it might help prepare nurses who find themselves caring for disaster victims. I hoped moreover, that embedded within constructions I would locate ideas that would be useful to nursing's understandings of healing.

Designing the Study

I had a clear question to pursue, in that I had the intention of generating understandings about the bushfire experience and the struggle to heal, in order to see whether insights gained could inform the healing role of nurses. The generating of understanding was to be undertaken with rigour and so great deal of time was spent in exploring paradigms and methodologies in order to locate those most appropriate to the question. At the outset of this work, I had a position which shaped the ways in which I viewed the world, influenced my own development and which guided my interests. I am not a positivist. I have an interest in how people experience their world, but my interests are just as often emancipatory as they are interpretive in focus, in so far as my questions are often about how something came to be, about whose interests are served in having something shaped in a particular way, and about how it could be otherwise if the way that things are is oppressive in some way. This, for me, includes a critique of the oppression of nature and the anthropocentrism which has led to the gloomy picture of the future of earth as it is described in later chapters. Permitting myself to consider that I am not separate from my work, nor am I separate from the interests that guide me as a person, as a nurse and as a teacher, freed me to search for, and accept the perspective closest to that which guides my own life, as valid. I arrived at the constructionist approach: an approach which owes much of its genesis to the apparent stalemate of the empiricist – rationalist debate (Gergen 1985); to the work of Berger & Luckmann (1966) in constructing reality through social processes; and to Schutz' (1967) social distribution of knowledge. It owes much of its explication to the ethnomethodology of Garfinkel (1967), the study of the processes by which people produce and organise the circumstances of their lifeworld (Holstein & Gubrium 1994). Constructionism provided the 'fit' I was searching for, both for my own ways of knowing and for managing research about this local phenomenon of healing from disaster, and the desire I had to reconstruct from the various perspectives something that would be useful to nursing.

I am interested in the world of experience and, whilst I do not dare to consider there to be no ultimate reality, I consider that what we currently know, is known because our minds actively construct versions of reality. I particularly like the versions of physical and social realities expressed in ancient myth, actively constructed by minds searching to make sense of their being. I find fascination in the journey from ancient myth to postmodern versions of realities, all building on and reshaping previous versions; constructing contemporary ways of knowing. I find myself persuaded by the excitement of postmodern scientific versions of cosmogony, but I remind myself that these are based on human minds configuring information from sources that may ultimately prove no more trustworthy than those which informed Ptolemy in ancient times. Knowledge is revolutionised constantly, old ideas are discarded for new, but the new ideas are as mythic as ever the old ones were. Eventually, everything we have come to know, as Schwandt (1994) writes, has been through discursive practices. I qualify this, however, to recognise a world that existed before humans came to inhabit it. There is clearly a physical reality that exists outside human construction, so that what is constructed then from my perspective is social reality. I am also reluctant to reject the possibility of higher realms, and cannot dismiss an ordering entity of some kind merely because I have no proof. Indeed, the ancient questions of cosmogony remain as pertinent to me today as they probably do for most people, so whilst it is constructionism that is detailed in this work as the paradigm that guides the research, this is only because prior to this study I had found no other formal descriptor. At the end of the study, one of the reconstructions has been my own perspective, which has been incorporated in the ecological postmodern. What difference this constitutes will unfold as the work progresses.

The Constructionist Perspective

The theoretical framework that guides this work as a piece of research is that of constructionism, which broadly refers to how people construct their understandings of lived reality and situation-specific meanings. This is not a unified field: the constructivist approaches of Lincoln & Guba (1985), Guba & Lincoln (1994) and von Glasersfeld (1991), for example, rest on individual cognitive predispositions and processes, whereas from the perspective of the social constructionism of Gergen (1985) and Gergen & Gergen (1991) it is not individual cognitive processing so much as shared interactions through language that shape understandings and meanings. This work acknowledges, but does not seek to endorse, these perceptions of difference however, considering them to be aspects of the same process, and so the perspective is referred to under the general rubric of constructionism.

The goal of research, from a constructionist perspective, is to have concern for and to wish to understand the richly complex world of human experience from the perspective of those who are experiencing (Schwandt 1994). To research from this view is to search for the constructions that particular people in a particular place at a particular time, make about an event or a phenomenon that has occurred. This is exactly what this research aims to do. Constructionists would be interested in the meaning-making of individual minds as well as the collective generation of meaning within this particular community, as shaped by language and other social processes (Schwandt 1994).

A Constructionist Ontology

Ontological questions are concerned with assumptions about existence or being. They attempt to differentiate between what really exists as opposed to what appears to exist. From a constructionist perspective, there are varying attitudes to ontological questions: von Glasersfeld, a radical constructivist, accepts that there is an ontological reality, but argues that it is impossible to know what 'to exist' might mean, since the human mind cannot conceive of an existence without space and time and yet these are but conceptual constructs. Gergen, a social constructionist, argues an ontology that is both idealist and relativist (Schwandt 1994) in that multiple realities are socially constructed through language, so that ultimately language is the only reality that it is possible to know. Schwandt suggests that Gergen's ontological beliefs appear characteristic of those put forward by Fish (in Schwandt 1994: 127) where 'reality *is* the result of social processes accepted as normal in a specific context, and knowledge claims are intelligible and debatable only within a particular context or community'. Generally speaking, in constructionism there is no reality which is separate from the knower: no final reality as is described in the positivist tradition as 'out there' waiting to be discovered through some rational method. Constructionists are relativistic, so that reality is considered as multiple human intellectual constructions that are based on specific experiences that people have, of which they collectively make sense over time (Guba & Lincoln 1994). In other words, knowledge and truth are not discovered — they are created, and the social environment is a major determinant of the ways in which people form beliefs about reality. Considering that social environments differ considerably, the likelihood of people in different places and at different times constructing different accounts of reality is high. Goodman considers that constructions create worlds that melt into versions, and goes so far as to argue that versions making worlds in fact makes ontology 'evanescent' (1984: 29), a perspective which Fiske & Shweder (1986) call ontological nihilism. Goodman uses the term 'irrealism' to describe his view, intrinsic to which is a lack of concern for realist or idealist arguments, while embodying, on the other hand, a radical relativism that 'inquires into what makes a version right and a world well-built'.

A Constructionist Epistemology

Epistemology is concerned with the nature and derivation of knowledge, and the nature of the relationship between what can be known and the one who wants to know. Guba & Lincoln (1994) point out that a particular epistemology is constrained by ontological belief: for example, a belief in an existent reality separate to the knower would require that the inquirer take a distanced, objective and value-free stance in order to pursue that reality. The two main intellectual traditions of epistemological orientation are labelled by Gergen (1985: 269) as exogenic, where the real world exists apart from one's experience of it, and the role of knowledge is to uncover that reality; or endogenic, where knowledge depends on the human capacity to think, categorise and process information. The former stems from the thinking of empiricists such as Locke, Hume and Mill. The latter stems from Spinoza, Kant, Nietzsche and others. Gergen points out that the history of knowledge has been a series of pendulum swings from exogenic to endogenic perspectives. He writes:

> We have witnessed the conflict between Plato's pure forms of knowledge versus Aristotle's concern with the role of sensory experience; between the authority granted to experience by Bacon, Locke, and Hume versus the rational capacities granted to the mind by Descartes, Spinoza, and Kant; between the emphasis placed by Schopenhauer and Nietzsche on will and passion in the generation of knowledge, and on the attempts of the logical positivists to ground all knowledge in observables (Gergen 1985: 270).

Gergen considers that it is against such a historical backdrop that the emergence of constructionism can be understood. Rather than engage further in empiricist and rationalist schools of thought, constructionists strive to move beyond dualisms altogether and to 'place knowledge within the process of social interchange' (1985:266). Knowledge, he argues, is not about what people possess in their heads, it is something that people share together. He argues his social constructionism as explicating the processes by which people make sense of their world, and outlines a number of underpinning assumptions:

1. what we take to be experience of the world does not in itself dictate the terms by which the world is understood;
2. the terms in which the world is understood are social artefacts, products of historically situated interchanges between people;
3. the degree to which a given form of understanding prevails or is sustained across time is not fundamentally dependent on empirical validity of the perspective in question, but on the vicissitudes of social processes; and
4. forms of negotiated understanding are of critical significance in social life, as they are integrally connected with many other activities in which people engage (Gergen 1985: 266-268).

Knowledge, then, is not a product of induction nor of hypothesis generation and testing, but is the result of linguistic rendering where, as Gergen and Gergen (1991: 78) write, 'accounts of the world ... take place within shared systems of intelligibility — usually a spoken or written language ... an expression of relationships among persons' and all are social processes; shared activities. In addition, interpretations of reality are adopted, abandoned, altered as social relationships and interaction alter over time. Constructionist researchers, then, believing that meanings are co-created, necessarily take an interactive approach so that the inquirer and the subjects, whom Steier (1991) prefers to call reciprocators to emphasise both the relational and reflexive aspects of constructionist inquiry, work together in uncovering the situated meanings and recreating them together.

Constructionism Guiding Method

Once again, questions of method are driven by the beliefs in the previous dimensions, so that where the epistemological perspective is one of interactionalism and co-creation, the appropriate research processes are necessarily interactive and dialectical. In this particular study, the aim was to gain an understanding of the constructions that various individuals, including the researcher, had about the bushfire and the healing experience. The constructions available were not only those of individuals within the community, but accounts written in newspapers, photographs with narrative in historical museums, paintings, and in one instance, a piece of music, composed, memorised and played but not written. This research was undertaken, then, from the perspective of social constructionism, reflexively carried out in the understanding that, as constructions from all of these sources are juxtaposed in dialectical context, it is possible to arrive at different, more informed and sophisticated constructions and that within any of those constructions, aspects may illuminate constructions of healing and constructions of nursing .

Interactive Processes

Constructionism guides research by directing a researcher to explore the words and actions of people in an attempt to elucidate the constructions that have been built around an event — the situated meanings. Researching from a constructionist perspective is to provide a construction of the construction (Schwandt 1994). For this study, both interviews and participant observation have been employed, along with scrutiny of newspapers, community members' personal photographic collections, stories written by community members, paintings done by artists in the area and a variety of other 'texts' that exist in the community. The combination of all of these allowed deep insights into the disrupted lifespace — a view from the inside, since I am a member of this community, through an interactive though generally unstructured approach.

Denzin & Lincoln (1994) describe fieldwork research as having either an 'emic' or an 'etic' approach: the former incorporates a concern for the understandings of the people of the community rather than that of the researcher, and suggests that the researcher has a distanced stance, attempting to present the understandings of the community members in an objective way. The 'etic' stance presents only the researcher's perspective. Rather than adopting either stance, this research is cognisant of the contemporary concern for reflexivity, so that a clear attempt is made to move out to the realm of shared language to explore the situated meanings for the community members, and to bring other voices in to challenge those meanings, to inform them differently, to invite alternative perspectives and so create new meanings. Since I, as the researcher, am reflexively a part of that which I am exploring, the research activity ends up being as much a story about me as it is of others' stories about themselves, my stories about them or their stories about others, and so the final work is a co-production of new meanings. Participant observation and interview, as the main processes employed, are better described collectively in this work as dialogue, since interaction with any source of insight, be it human narratives or written text, is considered a dialectical juxtaposing of dialogues. In addition, in respect of terminology, the term *data collection* with its connotations of data as some sort of truth, 'out there' waiting to be discovered and harvested, is replaced by the phrase *gathering of narratives*, which are clearly personal constructions.

As to the perspective of my participation in this community and the relevance of adding my constructions to the dialogues, I have been resident in this community for nine of the thirteen years of healing and meaning making. Whilst I was not living in the area at the time of the Ash Wednesday bushfire, I have had a small taste of what it is to fear an oncoming fire. Just prior to Christmas 1994, a controlled burn went out of control, burning a large area just west of my home, all of it visible from my balcony. One house was destroyed and others damaged, no one was hurt. Throughout the day the dense smoke wafted over the town and the occasional sudden intense billowing of smoke and flame signalled the fact that the fire had reached some human-made structure in its path. When it was clear that this was a fire out of control, I went from room to room, selecting what should be saved. Into the car boot went important papers and photograph albums. Of great interest was just how unimportant most of the paraphernalia of daily living was when it came time to think of what to save and what to leave. The thought of leaving a huge library of precious books, music and film was painful, but the collection clearly could not be moved. A small bag with toiletries and a change of clothes for everyone were the only other things taken. The car was positioned ready for a quick departure. The bath was filled with water and towels and blankets prepared. The drill that is known to everyone in this area was familiar and quick to implement. And so I can claim to have a shared insight into the preparation for evacuation, into the fears and general insecurity and into what informs people's decisions about whether to commit to this place in the light of such omnipresent danger. Van Maanen (1988:2) writes that '[a]ccident and happenstance shapes field-worker's studies as much as planning or foresight'. In this instance there really is a first-hand sharing of what it is to live in this place and be at risk. That is why I do not claim to have engaged in 'participant observation' in the distanced sense previously described; I claim to have a legitimate inside position in this community.

Ethical Considerations

The perspective that is constructed in this work emphasises the voices of the participants but refuses completely to background that of the researcher. There is a clear purpose however in uncovering the constructions of these people in context and reducing the amount of control exerted over them as they are related in the fire narratives. Reducing control does not mean, though, that they could be presented simply as given: there were real concerns from some participants that they not be named or be recognisable. To manage the concerns of individuals and the requirements of the Ethics Committee, names and places were removed, a confidentiality clause was put into all correspondence, including the plain language statement and the consent form, and every attempt has been made to render the data and the writings anonymous. In many instances people gave specific permission for stories to be told. Some waived the confidentiality clause completely, and for those who had some concern, the troubling components of their stories were removed from the narratives. The prologue however, was constructed from what was freely given. People in these stories had no concerns about removing aspects from the transcript or changing anything. The stories are stark but not controversial. Still, as an author-ial construction, the prologue does need to be deconstructed and given back to the people and that was one of the ethical tasks of this work.

There were some interesting ethical dilemmas that occurred during the research. Of greatest concern was the anonymity of the participants, where the stories of the experiences of individuals are well known in this area. One problem which occurred repeatedly was when various residents had particularly scathing things to say about other residents, naming them and detailing situations that occurred. There was a great deal of conflict in the community after the fire, stemming from a range of complex issues and for some residents, much of the anger and resentment remains today. In the beginning I remained silent whilst a barrage of accusations were hurled at one particular person in the town. As I uncovered other constructions, however, I became aware that these accusations were often unjust and so I found myself defending this person, aware that what was being said was a construction which for that person at that time was real, but wishing to offer an opportunity for reconstruction through giving factual information. In respect of this particular person to whom so much anger was directed, no obvious alteration to constructs occurred. Either the anger was too deeply held or my accounts held no legitimacy. Whenever criticism was directed toward someone, whether harsh or mild, it was necessarily transcribed — since all transcriptions were faithful reproductions of the dialogue. I made a particular point, however, of checking whether the person wished that criticism to remain in the transcript of the conversation. Sometimes a person would smile and ask that I remove it. At other times people would react angrily, requesting it be left there because they remained as angry with that person (those persons) as on the day that the incident occurred. One person said that the criticisms could remain since there was nothing in the transcript that he had not said to the person's face.

Promises of confidentiality were necessary and yet prove difficult when in any portrayal of the work in conference settings or in publications, there is a potential for individuals to be recognised from their story, even though towns and people's names are not mentioned. It is clear, for example, that because the prologue is a true account, those involved in the wedding would be known in this area. In addition, since two people from this community died, the identities of the two written about here are clearly recognisable to those from this area. Even recognising the fire location as a coastal strip of Victoria narrows the location to a reasonably recognisable extent. At a conference (albeit interstate) where some of the prologue was recounted, an audience member either identified someone in the story or identified with the story through some similar experience, and became upset, having to leave the room. There is no way that one can prevent this sort of hurt from occurring and I wonder if this constitutes harm, especially when the prologue is written in a way that is acknowledged as powerfully moving.

There were only two people of all who were approached who did not agree to participate in the research. One was highly significant at the time of the fire and in many subsequent emergency situations which have occurred in or around this place and whilst this was disappointing, it was understandable when one considers the number of post-bushfire journalists and researchers who swarmed into the area. Indeed it was surprising that only two declined. In respect of an ethical consideration however, both of these people have authored works on the aftermath of the fire and on other disasters and since this study included the exploration of written accounts, extra care had to be taken to be sure that none of their written works were used. To have explored the written work for embedded constructions would, I considered, have been tantamount to covert research.

In the main, these concerns occurred during the research process. At the commencement it was considered that care had been taken to think through possible ethical concerns. The

University Ethics Committee approved the proposal and gave formal permission for the study to proceed subject to the usual regulations for storage and management of data.

Research Processes and Strategies

The disaster itself was not the focus of the work: rather, the aim was to discover what this community found to be helpful in healing, and then to engage in a dialectical review of their understandings with my own observations, reflections and reading, and then to reconstruct a perspective that resonated for at least some and that would prove useful for nursing into the 21st century. For that reason the work does not commence with an in depth examination of the disaster literature, except that which focuses the reader on bushfire phenomena in Australia. The decision was made to begin by going directly to the people in this community at the outset of the work, to engage in conversations about their experiences of the fire and of their recovery, and then to allow their words to direct the work. There was never any intention of deriving some meta-theory, generalisable to others, which would explain recovery from catastrophe; rather the study focussed on members of a particular community, in a particular place, at a particular time, who experienced an event that seriously disrupted their lifespace.

Locating participants was not the problem that numerous people had predicted it to be. Many people had warned me that bushfire-affected communities were tired of 'being researched' and I had certainly noted newspaper reports of journalists almost being run out of town in some instances. It appears that being a resident of the town allowed some access, but by far the most important means of entry was being a nurse. There is no doubt that doors did open because of that. Being a nurse seems to confer upon one a mysterious entrance to an intimacy not usually or easily granted to others. People felt that they had something to say to health professionals, nurses in particular, about loss and grief. Some said that had I not been a nurse they would not have been interested in being involved. There was some previous experience with researchers who *'descended upon them like locusts, after the fire'* where residents felt poorly treated at such a time of trauma.

I was aware, through my knowledge of people and of some of their experiences, that the town had divided itself into two clear groups after the fire: the 'burnts' and the 'not burnts'. This related only to residents; holiday home owners were not relevant as far as residents were concerned. I therefore made a deliberate attempt to locate people in these two groups. Some were identified through a booklet that the local writers group produced, telling stories about the fire. I was particularly concerned to locate people who would consider themselves as healed, if indeed such a sense is possible. I felt that people who had been prepared to publish their experiences may not mind speaking about them again, and also, that they had processed the events in order to write and therefore would have constructed meanings and ways of understanding that might be elicited. Letters were sent to these people, detailing the study, the types of questions being asked, and the ways in which ethical concerns were to be addressed.

A consent letter was attached so that it could be read and understood prior to any follow up. The letter was followed by a telephone call to answer questions and to give further explanations. Many of these people had friends, some of whom contacted me, asking to be included, some of whom I contacted. In addition, some people were identified by participants as having been important to them at the time, or to the town in general in its recovery, so these people were contacted and, where they agreed, they were added to the study. There was no aim to have particular numbers, but simply to be able to explore constructions of experiences from multiple perspectives. No doubt this study could have expanded forever, with each new person adding aspects that would be unique to that person but that would inform reflections on other constructions. Finally, sixteen families agreed to participate in the study.

During an early interview I was alerted to the important role that one of the local general practitioners played after the fire, and that caused me to reflect on what the addition of the health worker group could add to the study, particularly in respect of how it may inform nursing. A deliberate attempt was then made to locate those who were working in the community at the time of the fire, and also to locate, if possible, those who came in from outside to assist. Fourteen people, loosely described as disaster workers, were eventually added to the study. The participants were initially grouped as follows:

- Group One — seven families who had a loved one killed in the fire or whose homes or businesses were destroyed.

- Group two — nine families who were in the town, evacuated at the time of the fire, and who were significant in the recovery of either individuals or the town.

- Group three — fourteen people who assisted after the fire, both local health professionals and professionals sent in to the town: three community health nurses; two general medical practitioners; one psychiatrist; two mental health nurses; one child psychologist; two social workers/welfare officers; one community redevelopment officer; one Red Cross manager and one disaster services lecturer with a nursing background.

Some of the relief workers were not from this coastal area and were included for a number of reasons. The Red Cross manager, the disaster lecturer and one of the community health nurses had extensive disaster experience and had been involved in the Ash Wednesday fire in an inland community, both as workers and as victims. I considered that they could offer insights to reconstructions from both perspectives. The child psychologist was the other person from outside this community; she too has extensive post disaster experience and has much wisdom. Her contribution to constructions, particularly my own and through me then to others, was significant. All of these people then, were viewed as 'text informers'.

One local medical practitioner lost both his home and his surgery and the disaster services lecturer lost her home. The inland community health nurse was evacuated from her home and sheltered in one of the few buildings that survived the fire. In this building, the local hotel, around two hundred of the elderly, the women and children of an inland town sheltered, whilst the town's menfolk fought to stop the fire getting to that building. All of the cars in the car park were destroyed, indicating just how close the fire came to killing everyone.

As the work proceeded, it became clear that individual members of families had voices that needed to be heard, so that instead of counting families, everyone in the study was identified as having their own story. In all then, forty stories were told. In addition, by the end of the analysis, when writing up eventually commenced, it had become clear that there was no real need to separate groups one and two. The experiences of those in group two, despite not losing their home or a loved one, were deeply traumatic and it could not be said that they experienced no losses. In the end, the only separation that was made was between residents and relief workers and even then, there was a difficulty in managing the data when the relief workers were also residents and when they were both workers and victims. This problem was never quite resolved and it is evident in the final work that this group is dealt with by moving them back and forth between their various identities, and indeed it is just this reality that presented their own greatest dilemma.

Gathering the Narratives

Interviews were conducted with each participant. These were held in a place of the resident's choosing, mostly in their own homes, or in their place of work for the disaster workers. One took place in the researcher's home. Most interviews took between one and two hours, although some took considerably longer. All were audiotaped, with permission, so that the researcher could be free to concentrate on the people and their narratives. The people in groups one and two were asked to describe why they had chosen to live in this place; their experiences on the day and night of the fire; how the fire affected them; why they remained in the town after this experience; whether they feel they have recovered; who or what helped them to cope; their feelings about the recovery of the town as a whole; and whether they felt the experience of the fire had changed them — all questions searching for their constructions of the fire as a significant event and their own path to recovery. People in the third group, where they were victims, were also asked these questions. In addition, all members of the third group were asked about the role that they played after the fire, how they managed that role and what about the work was difficult and what was rewarding, so that the constructions they had about the community experience as well as their own experiences were explored.

Although I had prepared a list of questions that I called my 'prompt sheet', in the main, people did not need to be asked specific questions. Following a suggestion that they tell me their 'fire story' they tended to just talk, reliving the painful memories, more often than not with some distress. In the initial letter, it was made clear that there was no intention to create more pain by reopening old wounds and that if people felt that the fire experience would be too difficult to talk about, this would be respected. Apart from the two who declined to participate, all felt it would be manageable. At the commencement of each interview, I reiterated my concern not to cause distress, suggesting that if at any time the participant wanted to stop, he or she should feel free to say so and the interview would conclude immediately. At the times that people became upset I did offer to stop, but in every instance people asked for a moment to regain composure, sometimes surprised by the intensity of the feeling after eleven years, but all wishing to continue their story. The health professional group was as distressed as the resident group, and for many it was the first time that they had expressed personal grief, having maintained some reserve in the face of their own and others' expectations of their role behaviour.

Important to the process of exploration of constructions was some gentle questioning or commenting about aspects not in one person's narrative but strong in another's, so that there was a continual exploration of whether other ideas or information provided a 'fit' with the social reality of the person being interviewed, whether the idea added something to their construction or changed it in some way. This is an important part of working from a constructionist perspective but great care had to be taken not to interrupt the initial narrative. In addition, there were several occasions when the work was presented to groups in the community: the Uniting Church Women's Group, for example, organised a meeting to hear what I had 'found' in the research and they made a point of advertising this so that anyone who had been a participant could come. There was lively discussion at these gatherings, most of which were attended by a number of participants although others in the group were unaware of their participation in the research. It is a fact that, in relatively small communities such as this, most people belong to most groups. In these discussion groups, many new constructions were added and all contributed to the ways in which I eventually reconstructed the whole for the purposes of this work.

After each interview the tape was transcribed and returned to the participant. This was for the express purpose of having them consider what they had said, to reflect on their own constructions and to see if there was anything they wished to add, or have altered or removed for reasons of confidentiality. This proved important, since in the emotion of the interview many people said things that they were quite shocked about later, and whilst that was important for them to recognise and work with, they were most concerned to ensure that such things would not be made public in any way. This had been promised prior to the study commencing, and any such wish was complied with immediately. Each person was either visited or telephoned following receipt of the transcript, to see what follow-up was required. This was important in terms of the accuracy of the transcripts and, as mentioned, to monitor the privacy issue, but in addition it allowed the researcher to follow up each person who had become distressed to ensure that the distress did not continue and that they had a chance to talk through the fact that they had become so emotional. Every person made some comment about this, and talked it through some more. All felt that talking about the fire memories and their distress at the interview had been useful.

Exploring the Narratives

The transcripts are called *fire narratives* in this work rather than *data*. There is a sense in which data is something 'out there' waiting to be located and in which, if the methods have been rigorous enough, one will be able to locate truth. There is no suggestion in this work that what has proven meaningful for these forty people will have relevance to anyone else, anywhere else. These are local, contextual stories which are insightful only for these people, in this place, at this time, as they reflect on how they have built up their constructions of the fire recovery experience. They may, however, have some transferability value which readers may judge for themselves.

Initially, the narrative information was managed by feeding it into a computer for analysis using a software package particularly designed for qualitative data. This proved useful for locating within constructions, those themes which were similar, and those that were quite distinctive, and which may inform the constructions of others in different ways. There was a sense, however, that managing them through a computer package 'fractured' the narratives; there was a spirit in their wholeness that was lost in thematisation. During this phase, I was oblivious to the fact that I was indeed treating the narratives as data, searching for the truths to be located there, rendering rhetorical my arguments about avoiding an objectivist stance. It took a little time to realise that forcing an incompatible blending of paradigms would not work. A clear commitment in this work required that the individual voices be heard, whereas the computer package would produce themes, burying rather than emphasising the individuality of the voices. Eventually there was a compromise, with the themes being used to organise aspects of constructions which would be highlighted by individual voices. There was a need to contain the project in some way, and it was not possible to tell the full stories of forty different people; however, what each person highlighted as most important has been the basis of selecting what is written in the work. This is also an attempt, in the postmodern vein, to subdue the author-ity of the writer.

Interpreting and Reconstructing

When the stories were examined, the constructions fell initially into two clear time frames: the time of the fire and the early stressful sequelae; and the aftermath — the 'getting on' which, for most, could be seen in terms of who or what helped, how they found the strength to carry on, and what sense they made of it. Intrinsic to most stories were accounts of how a bushfire is viewed, what gave people the courage to go on and who or what helped them in their struggle. The relief worker group also recounted how they perceived the town as hurting and what they perceived as helpful. They also told of the difficulties they experienced in their roles and what they required for their own coping and healing.

Initially, constructions were organised and reconstructed around the salutogenic framework created by Aaron Antonovsky (1979, 1987) with entropy (the tendency to disorder that results from a reduction in available energy in systems) as the first construction grouping, and negative entropy (the regaining of order and harmony when energy can be restored to the system) as the second. This proved a useful separation that was meaningful in this context. The fire certainly caused disruption and people needed to find ways of gaining the energy to go on, to cope and to heal. Continued reflection on the constructions, using the salutogenic approach with its emphasis on the sense of coherence, led to uncovering complexities and nuances in the narratives, particularly in terms of the cosmological perspectives embedded in them, and from this the new detailed construction arose. Exploration of constructions of that which created tension, which drained people's energies and capacity to cope, and of that which restored energy and gave them the strength to take steps toward recovery needed to be a feature of the reconstruction and led to a consideration of systems theory, thermodynamic laws and the notion of entropy.

A constant comment made by the majority of participants had to do with the ways in which they understood and made sense of bushfire and of loss and suffering. In the main it had to do with 'being Australian'. Bushfires happen in Australia and the task is to learn to live with them, to see nature as intrinsic to themselves and as why they chose to live where they do, risk notwithstanding. There is a sense of cosmological understanding that they are a part of this environment and that what happens to them is no more nor less devastating than what happens to that environment. Indeed, in the transcripts, the pain at the devastation of nature and the joy in the regreening are some of the most powerful themes. I followed a thread that had to do with the place of humans in the universe and their relationship with nature, and this led to an exploration of cosmology and the ways in which cosmological understandings have been expressed throughout the ages, mainly through mythology — which is as prevalent in the late twentieth century as ever it was. Clearly, cosmology needed to be a feature of the reconstruction, which would in turn incorporate myth. Exploring twentieth century cosmology led to again to science, which incorporated notions of entropy as well as those about the interrelationships between all things of the universe. The emphasis on environmental connections also led to ecological notions of the universe as a vast interconnected web of relations. A search of the contemporary literature on ecocentric ecology and what may be called postmodern science, led to the discovery of process philosophy which, both explicitly and implicitly, grounds the work of philosophers, scientists and theologians writing in these areas today, many of whom call themselves affirmative or ecological postmodernists. Process philosophy and affirmative postmodernism appeared to be a fine place to connect the ecological and scientific threads. The reconstruction was starting to find shape. Interestingly, at the same time, the constructionist research paradigm was starting to be shaken by the realism and pantheism embedded within these texts.

Components of the Ecological Postmodern Perspective: An Overview

Armed with the constructions of the participants, my own constructions as a member of this community and early ideas of the threads, my task was to proceed to the literature to search for others with whom I could dialogue in creating a new inclusive construction, a coherent perspective which could inform healing work. The perspective that is overviewed here and which is constructed throughout this work is the result of the juxtaposing of those dialogues. It has multiple components, the primary focus being about relatedness, the ecological perspective which is informed by cosmology, process philosophy, science (especially notions from the so called 'new physics') and ecocentric environmental philosophy. The ecological postmodern position is that described explicitly by writers such as the philosopher and biologist Charles Birch (1990, 1993), the process philosopher David Ray Griffin (1988 a&b), the process theologian John Cobb Jr (1988), and the green political author Charlene Spretnak (1988, 1991), and implicitly by many others who are writing in the areas of affirmative postmodernism (Berry 1988; Ferre 1988), process philosophy (Haught 1984; Cobb & Griffin 1976), the so called 'new physics' (Bohm 1988; Capra 1991; Prigogine & Stengers 1984), and environmental philosophy (Mathews 1991; Sheldrake 1990), in the late twentieth century.

Myths and the Cosmological Underpinning

Because much of this work is about the ways in which humans make sense of the universe, of who they are and how they fit into the scheme of things, it is underpinned by cosmology. Cosmological belief gives purpose to existence. Mathews (1991:12) argues that orienting people to their world, indicating who they are and identifying their place in the cosmic scheme of things determines in part, what they may expect from their world, gives aspiration to their lives and creates the norms which guide their day-to-day existence. Mathews gives the example of a community with a cosmological understanding of the world as hospitable to humans. Such a community, she argues, develops a strong morale and an optimistic spirit. There is every expectation that interactions with the environment will be positive and that happiness, self-realisation and achievement are possible. The sense humans make of why catastrophic things happen and how the ongoingness is to be managed, is related to their understandings of cosmology, of purpose and meaning. Humans have struggled for millennia to locate the cosmic scheme that explains the purpose of suffering. Mathews' description of a cosmology which is hospitable to humans is attractive: it does not dismiss suffering, but it remains hopeful of positive outcomes. This is clearly the belief of some in this study.

Mythology is also a feature of this work, because for millennia people have used myth in their efforts to make sense of cosmological questions. Myths in this work are traced from very ancient sources, but are located in the postmodern world also. Myth is still used to explain how the 'Right Order of Things' is part of the 'Nature of Things' (Toulmin 1982:53). Statements of causality are as tenuous now as ever they were. Instead of Thor we now have seismology and vulcanologists, but earthquakes and volcanoes still occur; it seems that explanatory myths have simply been updated according to the knowledge that is available today. No doubt these myths will be completely outdated through another millennium.

I have selected myths from Aboriginal Australia as particularly important in this work. The bushfire story is Australian, the words of the participants frequently relate to what it is to be Australian in terms of connectedness to the land and the spirit of survival. Aboriginal mythology locates people in relation to the land as their spirit home, and this seems to be implicit in the words of many of the participants. I have developed a sense in which the Dreamtime belongs to everyone, not to engage in an intrusive raiding or appropriation of Aboriginal spiritual culture, but in the sense of Jung's notion of the collective unconscious or Bohm's Implicate Order where everything is enfolded in everything else, or even in the sense of postmodern notions of quantum consciousness. The difference, I think, may lie in how separated one is from that consciousness. Locating process philosophy was an important step in reconnecting with a consciousness of relationships and a beginning realisation that, though we may appear to be separated, when the words of the people in this study are examined, we remain intuitively connected.

Affirmative Postmodernism

This work takes the very particular perspective of affirmative postmodernism. Whilst I recognise that there are many meanings of 'post' in postmodernism and that there are probably as many versions of the postmodern as there are postmodernists, the perspective of affirmative postmodernism described by those such as Birch (1993), Ferre (1988) and Griffin (1988 a&b) is the discourse within which the reconstructive work of this study is framed. This discourse celebrates the advances achieved in modernity, but also recognises the negative aspects, particularly those identified by ecocentric environmentalists, and it seeks to transcend and revise those negative aspects by constructing new postmodern views. This postmodern perspective sees a hopeful position for the future of the universe and its inhabitants. There is also a new spiritual world view that is intrinsic to this affirmative position. Imbued with a constructionist ethos, affirmative postmodernism becomes a natural extension of my stance as researcher and certainly part of the reflexivity of this work is about my own reconstruction of constructionism, which is detailed in the final chapter. Within the affirmative postmodern discourse, scientism is rejected, but not science itself, and postmodern science is one of several contributing perspectives. Many affirmative postmodern writers such as Griffin (1988 a&b), Birch (1990, 1993), and Capra (1982, 1991) incorporate ideas such as Bohm's Implicate Order, Chaos Theory, Systems Theory, Complexity and more into their perspective, and aspects of their work are incorporated into this reconstruction.

Affirmatives, as described in this work, embrace notions of ecocentrism, of participating in a universe of interrelated beings and thus argue for the development of compassion in dealing with each other and the universe as a whole. There is some recognition of the ways in which philosophies of the East and West are so very different, with some lament for the absence of

Eastern concern and identification with nature in Western interests. Indeed there are examples of attunement with Eastern philosophy, both explicit and implicit, in the words of some of the participants in the study and it is only concern for writing from my own Western situatedness as well as concern for space in this thesis that prevented the inclusion of a detailed exploration of Eastern philosophy. It is the notion of interrelatedness and compassion for all things of and in the universe that makes the affirmative discourse so attractive to me. It is the reason why I have added the term ecological to the title of the perspective. I am not unique in this, but I came to locate others, including Charles Birch (1990), and John Cobb Jnr (1988) who use the term, long after I had clearly identified it as my own direction. It was affirming to discover their work and added to my sense that the perspective is legitimate outside of my own world.

I am aware that there are many who would criticise some of the philosophers and scientists whose thinking guides this reconstruction, as somewhat outside of 'mainstream', perhaps as belonging to a 'new age' genre, a legacy of the 1960s ‘hippy’ culture and the Age of Aquarius movement, and rife with superstition, mystery and miracles. Some analytical philosophers with whom I have spoken, for example, are scornful of what they consider to be poor philosophising (at best, absent at worst) in the work of many postmodern scientists, physicists in particular. I, too, consider this work as leaning toward the ‘new age’ which is where I situate affirmative postmodernism, but I define this ‘new age’ differently. The ‘new age’ to me is the dawning of a sense of hope, of optimism for a future that sees people as caring and compassionate toward all of the species and things of the universe. It is about health and wellbeing, about sustainability, about peace. If there are fringe elements to it, they still have to do with these basic principles and one does not have to be radical nor 'feral' to be hopeful, caring and compassionate.

Process Philosophy, the Implicate Order and Ecocentrism

Alfred North Whitehead is regarded as the philosopher from whom process philosophy originated. His ideas are enjoying a resurgence of interest in the late twentieth century, and the of resurfacing notions that have been disregarded in modernity is so characteristic of a postmodern position that it is fitting to underpin the affirmative postmodern construction of this study with his ideas. Briefly, Whitehead (1929/1978, 1933) argued that the entities of which the universe is comprised are not particles, separate and relating to each other through sequences of cause and effect, but are events or processes which are interconnected. Whitehead gave the name 'actual entities' to what he said were the ‘final real things of which the world is made up’ (1929/1978:18). In identifying them as 'final real things' he was clear that there is nothing further back, nothing more real behind them. Actual entities are never experienced other than in aggregates, each of which Whitehead calls a nexus, and within which the entities are related to each other, to other entities, and to other nexuses. From a Whiteheadian perspective, entities are momentary events. Concrete reality is a process where actual entities are constantly becoming: occasions come into being in some form and then perish, so that they have no permanent identity or history. Each moment is what Haught calls a 'throb of experience' (1984:40). Human life, indeed all of life and all events consist of a continuation of becomings and perishings. The perishing, Whitehead writes, 'is [the entity's] assumption of a new metaphysical function in the creative advance of the universe' (1933:198). The universe has simply moved on to the next actual occasion, with some imprint of the former remaining in the flow of the process. Haught elaborates, writing that in Whiteheadian metaphysics:

> the universe is made up of moments that become and then perish. These moments are linked together in various kinds of series or patterns that build up into all the various objects of our experience. But beneath the stability of these entities there are events, happenings, occasions. In short, there is process (1984:33).

As each moment perishes it does not merely vanish, but is enfolded, as past experience, into every new present moment of feeling, preserved as memory. Through this moment stored in memory the past causally influences our present. It is present, however, not only in our own experience, but also throughout cosmic reality. The bushfire is such a moment; so too are all of the experiences of death, of loss and grief and of healing. This is also explicit in the work of the theoretical physicist David Bohm.

Central to David Bohm's work is his unique concept of order, which he divides into two: the primary order, which he calls the implicate order, and the secondary, explicate order. Bohm notes that until recent times physics has been interested only in the explicate order, with its mechanistic view of entities as separate, existing independently in space and time and interacting with each other through external forces which do not alter their essential natures. Bohm contrasts this to the notion of an implicate order which he believes a more complete physics would incorporate. Where, in the explicate order, things are '*unfolded* in the sense that each thing lies only in its own particular region of space (and time) and outside the regions belonging to other things' (1980:177), in the implicate order everything is mutually enfolded. Each thing enfolds in itself all other things of the universe, which means that there is an internal relatedness between all things. When one takes a Bohmian view, one commences with the implicate order, with the unbroken wholeness and then moves to the parts which are abstracted from the whole. Once they are abstracted they may be examined as explicate order, but always internally related to all else and only 'approximately separable, stable and recurrent' (1980:179). The explicate order flows from the implicate order and is always 'secondary derivative and appropriate only in certain limited contexts' (185). The law of the implicate order is about the internal relatedness of all things, not merely about those things which are abstracted and rendered observable and measurable.

Bohm describes a universe in which he sees the unbroken movements of folding and unfolding which he calls the holomovement. He writes '[n]ot only is everything changing, but all *is* flux. That is to say, *what is* is the process of becoming itself, while all objects, events, entities, conditions, structures, etc., are forms that can be abstracted from this process' (1980:48). Where relativistic physics describes a point event as the ultimate element of the process which is reality, Bohm proposes that the fundamental element be a moment. This moment in his view, is not something that can be defined using notions of space and time, since the moment may vary according to context. He argues, for example, that 'a particular century may be a 'moment' in the history of mankind' (1980:207). All moments have particular explicate order, and all moments are related to all others in the whole, in so far as they hold all others enfolded within them.

Bohm's notion of the implicate order and the ways in which our thoughts are internally related to that which we think about, the ways in which we view nature and the universe as separate to us or internally related to us, are of vital importance. If we see the world as separate and made up of distinct parts which can be manipulated, we will see nothing wrong with a view of people as separate from each other and separate from nature, all equally manipulable. Where we develop a sense of the universe as enfolded in our very selves and we in it, we see ourselves as one with the universe and not about to harm an entity that is an intrinsic part of ourselves. From this perspective arises a love of the universe, a sense of the worth of nature that is not tied to any instrumental perspective. This is one of the pillars of ecocentric environmental belief and it is a perspective which helps to make sense of the unexpected view of some participants in the study — that their losses were not more important than the devastation of their environment.

Systems Theory, Thermodynamics and Entropy

Flood, Jackson & Keys (1989:17) define a system as 'a complex association, group or collection of related parts that operate constructively together through interactions'. All living things are open systems that can exchange matter and energy with their environment. This, in the Whiteheadian sense, includes everything within the universe. Closed systems are isolated from their environment and incapable of taking in energy and matter. From a physical cosmological perspective, the universe itself is a closed system, since by definition it has nothing to which it stands in relation.

Flew (1979:107) describes entropy as referring to the amount of energy in a closed system. The first law of thermodynamics states that energy cannot be lost or gained, although it can be transformed from one kind of energy to another. The second law states that although the total energy may not change, not all of the energy will be available to do work. Entropy measures this loss of available energy — the greater the loss the greater the entropy (Flew 1979; Dillon 1983). Ultimately, within a closed system, the energy levels will tend to even out. This state of equilibrium means that there is no free energy available for work; entropy is at the maximum. In a closed system then, entropy always tends toward maximum. If the second law of thermodynamics is correct, there is an irreversible and inevitable movement of the entire universe toward chaos.

Living organisms are all open systems. Dillon (1983) describes living systems as being like factories in that they take in products, process them and send out other products, including waste from the production process. All living systems interact with their environment, 'taking in matter, energy and information, processing those items, and extruding to the environment other forms of matter, energy, and information' (1983: 122). Whilst stimuli bombard the organism and irreversible processes do occur increasing entropy, the organism as an open system also has the ability to take in energy. This negative entropy assists the organism toward order. Through its ability to take in energy and matter from the outside, the organism can not only avoid the increase of entropy with the subsequent total disorganisation and death of the organism, but can actually increase its order and organisation, albeit in the short term.

Concepts of entropy and negentropy in open systems give one way of understanding reactions within an organism to events in the environment. Whether the event be in one's internal environment, the immediate external environment, or in the broader environment of the cosmos, events cause tension, and the ways in which that tension is managed by the open system or by those who would exert control over the open system, determines the outcome. In this study I am using the notions of entropy and negative entropy (negentropy) to describe the ways in which a catastrophe drains energy, increasing entropy and disorder. Many people — the majority, it seems — manage to stop the tendency to disorder by taking energy back in from their environment. The environment, defined in a number of ways, both narrowly and broadly, creates healing opportunities.

Summarising the Reconstruction

The ecological postmodern perspective that I have created in this work is one that recognises humans and human life as one with everything, enfolded in the implicate order. Unfoldment brings entities into being for a moment, however that moment is defined, before they then perish. On perishing there is a return to the implicate order, where all that has been remains in cosmic memory. In their unfoldment, humans are part of the network of open systems, exposed to reduction of energy through various stressors. The bushfire constituted such a stressor. The reduction in energy causes a rise in entropy and a tendency to disorder, reducible when the open system can restore energy. Actual entities are all in compassionate relationship with each other and there is a sense that energy is available from untapped sources within this connectedness. A source might be another person, but it might just as well be the regreening environment that proved to be a powerful healer in the fire narratives in this study.

If one's life is lived in a construction of aloneness, separateness and the struggle for individual survival, finding a sense of meaning in suffering and locating both the motivation to heal and the resources that will assist in recovery become difficult. Through a construction of interconnectedness, there is hope for a positive future for the world and for all within it, including humans, and there is purpose in the struggles of being human, in striving for self-realisation and fulfilment. Reconnecting with the environment, the Earth, the universe, is vital in the creation of this positive future. The imperative is to recognise just how far we have been separated from our roots, and to engage in the journey to reclaim the universe with which we are mutually enfolded. Like the significant event of the bushfire in this study, many of the experiences humans have in their unfolded 'moment' create moments of great struggle. Within our enfoldment however, lies the means to understand and manage the struggle; that is our journey.

As a part of this ecological postmodernism, I have adopted a strong sense of spiritual consciousness: a creative, ordering force which is both immanent and transcendent. This spiritual consciousness is described by Haught (1984) and by others such as Griffin in all of his texts, as a fundamental trust that the universe is ultimately caring, and that despite tragedy and suffering, the universe tends toward the power of the positive. Certainly this thesis contains stories of tragedy and suffering, but it also contains stories of courage and healing. The fire was a moment of experience. That moment perished and the new moment helped healing through regreening and the evidence that life can go on. The old moment remains enfolded forever, in the memory of those who experienced it, and enfolded in all who follow. The fire is part of the cosmological story.

An Ecological Postmodern Perspective for Nursing

This ecological postmodern reconstruction produces a perspective for nursing, considering nursing as the sharing of care and compassion between humans in healing 'moments' which come into being and perish. Briefly, there is a reconceptualisation of humans, both those caring and in need of care, as actual entities unfolded from the implicate order, uniquely patterned in their unfoldment, but remaining connected to everything else both in the implicate and the explicate order. Entities become and perish and for however long their moment is, they are open systems, experiencing, being impacted upon, responding, feeling. Sometimes they experience stressors which defy their known resources and create tension; mostly, however, resources are available that render stressors manageable. Within the moment, some events arise which result in the need for care. From the notion of the implicate order, everything that has been contributes to each life, and each life contributes to all that will be.

When a person enters the health care system, the nurse becomes a focussed component of the environment, one of the resources available to help prevent tension escalating to maximum entropy and chaos. Of course, as part of that environment, the nurse is also a potential stressor. Many of the things that nurses do create tension, in that they are invasive, cause pain, cause embarrassment and more. In addition, the nurse is an entity, unfolded from the implicate order and subject to entropic forces. The ways in which the nurse constructs and manages entropy will in turn impact on how available he or she is and how positive a resource it is possible to be in a given moment. The caring encounter itself is sometimes entropic to the nurse. The narratives of this thesis give many examples of relief work constructed as entropic and yet at the same time as negentropic, which is a good reason for separating this group of participants out from the rest. There are many suggestions in the narratives of the relief workers which point to entropic effects as they work with the aftermath of disaster. There are also many suggestions about what factors they found to be negentropic, which are useful for care workers to ponder and which are of great significance in the construction of nursing's healing work from this perspective, described more fully in chapters eight and nine.

In choosing to develop an ecological postmodern position though this work, it is clear that certain discourses are privileged over others because they present interesting pathways among the many that it is possible to travel while pondering constructions. Taking other paths is, of course, the prerogative of the reader who chooses to engage in the conversation. This work is presented as a 'construction of constructions' of an event that occurred in a particular place at a particular time. If there is depth or richness to be found in the work, others will find it and respond with their own voices and interpretations and so carry on the conversation.

The perspective that emerged from this work — and called an ecological postmodern cosmology has been outlined in this chapter and is carefully elaborated throughout the work. It is a reconstruction that emerged as a result of exploring and reflecting on the fire narratives and my own perspective and adding dialogue from various other players: philosophers, scientists and theologians. A beginning notion of it existed embedded in the narratives and in the reflections I had made about person /environment relationships in this community through being a resident here. The work was broadly classified as constructive, and this chapter has described the research process and methods from this stance.

Having established the thesis as a piece of research and as an attempt at reconstruction, the study now turns to the significant event under scrutiny — the bushfire. Australia is a land particularly prone to bushfire. In the next chapter the history of fire in Australia is explored. This sets the scene for the exploration of a particular fire in an area of Victoria and the way in which it was experienced by those involved in this study.

CHAPTER 2

WILDFIRE: THE UNCERTAIN LIFESPACE

Whatever elements led to the bush, fire integrated and accelerated, like a flask of chemicals held over a Bunsen burner. By geologic standards, the bush was a sudden invention, kindled almost instantaneously from drying Gondwanic timber and the flint of homo sharply striking the continent. However the bush defined Australia, so fire defined the bush. In ways both obvious and obscure, the land of contraries was a land of fire.

S. Pyne The burning bush: A fire history of Australia

Earth, wind, fire and water comprise the four natural elements once thought to make up the living earth. Often these elements are construed anthropomorphically as woman: sometimes gentle, sometimes violent. Earthquakes, volcanic eruptions, typhoons, cyclones, tornadoes, bushfires and floods are evidence of the violent possibilities of the natural elements, often causing massive destruction and disaster. Myths and legends surround understandings of catastrophic events, as people struggle to make sense of an overwhelming force which has rendered them powerless.

The history of wildfire disaster in Victoria, Australia is explored in this chapter. Commencing with myths and legends about the origins of fire, the chapter suggests that fire has always been a part of the land, and that fire in the land is a natural event: as some legends would have it, a gift to humans. It is only when humans inhabit vulnerable places and lose life and property as a result of out-of-control burning, that fire is seen as a disaster. Much has been learned over the years about fire behaviour and about control of fire. Such is the perception of the power of nature however, that myths remain potent. Technology may have improved and the knowledge and skill of firefighters may be vastly superior to that of days gone by, but the violent woman-fire is not always controllable. Sometimes it seems that nature has to rage in fury, destroying all in her path, cleansing the land for a new beginning; and humans, for all their learning, tremble in the path of such force.

Myths of the Origins of Fire

Fire has always held fascination for people. Wildfire is an awesome thing, and it is not hard to imagine just how much more awesome it must have been to ancient people who knew nothing of the chemistry of fire nor of how to control and use it. Rossotti describes fire as a 'beautiful, fickle, life enhancing, life-taking phenomenon' (1993:255). She finds it easy to understand why fire appeals so much to the spiritual side of human nature, why those who 'worshipped trees, rocks, heavenly bodies, and water' should also worship something as awesome as fire that raked down from the heavens in lightning.

There is a rich mythology about fire, where fire is seen as a precious gift to humans, having been bestowed upon them for warmth and nourishment by some ancient totemic being or demigod. Joseph Campbell (1987) writes about myths of the origins of fire. In one story from the Thompson River Indians of British Columbia, the trickster-hero was in the shape of a coyote who, looking south, could see light and divined that it was fire. He decided to get this fire for humans. He gathered up his fast running friends and went to the camp of the fire people to dance and sing for them. Through subterfuge they stole the fire, setting fire to a headdress during the dance and passing it along the line of friends until the coyote, last in the line, ran up a tree with it. From then on humans have been able to make fire from the wood of trees. Indians from areas far distant from this one have similar stories, each time featuring a different animal, but usually involving some sort of headdress and an animal relay to escape with the fire.

In Greek mythology, Prometheus is the fire bringer. There are many versions of the story of his locating fire, which had been withheld from the earth by a wrathful Zeus. In one story he steals it back from Zeus. In others he plucks it from the sun, or steals it from the workshop of 'the lame god of fire and metalwork' (Campbell 1987:280). Zeus is also the main character in the photograph at the commencement of this work, which is of a mosaic on the outside wall of the Metropolitan Fire Brigade in Melbourne (MFBBM 1996). This beautiful mosaic is in three panels. The first depicts Phaeton, son of Helios the Sun God who, whilst driving his father's fiery chariot across the skies, loses control and commences to plunge toward the earth. At the last moment he manages to regain control of the stampeding horses and veer away from earth, but not before starting huge fires which kill all people and vegetation upon the earth. Zeus, hearing of the devastation wrought by Phaeton, strikes him down with a bolt of lightning. In the second panel, the earth has been re-inhabited, but the people are cold and miserable and huddle together in caves. Prometheus, wanting to better their lot and increase their power, vows to give them fire, which he steals from the sun by outfoxing Zeus, the keeper of the fire. Quickly he grasps burning embers in his hands and returns to earth. Humans now have fire for warming themselves, cooking food and forging tools. At the lower right corner of the photograph the beginnings of fiery devastation can be seen. This leads to a third panel which did not fit into the photograph, but which shows Pandora, sent to Earth by Zeus with a small magical box and a mission to punish the mortals who have accepted *and made use of this stolen fire. Opening the box Pandora releases 'the miseries of* illness, greed, envy, jealousy and ... all the destructive elements of fire' depicted in the mosaic. In horror at what she has done, she closes the box, trapping the one thing left within it: hope. Now the earth 'echoes with the sounds of the dying, the screams and clamour of war as thick smoke hangs in the sky from the destructive fire that razed everything' (MFBBM 1996).

Fire is seen in myth not only as a bringer of life, warmth and growth, but as a mighty power of destruction. Rossotti (1993:240) explains that bronze images of the south Indian god, Shiva, often have him dancing in a circle of flames designed to destroy the cosmos. The Babylonian Girru embodied both the fire of the smithy for work and the fire used for sacrifice and the destruction of evil. Another, Agni, the fire god of the Hindus, had one evil face and another kind face. His three limbs represented his various forms: the sun – promoter of growth; lightning - wreaker of vengeance; and earthly fire – warming humans and carrying their prayers and aspirations via rising smoke to the gods above. Burning sacrifice and carrying prayer through smoke, it seems, was a ritual of all places and all times. Such rituals were intrinsic to ceremonies, festivals and feast occasions and to 'bless' times of change or new acquisitions. Death by fire has also been present throughout the ages, whether as ritual sacrifice of some living thing to appease or please gods, or as a tool of execution. It was seen through the Middle Ages as a particularly appropriate way to rid society of heretics and sorcerers. Untold numbers of women accused of witchcraft were burned at the stake in what was overtly a scourge of evil but in reality was a means of eliminating women of power and the taking over by men of women's knowledge, particularly of birthing and healing (Colliere 1986).

Christianity has described the flames of hell - punishment awaiting the wicked who burn forever in atonement of evil.

In modern times, many rituals involving fire remain. Bodies are cremated, initially in order to prevent further harm through mutilation by enemies, or through witchcraft; later, ostensibly to dispose of dead bodies hygienically and in a way that is more appropriate than burial in environments where land is scarce. Mythical reasons for cremation remain powerful however, and Rossotti explains that the cremation fire 'frees the spirit, which is warmed and carried upwards ...; a spirit thus well cared for would surely not wish to return to earth to haunt the living' (1993:245). Fire is still used to mark the passage of the dead: candles are used for remembrance in funeral services; candlelight vigils mark ceremonies remembering the war dead; perpetual fire burns at shrines of remembrance.

Aboriginal Myths of Fire

Mudrooroo, an Aboriginal teacher and writer, relates many legends of fire. He writes that the elements earth, water, fire and air are at the heart of many Aboriginal myths. Earth comes first, since from earth water is liberated; water is second and from water, fire must be taken; air is represented by the smoke from the fire (1994: 58). Earth and water are considered to be female and are perilous to men. Fire and air are male, although most legends tell of fire as having been stolen from women. Fire then, according to Mudrooroo, belongs to both sexes and males usually have to pass through fire in initiatory ceremonies, then to be purified by smoke.

There are many stories relating how Aboriginal people first acquired fire, learnt to control it and put it to use. Barlow (1994) writes that, in Victoria, the acquisition of fire is attributed to the fishing eagle who stole it from the water rat and the cod fish. In Western Australia it was the serpent who was hiding the fire under water but a butcher bird stole it and gave it to the people. Mudrooroo (1994) writes that the sign of gaining fire is often marked on birds and animals. Birds that are black, legend has it, were burned whilst stealing fire.

Pyne (1991) writes that all peoples have fire myths and rituals. Fires of the Aboriginal Dreaming are special, however, in their context: the ways in which the natural conditions of the environment are combined with Aboriginal imagination to explain fire and its meaning. A Rainbow Serpent myth is typical:

> In the Dreamtime when the earth was young and people had not yet come to be, lived Kunmanggur, the first ancestor. He had the form of a python. His home was in a deep pool on top of the mountain, Wagura. By day he rose from the depths of the waterhole and lay coiled in the sunshine, his scales glowing with all the colours of the rainbow. Then one day he decided to create people.

> He fashioned a *didjeridu* and when he blew on it, out came creatures and a boy and a girl. He changed himself into a man and instructed the children how to behave and sent them out to populate the world. Kunmanggur decided to live among his people. He took a wife and fathered two daughters and a son. He instructed the two daughters in the power songs, but his son, Jinamin, who displeased him, he taught nothing.
> When the daughters had grown, they set out to the camp of their mother to find husbands. Though it was forbidden, Jinamin desired them for himself, intercepted them in their journey, and forced himself upon the younger, Ngolpi. The sisters try to drive Jinamin away with magic and watch him plunge over a cliff to the rocks below. They reported what happened to Kunmanggur. Jinamin, however, did not die, and when he returned to camp, Kunmanggur welcomed him and warned him to stay away from his sisters. Then he arranged a corroboree.
>
> Kunmanggur blew his *didjeridu*. The people danced around a great bonfire. After the last dance, the fire dance, Jinamin thrust his spear into Kunmanggur. Before he fell to the ground, Kunmanggur smashed his magical didjeridu. Jinamin leaped into the sky and became a bat. Kunmanggur recovered, though his wound did not heal and he weakened daily. He taught the sacred songs. Then at a place called Toitbur, a deep pool, he announced that he would leave, and take with him fire, 'so that people will know they have done wrong.' But before the firestick disappeared under the waves, Kartpur snatched it and set the countryside ablaze so that fire could not be removed again.
> Kunmanggur sank into the water and became again the Rainbow Serpent. He fashioned stones into spirit children. Thereafter, when women wanted children, they would journey to the pool, set bushes on fire, and strike the stone figures (Allen 1975 cited in Pyne 1991:118).

In this myth, fire is eventually taken from the Rainbow Snake, and becomes the property of humans. The fire comes to represent good; the Serpent, evil - to be defeated and kept at bay by fire, unless his services are needed. Serpent myths combine with fire, incompatible but linked in a 'dialectic of life and death' not evident in fire myths of other lands. Fire had a special power, dividing the world into what was burned and what was not, with humans having the power to shape the environment, guided by the ancient Dreamtime Totemic Beings who gave them the fire in the first place.

Learning how to create fire is attributed, in some areas, to the hawk who, local legend has it, twirled one stick in a hole in a second stick, eventually causing the stick to smoulder. Adding dried grasses to the smouldering wood created flame. Amongst people of other areas it is the crane or the kangaroo rat who discovered fire making (Barlow 1994). Mudrooroo (1994) attributes fire stick learning to the Dreamtime man called Fire who was the keeper of that knowledge and taught it to others. The Aboriginal art of making fire with sticks continues to this day. Once they learned to create fire, Aborigines carried smouldering brands with them as they travelled. In this way they were able always to have fire, which they used for multiple purposes. Clearing land was one use, important since the land was vulnerable to uncontrolled bushfires commonly started by lightning. Opening up the land permitted easier travelling and encouraged growth of foliage for animals to graze upon, assisting with maintenance of food supplies. A judicious use of fire was to encourage new growth, when it was realised that some native plants will only release their seeds after they have been burned. A further use of fire was during hunting, when fire would drive animals into the open where people were waiting with spears. Through constant burning of tracts of land over time, fire sensitive trees were replaced by fire resistant trees. Fire was used to maintain, rather than to destroy, the existing vegetation. Barlow writes that 'every three or four years the Anbara people [of Arnhem Land] burned every part of their grasslands, open scrub and eucalypt woodland in their country. The fires they lit were of low intensity because dead leaves and branches had never been allowed to build up too much' (Barlow 1994:14). Areas containing edible plants were not burned; to these areas taboos were attached, with the threat that anyone violating these would have to contend with the wrath of the spirits who dwelt there. The Aboriginal people would burn wide breaks around these areas in order to protect them.

Aboriginal people believed that fire would ward off evil spirits. Those leaving their campfire at night would take a lighted fire stick to throw into the darkness in order to frighten off any evil spirits who hovered there, should they hear any strange noises. There was also a belief that fire would encourage the spirits of the dead to return to their own spirit home. Homes and belongings would be burned to sever physical relationships, encouraging spirits to leave their earthly homes and return to their spirit home.

There is a legend from Western Australia, dated around 1890, which is about using fire for protection against evil spirits:

> At Kellerburin there once stood a giant tree. The marks of where that tree fell could still be seen when the old man told his story. It must have been 150 metres tall with a trunk over 6 metres in diameter. At the top of this huge tree, evil spirits in the form of eagles built their nests. These evil spirits swooped down on young children and carried them up to the sky, and then fed them to their young. So high was the tree that the strongest hunters could not hurl their koilees (spears) up to the nests.
>
> In order to drive these eagles away they decided to burn down the tree. People from all around the country came to help. They brought with them all the wood they could carry. Even so, it took many moons before the giant tree crashed, smouldering, to the ground. The fire and smoke drove the eagles away but a jingee, or serpent, had been living in the tree. No plant or grass now grows where the tree fell and Aboriginal people do not tread there for fear that the jingee might come and harm them (Barlow 1994: 26-27).

Goudsblom (1992) writes that, in many early myths, fire was understood to be living, possessed of a spirit which could be disposed to good or to harm.

Fire has always been regarded as one of the primal elements of the world, often considered to be the magical force that could turn base metals into gold. With the rise of science, however, fire lost some of its mystique, as forces of heat and energy began to be understood. Goudsblom writes of the three radical transitions brought about by humans: the original domestication of fire; the emergence of agriculture and animal husbandry in which fire played a major role; and industrialisation in which fire also plays an integral part (1992).

played a major role; and industrialisation in which fire also plays an integral part (1992). Today fire is, in the main, harnessed and put to work. People who manage bushland areas, such as rangers who work in national parks, have learned many important lessons about fire from the Aborigines. In particular, they have learned how to use controlled burning to prevent major bushfires. Despite the lessons learned from Aboriginal peoples and from facing wildfire time and time again, the primal force of uncontrolled fire is seen in its power, somewhere in Australia, every summer. Bushfires constitute one of the recurring forces of natural disaster in Australia.

Natural Disasters

Disaster is defined as a sudden great misfortune or calamity and is derived from the Latin *astrum* or star, and therefore literally means "ill starred" (Raphael 1986). The World Health Organisation defines a disaster as 'any occurrence that causes damage, economic disruption, loss of human life and deterioration in health and the health service on a scale sufficient to warrant an extraordinary response from outside the affected area or community' (Nakajima 1991:2). According to this definition, a disaster occurs somewhere in the world almost every day. Nakajima writes that in 1988 alone there were '74 major floods, five cyclones, 11 hurricanes, 34 giant storms, 17 landslides, 17 earthquakes, 18 droughts and 162 major accidents, of a magnitude exceeding local and national capacities to cope' (1991:2). Some disasters have death and damage tolls that are beyond comprehension. Pickens cites other research conducted by the World Health Organisation indicating that, between 1960 and 1989, natural disasters affected 233 million people in China, killing 727,849 and injuring a further 425,162. In 1987, disasters struck more than 23 million people from Asia to the Americas, and in 1990 an earthquake killed 40,000 Iranian people and left another 500,000 homeless (Pickens 1992:192). Many disasters are not "natural", being precipitated in some way by humans, but many are unavoidable and the only way to manage is by preparing and by responding in the aftermath. There is nothing to indicate that disasters are diminishing in the world; indeed, with increasing industrialisation and environmental degradation, the threat of disaster is increasing.

Events such as bushfires, floods, earthquakes and cyclones highlight the power of nature and the insignificance of individuals in the light of uncontrolled and uncontrollable natural forces. People who feel safe and secure in their chosen physical environment suddenly experience vulnerability as their homes and their communities disappear in the maelstrom. A natural disaster is a devastating event in the life of a community. It is a time where immense suffering, human resilience and courage are seen every day. Natural disasters may be survived but they are not forgotten, and are often coped with because of the mutual support of people in the affected community. Communities work to provide systems and organisations to prevent and prepare for such events, and to enable healing to occur afterward.

Bushfire Disasters in Victoria

The boundaries of Victoria place it almost entirely in what American author and ecologist Stephen Pyne calls the 'great fire flume of the south east' (1991:279). In Victoria, serious fires occur frequently and although it only occupies some 3% of the entire land mass of Australia, it accounts for 'half the economic damage attributed to bushfire since European colonisation'. Noble (1977), a journalist who reported on many major bushfires including the infamous 1939 Black Friday fire, writes that the State of Victoria has acquired a reputation as having one of the most dangerous bushfire seasons in the world: over two thousand bushfires and grass fires could be expected to occur each year.

Black Thursday, February 6th 1851; Red Tuesday, February 1st 1898; Black Sunday, February 14th 1926; and Black Friday, January 13th 1939, are all significant dates in Victoria's tragic history of bushfires.

Black Thursday

On the morning of February 6th 1851, Mrs James Fenton awoke from a dream of death and terror in a world so full of darkness that candles were needed all of the time (Pyne 1991). As the day proceeded, her dream became reality. The sky darkened, the land became still. Animals behaved erratically. And then ash and burning debris started to descend on the landscape. People gazed in dread, knowing that it came from a huge fire, and fearful for those threatened by the fire. The fire was clearly catastrophic, because these people were standing on the shores of Tasmania, and the fires were not in Tasmania. 'The smoke, the blight of ash, the bizarre atmospherics, the miasma of enveloping terror had spanned the Bass Strait from the mainland. Bushfires of immense size were burning in Victoria' (Pyne 1991:221).

Black Thursday was the biggest fire in Victoria's history. Tippet, another journalist describing aspects of the fire history of Australia, describes how 'almost the entire colony was ablaze, from the South Australian border to Gippsland and from the Otways coast to the Murray River' (1983:15). Ten people died in that fire - a low toll, due to the sparse population of rural Victoria at that time. Tippet described the morning of Black Thursday as 'abnormal, sultry and breathless. The vaporous sky became lurid, darksome - awful'. The feeling was that the last day, Armageddon, had come since it appeared that the whole of Victoria was on fire at the same time. How this fire occurred simultaneously in all parts of the State is not known, the details of the fire are not recorded, and Noble writes that 'it has passed into our folklore, with stories of men and women fleeing in terror from the red monster that raced across the country, devouring all before it' (1977:7). The captain of the sailing ship *Henry Edward* noted that even though his ship was well out to sea, burning embers from the mainland set fire to the rigging.

Red Tuesday

The summer of 1897 to the summer of 1898 was called the year of the great fires, culminating in the catastrophic fire of Tuesday, February 1st 1898. These fires were connected intimately with settlement, and were blamed on forest timber workers and settlers clearing the land with fire. People moved into vulnerable areas and bark huts and other poorly constructed timber homes were situated in dense bushland. Land was partly cleared, partly timbered and parched by drought. When the fire hit, flames burned blue and did not emanate light, fierce winds swept the fire along at breakneck pace, igniting timber like 'stockpiled torches', turning trees into "flaming catapults". Pyne notes that the fire did not spread so much as leap across the landscape; 'it invaded cultivated fields, burned paddocks, ravaged the surrounding bush, devastated homesteads by the hundreds ... gutted entire districts' (1991:241-242). In particular, the Red Tuesday fire swept across South Gippsland, killing twelve people, injuring many more and destroying more than 2000 homes, schools, shops and halls. Other fires occurred in 1919 with the loss of three lives, and again in 1926 in the fire known as Black Sunday.

Black Sunday

On Sunday February 14th 1926, a series of fires climaxed into a huge conflagration that swept the State. Once again, the fires were attributed to graziers, settlers and this time, tourists. Graziers and settlers took advantage of the very dry conditions to fire the land, clearing it for stock and crops. In addition there were the small landholders who burned to clear blocks of blackberries and other weeds without concern for nearby properties, and the many campers and holiday makers who carelessly left campfires burning in vulnerable places. To this list Pyne (1991) adds tractors and other machinery, including trains with defective spark arresters, careless cigarette smokers, road gangs with their billy fires and others. All of these contributed to the events of the summer. Thirty-one people died in Victoria, and smoke from the fires spread as far away as New Zealand.

The most remarkable thing about the 1926 fires was the magnitude of the response. For the first time, people expressed the need to understand the nature of bushfire and to take organised steps both to prevent it and to fight it when it occurs. As a result of this drive, fire laws were established and people called for fire organisations to be established. Pyne writes that, although the States did not at that time proceed with such ideas, when they finally did years later, their actions were 'built on concepts and institutions crystallised on Black Sunday' (1991:272).

None of the fires previously experienced, however, prepared the people of Victoria for the fires of 1939. Noble (1977:9) writes that 'it almost seemed as if men were combining with nature to bring about a holocaust that would fundamentally change the attitude to fire as it changed thousands of square miles of the State itself for a generation'. The conditions that create the big wildfires are those of drought, soaring temperatures and high winds. Victoria in 1938 had all of these conditions. By the summer of that year, Victoria 'resembled the setting for a Greek tragedy of vast proportions' and well beyond the power of anyone to prevent or to stop.

Black Friday

In January 1939 the words Black Friday were branded forever in Australian minds and history. Conditions in Victoria at that time were very similar to those that occurred prior to the Ash Wednesday fires. Tippet painted a grim picture of creeks and springs that had ceased to run, and depleted water storages resulting in moderately sized towns facing cessation of water supply. He wrote that the forests, from the foothills to the mountain tops, were tinder dry (Tippet 1983). Fires began and blazed out of control for a week, culminating in the devastating blaze that occurred on Friday 13th January. Lightning started some fires, but as usual there was an anthropogenic litany. Pyne suggests that:

> [the] register of casual incendiarists reads like a roster of rural Australia: settlers, graziers, prospectors, splitters, mineworkers, arsonists, loggers and mill bushmen, hunters looking to drive game, fishermen hoping to open up the scrub around streams, foresters unable to contain controlled burns, bush residents seeking to ward off wildfire by protective fire, travellers and transients of all kinds. Honey gatherers lit smoking fires. Campers burned to facilitate travel through thick scrub. Locomotives threw out sparks along their tracks. A jackeroo tossed lighted matches alongside a track so his boss would know where he was. Residents hoping to be hired to fight fires, set fires (1991:310).

Pyne goes on to state that only one third of the documented fires were reported as having no known cause. Referring to this proclivity for lighting fires, when giving evidence to a Royal Commission after the fires, one bushman argued that 'the whole of the Australian race have a weakness for burning' (Pyne 1991:310).

There are tragic stories of the 1939 fire, many of which had to do with workers in remote timber mills, with modest homes at the end of tram tracks, surrounded by dense bushland. For many people in these places there was nowhere to go to safety. Some sheltered in "dugouts" but sometimes even these proved to be death traps, the battle being not for survival but for whether it would be heat, suffocation or flames that would cause death as the hot wind drove burning air into the shelter. After the fire the State paused to count the cost. Millions of hectares of forest were destroyed, farms burned, and at least six towns obliterated. Some estimates suggested more than one thousand homes had been burned, along with two hospitals, a number of guest houses and hotels. Countless people were admitted to hospitals with severe burns and many later died from their severity. The final death toll was given at seventy-one. In the history of fire in Australia, Black Friday was Australia's worst natural disaster that is, until 1983. On a Wednesday in early February 1983, now known as "Ash Wednesday", the horror of major bushfire occurred again.

Ash Wednesday

In an article headed 'Nature's Irony' two newspaper reporters[1] recall that on February 17th 1972, Melbourne, the capital of the State of Victoria, was swamped with the heaviest downpour of rain ever recorded. Widespread flooding occurred. Eleven years later, they write, Victoria is on fire. They compare these two very different situations, each of which constituted a natural disaster. February 1972 was the wettest on record ... February 1983 was the driest. On 17th February 1983, they described the State as a horrifying, smouldering disaster area of death and destruction. In the flood of 1972 there was no loss of life, but many people were injured, footpaths caved in, roofs collapsed and buildings were ruined. About the fire they wrote '[t]oday we are mourning and counting our dead by the score — brave firefighters, home-owners, holiday-makers, innocent travellers, children. All trapped by the incredibly rapid onslaught of the flames' (newspaper report).

Wednesday 16th February was Ash Wednesday, the beginning of Lent on the Christian calendar. It has now been afforded a place in Australian history for reducing much of the States of Victoria and South Australia to ashes. Just as Ash Wednesday, in the Christian sense, signifies human remembrance and celebration of temporality and life in the hereafter, so this fire stands for beginnings and perishings, change and flux, and a denial that humans are the "masters" in control.

Another newspaper reporter wrote that, on the 16th February, one hundred and eighty fires started up in various parts of the State, many deliberately lit. The Ash Wednesday fires were particularly intense because of the fuel loading, the extreme heat of the summer, and the fierce winds that were gusting at the time. By 11pm on the 16th it was reported that 20, 000 hectares of countryside had been burned. Every emergency service: police; fire; council; and the State Emergency Service was pressed into action to counter the threat. Emergency accommodation services were set up in a number of areas to cope with those thousands who were forced to evacuate their homes. The Ash Wednesday fires ravaged large areas of Victoria. The final count was reported as:

- **to the east:** 27 people dead, 15,000 ha of land destroyed and more than 230 houses lost. Some towns 80–90% destroyed.
- **to the south:** 5 people dead, 782 houses destroyed
- **to the west:** 7 people dead, 157 houses and 180 outbuildings destroyed, 6 bridges and 23,000 head of stock lost.
- **to the north:** 6 people dead, 628 houses and 20,000 ha destroyed.

(compilation of information from various newspapers, 1983).

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[1] No reporters or newspapers are appropriately referenced in the text of this work, nor do they appear in the bibliography. This is out of respect for the participants in the study who have been promised confidentiality, some of whom may be identified in particular newspapers of the day.

The fire to the east was described as equivalent to a small atomic bomb. A news reporter quoted a professor from Melbourne University's Forestry department as saying that ‘the blaze was about 30 times more intense than a normal bushfire’. He described a controllable fire as measuring around 2000 kilowatts of heat energy per metre, compared to the Ash Wednesday fire which he estimated at around 60,000 kilowatts. He compared the fire to the bomb dropped on Hiroshima (newspaper report). ‘Hell’ is how one man described that fire to newspaper reporters. ‘It was a fiery wall — you couldn't imagine anything so vicious, so mindless ... We watched houses going up, poof, poof, poof. They just went all at once.’ One newspaper described how the people of an eastern town knew that they had lost five men when the bus carrying the volunteer firemen had not returned home well beyond the time their shift was to finish. It appears that they drove into the heart of a 1000 degree fireball. The driver was found still gripping the steering wheel. ‘We heard there had been lives lost there and when the bus was so late the whole town knew what had happened ... It didn't take long for everyone to know who we weren't going to see again ... Nearly everyone who has come in here today has burst into tears.’ This from the local postmistress (newspaper report). The fire captain of that town described the men who died in that fire: ‘They were ordinary blokes just doing their duty’ (newspaper report). Six firefighters - five men and one woman from another town nearby - died when the fire overtook their tanker. ‘The whole town can't believe it. The news has shaken the whole place’, said one volunteer fireman from the same unit:

> they were the best of us all ... It's just impossible to put into words what we feel ... They were friends, they were good mates, that's all you can say ... its hard to believe we were talking and laughing together and a couple of hours later they were gone ... we trained together on Sundays, played footy and cricket together, then something like this comes along ... It makes you wonder whether it's worth sticking in the brigade — but you have to go on, if only for their sake (Newspaper report).

One of the most frightening stories to emerge from the Ash Wednesday fires has to be that told by the people of a town further inland who huddled in the town's hotel, some two hundred and fifty of them, while the fires raged around them. Journalists reported comments from people describing the fire as it entered the main street, ‘the roar of the flames and wind was horrific, like a train’. Inside the hotel, the children lay on the floor with wet towels over their heads to help them to breathe, From time to time people sang songs to help them to cope with their fear as outside, the firefighters battled huge flames that threatened to engulf the building. One local firefighter is reported as saying ‘If the hotel had gone up, the whole population of the town would have gone up with it ... we were in the middle of a holocaust. That's the only way to describe it’. Reporters wrote about the men who stood on the roof spraying water for hour after hour. About these men, one woman who was sheltering inside said ‘you've no idea how they fought it ... you've no idea’, overcome with emotion at the courage of these men who had saved the people of the town. All she could think of was ‘we were going to be burnt if it wasn't for those brave fellows outside’. She said ‘houses and shops next to and right around the hotel were in ashes'. In one of the eastern towns, a streetlight had been subjected to such violent heat that its dome was described as 'a glass tear drop about to fall'. A reporter wrote that 'it would have "cried" only metres from where a fireman was incinerated in his car'. A volunteer fireman told this reporter 'she's a two faced bitch' about the fire that had killed his friend; 'you can't bloody well tell which way she's going to go, sometimes. And I reckon that's what happened to him. People say death brings peace. But I don't know, how can there be peace in a death like that' (newspaper report).

In the areas to the west four men perished when their car was overtaken by fire and a farmer died trying to rescue stock trapped in a paddock. More than 20 people were injured, some seriously. A heart-rending story was told by a psychiatrist of a man whose wife and daughter died in the fire in an inland town. He said:

> he was one of those who lost his home and his wife and daughter in the fire in very tragic circumstances. When the fire came he was with his wife and daughter ready to sit it out. Then the wind changed and the fire moved away so he thought everything was fine. He went to the CFA station, and joined the team that went to rescue the fire truck that was burnt out and during that time he heard that the fire had come back to his area again. When he had a few moments he drove up to his home and found it burnt out, but he didn't see his wife's car there so he thought they had escaped. He went to back to the CFA station went on fighting fires until five in the morning. They had a break so he thought he'd go back and with daylight he was going to survey what he had lost. Three hundred yards away from his home he saw the burnt out car and his wife and daughter were in it (transcript 1995).

In the area of this study, 2 people died and around 700 homes were lost. Firefighters were hampered by a lack of water brought on by the failure of the power supply. The town's water is pumped into a main holding tank and the lack of power caused the pumps to fail. Tankers and other vehicles had to be raced in to carry the water needed to fight the fires. By morning it was reported that these 'beautiful holiday villages are now a house graveyard'. The same newspaper reporter wrote:

> All around me are the blackened remains of houses, funeral pyres to a thousand dreams. Brick chimneys, some still smouldering, stand like white man's middens of a Dreamtime that soured. The dead and the dying are still being counted. The homeless have their own wounds to nurse. And the nation joins in a requiem of sorrow .

Another reporter remembers the area of this study as a 'charred and smouldering wasteland' after the fire. Where lush forest and pasture land became a 'barren landscape ... [of] ashen hills, blackened trunks, rubble remains of homes and townships, burned and maimed stock, swollen rotting carcasses, decimated wildlife and a displaced and confused population. The coast' she wrote 'appeared to have melted into the sea'.

Although less acreage was burned, the Ash Wednesday fire was considered a more devastating fire than even Black Friday of 1939. As many lives were lost in the Ash Wednesday fire, despite the lessons of 1939, and the massive firefighting forces which were mobilised. Seventy-one people, including thirteen firefighters, died on that day across the two States. Even after Ash Wednesday, fires continued to burn throughout summer. Lightning caused 50 outbreaks of fire in the last week of February, and another 45 in the first week of March. Most of these fires were brought under control very quickly, but fires continued to break out until well into April. This meant that the firefighters could not relax their vigilance nor recover from their experiences. Despite all of the technology, the knowledge and the manpower, people have come to understand the awesome power of nature in fire, and that Ash Wednesday was merely the latest in 'an interminable succession of Australian holocausts ... There would be more' (Pyne 1991:412).

Despite the long and terrible history of bushfire in Australia, Australians still regard fire as a part of life and as not always an enemy. In 1988 Australia held Bi-centennial celebrations, recognising the two hundred years that had elapsed since colonisation. To mark the occasion a huge bonfire was lit at Botany Bay, the scene of the landing of the First Fleet. As this bonfire was sighted by others stationed further along the coast, they in turn lit a fire, and so on until the entire coastline of Australia was ringed by fire, marking the unification of the country. Rituals of fire continue, and somewhere between the billy fire and the bushfire, lies the history of what makes Australia unique. Within the adoption of an outback mythical symbol for a contemporary urban celebration lies the story of how Australians live with fire. As Pyne (1991:421) writes, 'fight it, flee it, substitute one fire for another. They could, within limits transfigure bushfire into bonfire. But whatever course they chose, as they shaped fire, so fire shaped them. There was Australia; there was the bush – burning, oracular, unconsumed.'

This chapter has explored some mythological origins of fire and aspects of the history of bushfire in Australia. In particular, the chapter focussed on the Ash Wednesday fire of February 1983, which underpins this thesis. The experience of the Ash Wednesday fire was the significant life event from which people in this study had to recover. Chapter three commences the accounts of the bushfire from the perspective of people in a particular community that experienced severe loss. In this chapter, the focus is on how the multiple voices talk about the entropic sequelae of the fire, how the fire created disorder in their personal lives and the life of their community. Initially, the narratives of the residents are explored; then the chapter turns to narratives of the disaster relief workers, both local health workers and those brought in to assist in the aftermath of the fire.

CHAPTER 3:

ENTROPY: DISORDERING THE LIFESPACE

It roars for days in the trackless scrub, and across,
where the ground seems clear
With a crackle and rush, like the hissing of snakes,
the fire draws near and near.
H. Lawson, The Bushfire

All around me are the blackened remains of houses, funeral pyres to a thousand dreams. Brick chimneys, some still smouldering, stand like white man's middens of a Dreamtime that soured. The dead and the dying are still being counted. The homeless have their own wounds to nurse. And the nation joins in a requiem of sorrow .
Newspaper report 1983.

The prologue at the beginning of this study told the story of four families in the region, from the lead up to the fire and through the events of the night. One purpose of telling this story was to raise awareness of the many stressful occurrences which drained people's energy and from which they had to find ways to recover. Factors which drain energy and create confusion and disturbance have been described in chapter one as entropic, and it is on the ways in which the narratives are constructed around this notion of entropy that chapter three will focus.

The prologue was a narrative from the perspective of the writer, which appeared whole, unfragmented, unified. This obscures the realities of this community by giving an impression that members perceived the event in the same ways as the writer, and indeed in the same ways as each other. The postmodern premise that what is real is heterogeneous and differentiated, means that when anything appears whole, something must have been suppressed in order to make it appear whole. The narrative of the prologue has suppressed the voices. In a sense, the collective stories were appropriated, and this was for multiple purposes. One purpose was to create a powerful tension within the reader, who will then recognise the entropic nature of the event and the steepness of the climb to recovery. The stories are not the property of the writer, however, and in order to be true to an affirmative postmodern stance, it remains now to deconstruct the totalising narrative of the prologue and return each 'small' narrative to the teller, to let the tellers' individual voices emerge, to let the narrative disintegrate, to show the confusions, the conflict and the realities through the eyes of the players in their various roles.

The purpose of this chapter, then, is to present the voices: firstly those of the residents, and then those of the disaster relief workers, as they give their interpretations of the fire narrative and the entropic sequelae experienced from the Ash Wednesday bushfire. From time to time, theoretical contact points will be flagged: these identify topics which are elaborated on later in the work. Because the participants in the study were promised confidentiality, nothing identifying particular persons or places will be given. People will be known as 'one woman' or 'a firefighter' and places will be 'coastal town' or 'further inland'. It is recognised, however, that the situations of some participants are known through media coverage, and so some will be recognisable as participants, even if particular words are not be ascribed to them. These participants have given permission for data to be presented with as much care as can be given to their privacy. Rather than give false names to the participants, given that forty people generated so much transcript data, conversational quotes will be italicised.

Stressors: Ubiquitous ... Omnipresent

The late medical sociologist Aaron Antonovsky (1979, 1987) points out that it is not the significant life event that is problematic: it is the cascade of events that result from it. The bushfire was not a stressful event. Fire just *is* – it is normal in the land. It is the series of events that occur once the fire goes through that create the tensions. Antonovsky constructed a model that he calls salutogenic: a theory of coping. His work is an example of chaos, systems theory and thermodynamics in action, albeit as Toulmin (1982) would argue, an extrapolation. Antonovsky considers that any significant life event creates tension, drains energy and results in some degree of disruption and disorder — entropy.

Stemming from *genesis* (origins) and *saluto* (health), salutogenesis is concerned with the origins of health rather than the origins of disease (Antonovsky 1979: vii). How people manage to stay healthy in the light of pervasive struggle, is what Antonovsky calls the 'great intriguing mystery' (1979:9). A major source of the salutogenic orientation is Antonovsky's belief in 'the fundamental assumption of heterostasis, disorder, and pressure toward increasing entropy as *the* prototypical characteristic of the living organism' (1987:2). The pathogenic orientation assumes that there is a 'normal, self regulatory, homeostatic process' which from time to time becomes disrupted. Models that espouse homeostasis and equilibrium in living systems are adequate to describe systems in a stable static state, but such a state does not exist in open living systems: rather, they are subject to a constant bombardment of stimuli, both positive and negative, from both their internal and external environments. There is a constant demand for change, for evolution, for differentiation. Systems Theory does not espouse homeostasis, it incorporates equally 'maintenance and change, preservation of a system and internal conflict ...' (von Bertalanffy 1968:23).

Antonovsky had for some time been pursuing research in the area of stress and adaptation. Stressors, he suggested, are demands which place a load on people and create a strain that he labels tension. There is considerable research conducted on stressors, measuring and conceptualising them, including an hypothesis offered by some stress researchers (Antonovsky 1987: xii) that low levels of life stressor experiences explain health, or at least movement toward the "ease" end of the health ease – dis/ease continuum. Many agree that reducing or removing stressors moves people toward the ease end. Antonovsky argues that this is not so. Stressors, he argues, are 'ubiquitous ... omnipresent in human existence' (1979:10). Humans experience stressors in all phases of their life span and in all domains: physical, emotional, sociocultural and spiritual. In addition, low-level stressor experience does not explain the findings that many people who have led lives of great hardship can be healthy in all domains. Stressors, therefore, need not necessarily be perceived as negative, nor need they inevitably lead to stress. They do, however, create a state of tension. Differentiating between tension, the response of the organism to stressors and stress, which is the state of the organism resulting from the failure to manage tension and to overcome stressors, is vital to understanding the salutogenic model. Tension, Antonovsky argues, may be salutary; stress, on the other hand, is related to dis-ease (1979:10). Antonovsky claims that barring stressors which are so powerful that they overcome any attempt at resistance and directly destroy the person, people's health outcomes are entirely unpredictable (1987: xii). Some people will succumb to the tension produced by the stressor and experience some sort of pathology; others may remain unchanged; yet others may experience some salutary effect, that is, some benefit.

There were many stressors creating tensions for the residents of the community under study. The entropic experiences of the participants have similarities and differences, and are clearly divided into a time sequence. This is not to say that there was an actual experience of linear time; indeed, those who had a close encounter with the fire on the night of Ash Wednesday recount a weird feeling of timelessness, described by one man as *'time standing still'* or as a woman said, *'it was as if we were in a dream, it was quite peculiar. I couldn't explain it to people'*. This interruption to ordinary notions of the continuities of time is a particularly postmodern construction and occurs frequently in the fire narratives.

Ash Wednesday: Entropy and the Resident Group

Stories were told about preparing to evacuate, sheltering from the firestorm and about the immediate aftermath of the fire. Some of these stories were told in the prologue, but many powerful stories are absent due to space limitations. Those that are recounted here are of personal loss, as well as the broader loss experienced by the community as a whole. Others had to do with anguish for friends and for the devastation of the environment, and were predominantly about the bushland environment and animals.

Preparing to Evacuate

Some began preparations to leave, gathering pets and belongings and moving livestock closer to the house for safety. Others packed up and left the area with the early warnings. Some of these had nowhere to go, and were moved on from each town they went to as the fire raced on. A woman who normally considered herself to be capable and efficient spoke of the panic that engulfed her as the fire drew near and she recognised that she had to leave her home. She got to her son's farm where she found her son away fighting the fire and her daughter-in-law moving the wood heap away from the house. This daughter-in-law had sealed the windows, prepared and packed food, drink and spare clothing for herself and her two children who were with her, and had left notes on the windows and on the gate for anyone who came, to say where they were going. The woman said of her daughter-in-law *'she did a remarkable job for a city girl who had never experienced a fire'*. Somehow, the fact that this woman was from the city but had remained cool and collected, highlighted even more her own inability to feel in control. It seems that this woman has a construction of country women as practical, sensible, capable people who cope smoothly with the unpredictable, and of city women as different. Being out of control did not fit with her construction and left her adrift.

Other people waited until the police came with calls for them to evacuate immediately. By then the roads out of town were cut and the only place to go with any safety was to the river or to the beach. Reluctance to go was often due to the absence of a family member: children playing with friends elsewhere; others fighting the fire or out with ambulances – separation was a major tension. One told of the difficulties of getting people to the waterline, *'my parents-in-law were incapacitated at the time'*, people helped carry wheelchairs onto the sand. It was a long night on the beach watching the fire engulf the town. Not everyone who tried to evacuate managed to get to safety. In one area further along the coast, four men in one car and a mother and her young daughter in another perished when their cars were overtaken by fire. A farmer died trying to rescue stock trapped in a paddock.

Sheltering from the Firestorm

The prologue told the story of those sheltering on the beach: the contradictory instructions; the sights and sounds of helicopters landing and taking off, and water tankers and fire trucks constantly racing past adding to the terror. People watched as the fire raced across the ridge. One woman said:

> *We sat on the beach with the loudspeaker saying please move the old people from the rocks down towards the sea because when the fire comes across that area it will drop hot ash. They hadn't realised that the tide had come in by this time so there was nowhere to go. We sat there and looked up on this hill; you could see things exploding and you kept thinking I wonder if that is our house.*

The scene at the river and beach on the night of the fire was portrayed by many people as really strange: there were dogs, cats, birds, horses and even a cow on the beach and there was not one animal fight for the whole night. Animals that normally might be aggressive to each other showed no aggression whatsoever. It seemed that they had this common fear of what was happening around them and they went with the crowd for comfort. That people tried hard to save animals, and that animals – both pets and wildlife sought the company of humans, is significant since this work identifies human – non human relationships as fundamental in the universe.

The Aftermath

After the fire had moved on and people returned to their homes, losses started to be counted and the cascade of tensions commenced. For a time everyone had a shared sense of time disruption, and of shock and disbelief. Then, the town quickly divided itself into the "burnts" and the "not burnts". Emotion ran high and it was often hard for the members of one group clearly to see the situation of the other.

Residents were deeply distressed about the loss of human life; generally, however, people spoke more of the loss of animal life than of human life. Some explained this by suggesting that those humans killed, in the main, had opportunities to escape but chose not to. There was some feeling of anger at what was perceived as poor decision making and unnecessary risk taking by those who died, but also a sense that danger *'goes with the territory'* and that it could have been anyone. This was the first sign of the construction of fire as intrinsic to the land, and of humans as not at all the "all powerful" beings that their behaviour would sometimes indicate. People who lost a loved one spoke a little of the loss: more in telling the story of how they died, and then their focus turned to how they struggled through the days and years after that. The stories of the two men who died in this area have been told in the prologue. These stories are true to those told by members of their families. After loss of life, attention was directed to loss of homes, businesses and personal possessions, and to the devastation of the environment.

Loss of Homes and Possessions

There was no rhyme nor reason about what was lost and what remained. A brick home burnt and two wooden homes on either side were unscarred. People described how the local council cleared the rubbish for rebuilding. One man shook his head in amazement as he said *'two scoops of a front end loader. That's all that was left. Two scoops was this entire house and contents!'* How does one reconcile a special dwelling place, filled with a lifetime of memories, reduced to such minutiae? From a construction of this place as vulnerable, people had attempted to build homes that would be bushfire-proof. One family built an aluminium house. A neighbour explained how it had melted and run down the drive in little rivulets and solidified, and when the owner came back he just *'sort of picked up his house, like garden stakes and stacked them in the corner of the block'*. Some did not lose all of their homes but sufficient damage was done for people to feel pain. One woman said *'the verandahs went. My studio was just bowed out like that, it sort of exploded.'* She remembered her husband going round shifting the remains; he'd built the studio, verandahs and the fences out the back, and he said *'it's taken every blasted thing I've done here'*. This was not an uncommon reaction amongst men in the area. Builders, for example, talked about how many homes that they had constructed had burned. There was a sense that their proud contribution to a thriving town had been destroyed.

People spoke of how wrenching it was to witness the grief of others. One woman said that her friends, who were sisters, both had their homes destroyed. She drove by the property and saw one of these women standing out the front with three little balls in her hand from a clock, and she said, *'that's all I've got left of it'*. Many stories were told of stunned owners sifting through ashes in an effort to find anything remaining of their possessions. A newspaper reporter described one woman with tears pouring down her face as she searched for her engagement ring. She said *'I only took it off the other night and put it on a bench in the kitchen. It's the only thing I want to find'* (newspaper report). A woman who had lost everything said that she could remember needing to ring somebody but didn't have any money. She said *'I went into the butcher and started to say ... can I use the phone or borrow, can you lend me 30 cents and off I went again ... crying ...'* Then she had to face up to what she called a really hard lesson: to accept handouts, second-hand things, something they had never had to do before. She said that a friend helped her to understand that everything there had been given with love and she had to accept it in the same way. She added that she thought that the men had more difficulty in accepting help than did the women, and that generally, women had each other to lean on, and that made it a lot easier: an indication of the constructions of gender roles and ideas about men's friendships, where men tend not to lean on each other in raw emotion. It was a very strange thing for many people, first to accept having nothing, and then having to accept handouts, people's kindness. It was, for this particular woman, so very difficult.

Whilst many lamented the loss of possessions, particularly irreplaceable photographs, some were also pragmatic, saying *'really possessions don't mean anything at a time like this. You count your fingers and toes. We've still got them.'* Some became irritated with those who grieved for "“Things”. One woman said:

> *What is really important after all, people got distraught over the most stupid things. And I thought god you've come through depressions and wars and you're that tough generation and you know, a miserable bush fire that's done damage to your very wealthy houses, and they were much more upset than people with children. But I think people with children have got their values a little bit ... when you've got little kids you know, your order of important things in the world are very clear and you don't have much option. I mean if you're kids are happy and safe and well everything else looks pretty minor.*

This also alludes to notions of role constructions of coping and getting on with it, but also introduces constructions about values and about relationships versus connections to “things”.

Loss of animals and the environment

People in all groups spoke of loss of animals, pets and wildlife. People spoke of finding the bodies of their pets, dogs, horses and birds. A woman told of her husband's attempts to save her horses: it had a very sad ending. She said:

> *My husband and his friends brought my horses from further down the coast up to here. They came all the way down from grassy creek along the main road. I had another horse up here that I was training and he put them with her. They would have been killed wherever, but one horse was staggering around the next morning. That was horrible going to the paddock and just walking through it and it was really quiet. I noticed the gates were locked. Nobody had even thought of opening the gates and letting them escape and take the chance. The little mare that I'd been riding that morning ... I walked through the paddock and it was dead quiet and I heard her call out. She was really badly burnt and blinded and in a terrible mess. And she found me and sort of came up and it was pretty dreadful. I was in tears I just walked around a little bit and saw legs sticking up and I didn't go and see the horses, the other two, because it was quiet and I saw enough. My friends and my husband buried them.*

The injured horse did survive with careful nursing. The veterinarian wanted to destroy her, but the owner would not hear of it. She said, *'No way. I've lost the house, everything I own, my clothes, everything else, God, at least I'll have one shot at saving one horse, you know? That might sort of keep me ...'* She saved that horse. She found it odd that people would sympathise with her about the loss of her home and her possessions when all she cared about were her horses. She was another who had no sympathy for people who mourn for “things”. There were others, the woman who lost her studio and all of her art works, said she felt:

> *... a terrible heaviness, a sadness for the bush and the birds. We used to go up the back and take bread and green stuff for the birds and anything that was left living. I believe there was a 'roo down there because we saw the tracks. It was probably burnt. I found lots of roos crouched, like parchment, just as they'd died and a flock of wild geese in a hollow where they'd sheltered.*

Grief for her own losses came later, but was never as profound as her grief for the losses in the environment, and these aspects of deep grief for animals and for the natural environment gave the first hints of cosmology at work: a belief in a universe where humans are part of, rather than superior to, nature, which appears throughout the fire narratives. This woman told of walks that she had always taken through the bushland, with her dogs. The council was taking the rubble of burned homes away and they had made a circle road around up into the bush to a new tip and down again. It was a one-way road for the big trucks. She described how she would go the wrong way, deliberately refusing to comply with the one-way sign and thinking, how dare they! She found herself often acting out in anger. What really hurt her was that the bushland, the subject of all of her art work had gone, and so had all of the art work, there was no bush and there were no paintings to look at to remember what it had been like. She also said that people who came to sight-see angered her tremendously, a sentiment expressed also by many others. One day, her rage at these sightseers boiled over and she took a large stone and threw it at a passing car. She hated what had happened to her beloved place.

Many animals, pets, farm animals and wildlife, wandered dazed and burnt; the animal welfare people put down countless numbers. For many people, the absence of birds was dreadful. This is an area usually filled with the calls of magpies, cockatoos, galahs, many varieties of parrots and kookaburras. Many had flown out to sea, where they became exhausted. Fishermen reported hundreds of dead birds floating off the coast.

Guilt; Resentment; Anger ... and Grief

Loss and grief were felt by those whose homes were gone. For others, the emotions of guilt, resentment and anger were the most commonly described reactions. Some stemmed from conflict that was already present in the community, others were engendered as a direct result of the fire experience. In addition, people in the "burnt" group needed to be together, needed to be with people who shared their experience. This split long-term friendships and created space for other emotions to flourish. The disaster relief workers, especially the mental health workers, the social workers, welfare officers and the community redevelopment officer who were sent in to this area to help in the aftermath of the fire, quickly became aware of the heightened emotional tensions, sometimes because they bore the brunt of them. They were often able to help people to see the psychology behind their emotion and they were often able to defuse situations.

One emotion that is seldom located in the disaster literature, but which was clearly evident in this area, was the resentment that women felt at having to make huge decisions about what to take, when and where to go, and saving children and possessions alone. This emotion had to be channelled somehow, when the reason for their being alone was because the men were out fighting the fire or out with ambulances. In these circumstances, even though they felt angry, to express it would be impossible because the anger was *'really unreasonable'*. Where women could express anger was when the men were out helping a friend rather than fighting fires, as in the case of one man helping another to move horses whilst his wife was struggling to relocate herself, his aged parents and her small children. In this case, anger was seen to be legitimate. Relief workers came across this problem of role conflict often. A community health nurse knew of some women in an inland town who were firefighters, who were out on the fire trucks fighting fires and not available to evacuate their families or to support them after their homes were burnt. This nurse also recognised the trauma for men, when they were doing what the community expected of them: going out to fight the fires, when they would have preferred to be taking their loved ones to safety. For many of the men, their greatest trauma had to do with spending the night fighting fires without any idea where their families were, or whether they had survived the fire. On the other hand, another nurse told of the deep shame and guilt that she and her husband still feel to this day - that they left the area: that they, two young and fit people chose to go, leaving others to save their home. Given the many times that role expectations have been mentioned, even in these few pages, it seems that the social construction of roles create expectations that, in unusual situations, are as difficult when one complies with them, as when one does not.

The primary emotion experienced by those whose homes were saved was guilt. The words of one woman represented the majority of those whose homes did not burn when she said *'I felt I should have suffered more, I barely had a friend with a house'* Guilt so affected one woman, whose home was not burnt but was badly smoke and ash damaged, that she felt unable to claim on her insurance policy. She felt that she would not put any more drain on the insurance companies so that those really in need could get whatever money was available. Many people argued with her, but she replied that it was a contribution she could make, an atonement for not losing her home too.

Some of those whose homes remained offered to take in others who were rebuilding their homes. This created its own cascade of tensions when those people stayed and stayed. The community redevelopment officer spoke of some resentment that was felt by people, and he highlighted how difficult it was to express because it flew in the face of great generosity. He described the problem from the perspective of the one who has offered to share a home as:

> *I've got a house and you haven't and so come and live with me, and then within a few weeks it would be Christ my house is never empty, Christ I can never get a hot shower, Christ the house is always filthy or why don't you bastards get your own house, it's not my fault you got burnt out.*

The language he used expressed the way he saw the intensity of this feeling in the community. A similar story was told by a social worker, about the experiences of one family who offered the caravan in their back yard to another family. She said:

> *I suppose they did that because they felt guilty or they felt they had something to give and they couldn't let this family be out there with nowhere to be. But it was ten or eleven months and there were these two families with kids from early teenage and down, so of course there were squabbles and competition. Nine people: one shower and one toilet and one kitchen. The two women had to sort of share the cooking arrangements ... The family that were helped say 'they are our*

> *best friends' and really expressed appreciation: 'we wouldn't have managed without them' and still see them a lot. But the family that provided it say 'whew, gee I'm glad they're not here any more' and 'yes they're nice people, but ...' and looking back they say it was a dreadful time.*

The problems were not unilateral: those who moved in experienced problems with privacy that had a different edge to that experienced by the home owner. The "victims" longed for a place where they could be alone with their grief in private without having to put on a face, particularly a grateful face, for those who were helping them. This last point was eloquently expressed by a woman who said, *'At times I was so desperate for somewhere of my own. I felt like an animal that wanted to curl up in its den'*. It seems that notions of space and place, particularly where and how one dwells in the lifespace, are vitally important to wellbeing, and this is clearly an important enough notion to warrant further exploration later.

The guilt that people experienced often turned to resentment at the fine new homes that were built from a combination of insurance and Government relief monies. The woman whose husband died trying to save their home, spoke of going to a luncheon at the home of another couple. They had invited other friends and one who didn't know her circumstances, other than that her home had burnt, said *'well you've all got nice new homes'*. This woman refrained from an angry reply out of respect for her hosts, but she felt a deep anger at the trivialisation of her profound losses. She went on to say that this was the only time such a thing had occurred to her, although she was aware that it did occur to others from time to time. She expressed sadness that people would feel guilt or resentment. She also said that when her home was rebuilt, she, like many others in her situation found that nothing was or could ever be, the same. She, like many others, found that the bright new home had no soul. Her old home had grown 'like topsy' and was filled with the laughter of her children, the memories she had shared with her husband, the comfortable at-homeness that a well-loved place has; the new home had none of this - it was simply somewhere to be.

Anger flared over so many things. One of the mental health nurses said that he could remember anger being directed to the fire chief. He said he was *'copping it from all angles for about two weeks, about decisions that could have been better, it was all the 'what if' sort of stuff.'* He said that he and his colleagues made a point of telling quite a few people that this anger is not about fault, this is just people expressing how they're feeling. He urged those on the receiving end to see it as that. Anger flared when people scavenged bricks or lead from the tip, or when others came offering to buy property cheaply. People became angry when shop owners who promised assistance put out shoddy goods. In addition, one shop required that people spent the full value of the voucher they were given at one time. This was particularly difficult for women with small children, traumatised and trying to cope with making decisions about all that they needed in one visit. One of the women who had been burnt out, but who was managing relief activities, mentioned this to the Salvation Army who moved in to change the situation.

Anger was directed to unhelpful insurance companies, although these were few, at least in this area, and to the greed of those who were not affected but who collected money and goods available to victims. Often the outreach workers were called on to intervene in such situations. The community redevelopment officer had many anecdotes that space unfortunately precludes telling, and a point made by other outreach workers was that they were not all as capable of the 'strong arm tactics' that the redevelopment officer, a strongly assertive man, found successful; they often had a much harder task to ensure that people were treated justly. There is an interesting dualism in here, of relationships where some people can be helpful and compassionate, whilst others are uncaring and self-serving and one wonders how such opposites in behaviour could exist, how it is that people could deliberately create even more pain for people at such a time.

An anger that was deep in some people and that has lasted through time to the present was directed to the conservationists in the towns, and this was an interesting dialectic, given the deep environmental connections that exist simultaneously in the narratives. Some people to whom anger was directed were members of formal conservation organisations; others were self confessed "greenies", whose love of trees and an unwillingness to prune or lop left neighbours feeling vulnerable. One angry woman said *'you can't take a tree down on your own land without permission'* - an assertion that, on the advice of the local council, proved to be incorrect. Her anger stemmed from what she considered to be an unbalanced approach and this was and still is, the opinion of a great many people in the community. Most people consider themselves lovers of the bushland: they do not wantonly destroy, but they believe that priorities have to be set in terms of fire prevention: slashing, clearing and preventative burning, in order to protect the people of the town. Of the conservationists in the town this same woman said *'they kept a very low profile after the bushfire – they did not come out of their hidey holes for quite a long time'*. This was mainly directed at one particular woman, the leading conservationist in the area, who bore the brunt of people's anger at the time, and from then on until her recent death. This was another inaccurate version of events. Whilst she was a powerful woman and did influence what the shire was able to do in prevention work, she worked tirelessly after the fires, planning revegetation approaches with the shire. She also worked with scientists who came in to research the effects of fire on the land, discovered and recorded the growth of rare plants that only emerged after the fires, and helped countless people to have faith that their bushland would return. She was responsible for much of the hope that lifted the spirits of the people, albeit without this being recognised locally. It was recognised further afield, however, and she was eventually decorated for her work after the Ash Wednesday bushfire.

The anger expressed toward the conservationists came from the many people who felt vulnerable in this area, and there is truth in the assertion that the *'greenies have taken over the town and won't allow the burning off'* that used to be done in the surrounding areas as a fire safety precaution. It is more than this however: there are many people who do not clear their own properties, either because they are holiday-home owners who do not have the concern for the town that residents have, or they refuse to clear their blocks because of their deep ecological commitments to the land, believing that the bush does not exist for humans and should not be moulded around human need. This is another theme to be examined in some detail later. The point is made by one man who said, *'it wasn't only my house. If my house had've gone, all the houses around me would have gone too, because none of them had proper fire protection. Around us it was a jungle and I was tired of telling people to clean up their back yards'*. This same man told of a neighbour whose home had burned in the fire. Later the trees grew back over his house and when he was asked why he hadn't trimmed them, answered *'I like the trees'*. He said *'if the house goes again, it goes'*. There is a sense in which this exemplifies an instrumental relationship with nature, but there is a great deal of evidence in the narratives of an ecocentric view which adds to the cosmological perspective that appears embedded in the narratives of some residents, and which will be explored further as this work proceeds.

On probing, it emerged that what really angers these people is that the town's sons, fathers and husbands are put at risk. People who do not take steps to prepare their properties endanger the firefighters. The firefighters are all local people who care about each other and who battle courageously to save lives and homes. One woman, whose sons were out fighting the fire, wept as she recalled how, in the dense smoke, the fire truck being driven by one of her sons, ran over a young man. He was not badly hurt, but she suffered for her son who was so young, and had to live with this memory. She spoke passionately about the courage of the men out fighting the Ash Wednesday fire. She said *'I think on that night, those kids grew up'*, another example of disrupting modernist notions of time, *'they confronted something they had no control over. They had been taught to fight fires, but there was no way, when houses were exploding, that they could do anything. They just had to get out'*. This is the fear that sparks the anger and it creates a discordance for those who dearly love the environment but whose loved ones come first. This is the fundamental ontological conflict with which this community lives.

Entropy and the Relief Workers

Some events and tensions that have been described thus far were manageable for most people; but for others, individuals and the community needed support, some of which was already available within the town, through Red Cross and other organisations. General practitioners and community health nurses maintained services, State and local governments acted quickly to send in relief workers and hospitals sent teams of staff to assist. Because of the ways in which they worked with the community, many of these people gained a broad sense of the suffering experienced by the residents. Some of the stressors that they saw were not mentioned by residents, so that there appear to be some discrepancies between what the two groups perceived as problematic. In addition, the nature of their work led the relief worker group to experience high levels of personal tension. All of the services were valuable, all contributed much to the recovery, but many introduced new problems to the town, and just how effective some of these were has been debated. The professionals who came in to help after the fire were mainly mental health nurses and Government workers. The latter group mainly consisted of community redevelopment and outreach people, some of whom were social workers and welfare people. Some of these people were seasoned disaster workers; for others, however, it was a new and difficult experience.

Sensitive Helping

Those who were experienced spoke of their sensitivity to the task and how over time they had learned much about disaster work from the mistakes that they had seen others make. At least four gave examples of people who were more concerned about their power and status than they were of the community's need for their assistance. These relief workers, learned that people who made mistakes were not forgiven by the local people, nor by their colleagues, it seems, in the light of the many comments made, particularly in respect of mental health services. Some felt that there were a few relief workers who were quickly overwhelmed. Some of those in this study expressed their anger at the lack of support that they received from their parent organisations as they struggled with the hours, the devastation around them, and the hardship and emotion with which they dealt on a daily basis. There is debate, however, about the benefits of debriefing, and the relevance of personal belief systems in coping will be the subject of later theoretical exploration.

One discovery, for which novice relief workers were quite unprepared, was the ways in which the community viewed them as outsiders. One of the social workers said that she felt as though her presence was merely tolerated, that people were polite and grateful in a way, but they would rather *'all these people simply go away and let us nurse our wounds in private and get on with helping each other to heal and to rebuild'*. The more seasoned helpers had encountered this before and were able to continue their work without the resentment that sometimes got in the way for novice workers whose constructions of their role led to expectations of being warmly received and valued that were left unmet. Those interviewed for this study who came from outside as health workers, indicated that they made connections with local health services, finding it appropriate to work through local community health nurses and general practitioners. For some, this was done out of a recognition that these were the people who knew the community and were the best sources of referrals. The more experienced relief workers also operated in this way from an understanding that people *'trust the workers they know; they don't trust outsiders'*.

The community nurses went out to every home in the district so, according to a social worker, *'they knew who was coping well, they knew who was not'*. They acted as mediators, softening the impact of an often painful recognition of needing help, simply by being known as part of the community looking after its own. The same occurred with one of the doctors, who would refer troubled people for specialist help, and the mental health workers would see these people in a side room of the doctor's surgery. Mental health workers also operated from their cars, in order to be available to see people whenever and wherever they were summoned. The social workers, welfare officers and the community redevelopment officer set themselves up in caravans conveniently located either by the health centre or by the local doctor's surgery. Another caravan was set up to function as a drop-in centre, where people could gather to talk, to have a cup of tea or to watch television. In addition, a room was established to receive donated goods and clothing. Despite all that was organised, however, it appeared that people just wanted to get on with their own recovery. As the redevelopment officer said, '*they didn't want a community place to have a cup of coffee or watch the TV, they'd rather have the bloody TV hanging out of a tree at home.*' It was very important for them to stay put: as he said '*carpet on the dirt was better than going somewhere else*'. The drop-in room was seldom used. This again points to the importance of dwelling in one's own space and place.

It seems, from conversations with all relief workers, that their focus was on individual people who were referred to them. In the inland towns, those needing the greatest amount of counselling support were the children and the young married women because there were many more lives lost there: mainly firefighters, men with young families. In this coastal town, children were deeply affected by the awesome ferocity of the fire, but according to a nurse and a social worker, there appeared to be a difference in the level of distress between the children of this town and those from inland. Certainly there was less loss of human life here, but the community health nurse wondered if, although the fire took so much, children knew they would be safe on the beach, whereas the inland people had no safety zone and could not see a scar-free area anywhere — perhaps another signpost to the impact of the environment. Some residents in the coastal town did identify troubled children: one woman described the reaction of her five year old daughter on the night her grandfather died as he tried to outrun the fire, 'We *got to safety at a friend's home and then the next thing she just threw up everywhere. She wasn't sick, she was just that traumatised ...*' She said that some months later a fire started in a nearby tyre factory. She said '*the black smoke was billowing all over and we looked around and my daughter was gone. We found her under the bed crying and she said she was scared that her grandma was going to die now ... she was really, really scared.*' The mental health workers who came in said that they did not approach the schools or set up anything particularly oriented to children. Many residents believe that children's needs were neglected. Some of the mental health workers felt, with hindsight, that they could have done more and that, given the situation again, they would work quite differently. In particular they would focus more on children, both individually and in groups, at school or in play groups.

No-one from the resident group or the worker group in this area mentioned adolescent children or those of an age to understand how terrible this fire was, who evacuated to the river bank and watched the fire burn the town, knowing their fathers were out in it somewhere. This is a community with people of all ages and it was only well after the interviews were finished and narratives examined that the story told by a community nurse from another inland community about the problems that she had with a teenaged son, provided the trigger for looking for any awareness of, or action for, teenagers in this area. It is unlikely that teenagers here were unaffected, but they are invisible in the narratives. Perhaps the behaviours that might have alerted parents or others to problems stemming from the fire experience were attributed to the usual struggles and tensions of teenage-hood and so were missed.

Another reportedly overlooked group was the very large elderly population of this area. Many had retired here, some widowed, many infirm, and the evacuation and the aftermath were particularly traumatic for them. There are conflicting reports about what was available. One older woman who was burnt out said repeatedly that the elderly were desperately in need of help that was not available. On the other hand, the local health services functioned normally. The community health centre remained open and fully staffed, the general practitioner in the neighbouring village lost his home and practice but set up in a caravan and remained available. In addition to the usual health services, the visiting mental health workers had arrived and were working with the local health personnel. The social workers and welfare officers came within days of the fire. Perhaps the perception that no real help was available was more a problem of communication, or of the ability of these people to locate traumatised persons when they had moved elsewhere after their homes were destroyed. Certainly, the local community health nurses made every effort to locate and visit everybody, as did the redevelopment officer. All felt that those they missed must have moved out of the town temporarily. One of the local doctors mentioned that the Elderly Citizens Organisation got itself going again quite quickly, and this was not the only organisation in the area that was set up for and managed by the older residents of the area. It may be that there was a perception that there were adequate structures for supporting the older residents, more so perhaps than any other group in the town. What was missing, perhaps, was the presence of the relief teams working with and through these groups as well as with individuals. Contact with a child psychologist very experienced in post-disaster work revealed a very different pattern of managing the Ash Wednesday fire in an inland community. She not only worked with referrals from local doctors and nurses, something she considers crucial, but she also contacted every established group, went to town meetings and tried every avenue possible to locate individuals and groups to make her presence and skill known. This woman has published a great deal, and some of the ways in which she worked have been put forward as models by others as they speak of what they would do differently if they were involved in such a situation again.

Experiencing Conflict

Relief workers experienced personal tensions, and these generally related to work overload, to the constant emotional bombardment of people's trauma, or to finding themselves embroiled in conflict, sometimes with other professionals. There was considerable evidence of role confusion, sometimes because people did not want the services that were being offered, but also when the disaster personnel were themselves victims of the fire. In addition to these stressors, the relief workers were also affected by the devastation to the environment, the destruction of bushland and the death of animals.

It seems that the mental health workers were regarded by townsfolk and other relief workers as having the greatest difficulty, though they were not necessarily aware of this. This perception was as much because of people's reluctance to use them as it was about other professional workers' attitudes to psychiatry. The community redevelopment officer said that, in his opinion, people from psychiatric services were not all that well received in initial stages: *'seeing people from there means you're a nut and so people would rather say I'm OK'*, and there were countless stories told about the struggle that relief workers had to get people to go to the mental health workers.

Most of the professional relief workers who were not from psychiatric services had something to say about those who were, considering them to be either *'terrible or terrific'*. Three people told separate stories of major and somewhat astonishing insensitivities of mental health teams that they had personally witnessed in other disasters. Others spoke of mental health workers who were discreet and sensitive. One of the local doctors, however, spoke somewhat disparagingly about the mental health team that came to this coastal area. He said:

> *If my memory serves me there was some sort of crisis intervention team sent down from the hospital who made a lot of noise and sort of went around looking for problems, but they didn't stay terribly long. I'm not sure that they found any sort of acute stuff. I think they unearthed some people that have had chronic psychiatric problems that had been sort of simmering and people perhaps hadn't been aware of ...*

There was a suggestion that the mental health team may be of assistance in debriefing the firefighting teams. The same general practitioner said, however, that the firefighters in particular resented their presence. He said *'the fire volunteers sort of felt that these people had come down and thought they were fruit cakes, you know, that was the message'*. It appeared that it was no secret that these people were from psychiatric services, and this doctor felt that the firefighters, most of whom are tradesmen, cope in their own way and generally would not need their help. This may seem like a dismissal of the usefulness of psychiatry, but is a stance that has gained some legitimacy in recent research and publication (Cohen 1995; Stuhlmiller 1995).

The perception from other workers that mental health services were not really needed made getting into the community and gaining access to people in trouble quite difficult. In general, however, mental health workers did not see their services as either unhelpful or underutilised: one in particular said that she couldn't recall any rejections from the community although they made a point of not referring to themselves as psychiatric services, rather as nurses from the local hospital. If people asked more, they were honest about who they were and what skills they could offer, but they were sensitive to the community sense of stigma about psychiatry and were careful not to frighten people off. One of the mental health nurses mentioned a doctor further along the coast as the only professional whom she could recall as problematic in that he would not refer patients. She said *'apparently it wasn't just* *our services, he wasn't a GP that refers, he bottled everything up and we were no exception'*. She felt that this was particularly regrettable since there were a number of children in that area quite badly traumatised by the fire and they had a fully operational children's clinic at the time, a service that he didn't use. In general, then, this area of mental health was full of contradictions and interesting, probably predictable, attitudes.

The comments about mental health were not the only indications that relations between the professionals was not always happy. Conflict occurred between local health professionals, between locals and those who came in, and between relief workers and Government bureaucrats. There appeared to be some animosity simmering between general practitioners in this area prior to the fire. One of the doctors told of the snarling comments that another doctor made to him on the night of the fire, in respect of his surgery being destroyed. He responded with a critical comment about the other doctor's whereabouts at the height of the first aid rush. There was no attempt to coordinate the medical services: each doctor continued to operate on his own turf and in his own time-table. Further down the coast other doctors did the same.

One of the local general practitioners and the nurse who worked with him were clearly under huge strain: she having lost her father and both having lost their homes and their work place. Both worked at a furious pace, losing themselves and their personal pain in the intensity with which they involved themselves in the community. The health workers who came in recognised their need to do what they were doing, but apparently found them quite difficult to work with. The nurse was almost aggressive in manner, and the relief workers sensed that she was competing both with them and with the general practitioner for the role of key helping person, resenting the active helping presence of anyone else, particularly "outsiders". One of the relief workers said that *'this doctor and his nurse* [sic] *at the time really should have been removed'*. She said *'they were far too stressed to manage other people's health concerns well. The health department at that time should have had other doctors on a visiting basis down there.'* The community redevelopment officer, who had a great deal to do with them, agreed with this assessment although in his judgement the nurse was, at the time, the more rational of the two and was largely holding the doctor together. He felt that she understood the ways in which communities see doctors as lynch pins, and in his perception she was able to push the focus that she thought was important to the community.

The redevelopment officer also told of a heated clash with a local Government official. He was briefed to attend to people within certain geographic perimeters. People outside his boundaries made representations to him many times, asking for assistance. He went to the shire involved, with the approval of the shire which employed him, and offered to extend the boundaries of his services. He said that the Shire Engineer's response was *"Listen young bloke, are you in the business of building bloody houses? Do you put bloody bricks on top of bricks?' I said 'no I don't' and he said 'well f--k off, we don't need you'."* And so these people did not receive the support they needed. The redevelopment officer did as much as he could unofficially, with telephone advice, and, as he said, *'if they needed somebody to chase something up, I still did it, but in terms of any material assistance or organising anything that may be of assistance to them as a community, forget it. Good old engineers.'*

Having to deal with this sort of conflict added to the pressure that the workers were under.

Work Overload

Work overload related to the extraordinarily long hours that staff put in, over many days without a break. The constant high-level emotional trauma that some were dealing with, coupled with battles with insurance companies or the greed of unaffected people collecting donated goods, was taxing. Many relief workers felt some bitterness toward their Departments, having had no effective debriefing and feeling generally unsupported.

One Government outreach worker was not aware that she would be mobilised as part of the disaster plan operation. She recalled that she'd had an exhausting day at work and had just arrived home when she was called out again to help with the fire evacuation. She was collected and taken in to the Red Cross headquarters where she remembers feeling irritation at the confusion and lack of organisation. She and her team put some order into proceedings there, but she was relieved when someone arrived who could organise that side of the operation. Evacuees came by the bus load. Many were elderly and some were in wheelchairs. A welfare officer recalled a bus load of school children arriving, having been evacuated from a holiday camp. She said she felt so helpless: *'We couldn't do anything. We just hustled them in and wrapped them up in a blanket while the Red Cross ladies were hovering with their cups of tea, which these kids didn't want - they wanted mum and dad'*. She said that the Red Cross centre was *'awful, people kept coming, like waves, like the tide coming in'*. From there, she was sent to the coastal town where mobile homes had been set up with power. There the Government outreach workers commenced their work. They obtained a street map of the area, divided it up in grid form, and each outreach worker took an area, the object being to doorknock, to advise people of what help was available and where. From then on the caravan was staffed with two Government welfare workers each day. She remembered the hours - that she would arrive at the caravan at around eight in the morning and would generally not leave before eight at night. She could not remember how many days they were rostered on at a time, whether it was two or three days or a week, but she said she would *'go home you know after that absolutely totalled, and then have to get back to it again the next day'*.

The nurses in the health centre worked long hours, and within the first fortnight were exhausted. They were dealing with their own trauma, and that of their children, as well as the trauma of the town. One of the social workers noted that they were in need of time and space to address their own problems, but instead they were giving themselves to the community and they were exhausted. On the other hand, the health centre doctor does not recall anything other than "business as usual" after the first few days. He did not go out into the town and the people who came in, he thought, had the same sort of needs as usual. The mental health workers said that they were acutely aware of the stress that the local health workers were experiencing and tried to keep an eye on them. Of their role in helping the doctor who was so traumatised, one said *'we probably did a lot of debriefing with him without really calling it that, or intentionally doing it. It just happened'*. They had considerable contact with this doctor, and he certainly recalls them with gratitude for the role he identifies that they played in his own coping and eventual healing. Eleven years later he remembers their names. He also remembers the community redevelopment officer with respect and friendship.

The lack of debriefing left some people bitter. A social worker said that it was three weeks before anyone from the Head Office came down, and even then what occurred was a talk. It helped to recognise that other people were going through the tiredness, the emotional strain, the concern for their normal clients, but in hindsight, knowing what she knows now about skilled debriefing, she thinks: *'it was simply a meeting where some of us felt able to talk and we were told how wonderful we were and that was sort of about the extent of it, it wasn't what I'd call debriefing now'*. The mental health workers did not set up any particular mechanism to debrief themselves. The reason they gave was *'lack of time and energy, I suppose'*. They are all aware just how different the level of awareness is today about the need for supporting and maintaining the helpers. One comment was *'certainly the expectation now would be you'd be properly debriefed and probably be given time off afterwards. We just came back to work. I guess we got paid overtime. I can't remember but I don't remember having time off to recover. You just hung in there'*.

The relief workers spoke of the long-term effect that the fire experience had on them. All found it traumatic, although most said that in an odd sort of way they enjoyed it and would do it again. One, however, told of how, not long after she returned to her normal duties, she was asked to go back to the area for one day per week. She surprised herself by the intensity of her reaction, and she knew she couldn't go back there. The Department recognised her stress and suggested that she *'go to the doctor and get some time off on sick leave'*. She felt that she should have been given time without any certificate, without any loss of pay, without something on her record branding her forever as someone who could not cope under pressure. She struggled to manage, but after two or three days had to stop. She ended up with ten days off, on what was classified as stress leave. One of the mental health workers was *'overwhelmed by the amount of grief that happened'*. He was identifying with just what it must be like to lose everything, especially a close family member. He said *'there were stages when it was wearing me out. I did get an ulcer out of it all, I took some sick leave at the end'*. This nurse used friends for debriefing, but said that with hindsight he would have used the system a lot more, *'just so the Health Department realised what was needed'*.

One of the problems of which residents were unaware, was how hard it was for some relief workers to manage closure. This same mental health nurse felt that many people were benefiting from the presence of the mental health team, but there was concern from the hospital that some were becoming dependant on regular visits, and he was instructed to begin the separation process, taking only the more severely affected to continue counselling from the hospital consulting rooms. A social worker told a similar story of feeling a level of responsibility for the people she worked closely with, and to some extent she still feels that she ought to ring occasionally or visit. She hasn't, but she is not sure why. She wonders whether she knows instinctively that it would be more than she could cope with if she found them not to have recovered. She added that, in her normal role as a child protection worker, she would not contact families, even though some families extended invitations to coffee. Perhaps her reluctance to go back to visit is partly that protective habit; some role constructions, it seems, include taboos.

Role Conflict

Role conflict has to do with the confusion that occurs when a person who is normally in the role of helper becomes the one in need of help. Local doctors, in particular, often got caught in their sense of responsibility as leaders in their community. This chapter has already described instances where doctors and nurses worked long hours and wore themselves to a point where they were no longer coping. In several instances they needed to be told to stop, take time out and deal with their own issues. The general practitioner who lost his home and surgery had spent the evening of the fire driving around the town, urging residents to evacuate and even carrying some of the elderly or incapacitated people out to safety. All night he worked to help the firefighters and others who needed eye irrigations or other treatment, and after the fire he kept working at a pace that exhausted him. The redevelopment officer said that this doctor *'drove around like a maniac. He was doing home visits, morning visits, day visits for months and months and months'*. It was the same for the nurses in the area. Several had lost their homes, but gave their commitment to their nursing role priority. One of the community health nurses said of her friend, *'she sort of worked like a maniac for a long time and she certainly needed help. I don't know who she talked to help her through. She didn't like accepting anything from anybody; she would much rather help people.'*

The competing senses of duty that the relief workers experienced was particularly difficult. One woman experienced the pull of wanting to leave the town as the fire was approaching, but feeling that, as a disaster worker, she of all people should stay. Her home burnt. As a professional and a "victim", this woman found an enormous amount of support within the burnt-out group in the town. These were people who weren't simply being sympathetic, but who knew exactly how she was feeling, and that helped. She found it interesting when others with whom she spent time had no concept of what it was like. More important to her, however, was her reaction as a nurse and a disaster management lecturer. In the years that followed, she stressed the image of her professional self rather than allowing anyone to see her as a victim. She said *'I found it very difficult. I had always been used to being the one helping other people. To have that reversed ... It was really uncomfortable'*. One of the painful effects of the fire for this woman was how it caused old hurts to resurface. She had lost her fiance in a car accident just before they were to marry. The fire took the engagement and wedding presents and all of his letters; everything she had to remember him. The fire brought back a lot of grieving over his death that she had never really resolved. She has since found that this is not uncommon: so many people she has spoken with find precisely the same thing. It is not just the event of the fire that creates hurts; it is also that it brings back past grief.

Having lost all of her possessions was, for her, like a loss of identity. She said, *'everything that you thought made you who you were and that had been the life that you put together was gone'*. In particular, she found that because the house that she lived in (which was burnt) was rented, and the owners made the decision not to rebuild, there was nothing to indicate that she had ever been there. She said, *'there should be a plaque saying I actually did live here. If I'd owned and rebuilt ... he fact that I owned a place somewhere else was irrelevant, you know this was ... everything I'd had was here and now it's gone'*. Like many others interviewed for this thesis, she found herself desperately looking for things that she had owned. She became obsessed with wanting the same pattern in her china, the same Stuart crystal and became frustrated because she couldn't find it. One of the lessons she learnt and passed on to subsequent students, and which is examined further later in this work, was the difference between a house and a home. The home was gone, the house that was rebuilt, for most people and for a long time, had no soul. She said, *'there's nothing of memory. There's nothing that you put time and effort into, or that you look at and think 'so and so gave me that for my 21st or my 18th', or 'that's what I bought when I was in England', or any of that. It doesn't mean anything'*. She said that it was a long time before she faced up to how hard all of that was. So many times she almost reached out to friends for help, but she could never bring herself to do it. She said that she thinks that this was because she was so used to being the helper and to be seen to be in control. This is further evidence of taboos embedded in some constructions of the helper role.

Environmental Devastation

The disaster workers, like the locals, were deeply affected by the devastation to the environment, the bushland and the animals. One of the community health nurses drove around the outskirts of the town a day or two after the fire and she said it was so quiet - there were no people, and no birds. And the area was so totally destroyed she was unable to tell where the streets were. She said, *'it was just a moonscape, nothing, quiet and ash and hardly a tree or anything'*. She said that it gave her the most eerie feeling not be sure quite where she was. She reflected on whether this was what a person with confusion might feel - so insecure - when there is nothing with which to identify. Others spoke of the aspects of nature that distressed them. For many it was the animals. The nurse who was also the disaster management lecturer said there was a kangaroo outside her back gate for a few days before somebody buried it. It had been caught when the fire ball had come through so quickly and it was charred but still standing. Loving animals as she does, she found that enormously distressing. Watching the magpies searching for food was also distressing and she was bought *'tons of bird seed, minced steak and so on to feed all the birds that I could'*. She was distressed about the soft ground that was burnt to a depth of eleven inches, so it was just like walking on dust. The disaster relief workers were no more immune than anyone else to the pain of the devastation of the land; embedded in their narratives too, was evidence of this recurring cosmological theme of human/environment connectedness.

This chapter has described the stories told by certain residents of a town that was almost destroyed by the Ash Wednesday bushfire. The stories tell of the preparation for the fire, the evacuation and the aftermath. Most are stories of grief. Even now the folk of this town measure time as before the fire (BTF) and after the fire (ATF). It was a powerful experience and one which will never be forgotten. Themes that could be explored in detail from this chapter include those specific to this disaster: the emotional expressions of anger, resentment and guilt; the conflict that seems inevitably to accompany the afermath of disaster; the role constructions, especially gender roles and helping roles; notions of fractured time; entropy and cascades of tension. Any one of these could provide the rest of the journey of this thesis, and some are carried forward to theory construction in this work. The one that is most dominant and pervasive in the fire narratives, however, and therefore the one to be pursued in this work, is the cosmological view of humans as connected to their environment, to spaces and places. Places are defined as homes where people dwell and this work explores what it means to lose a personal dwelling place. Space is defined as the environment in which people have chosen to settle, with its important components of bushland and wildlife. The entropic sequelae of the Ash Wednesday bushfire are also examined from the perspective of the relief workers. In some aspects their experiences are similar, in that they were deeply affected by the devastation of the environment and they felt, and sometimes bore the brunt of, the intense emotion being experienced by the residents. Work overload, conflict and role confusion are three major themes that run through the narratives of these workers. Again, however, the theme to be further examined from the perspective of health workers, and taken into a dialogue with nursing, has to do with the development of a personal cosmology.

Images in poetry conclude this chapter. These capture many of the tensions of the bushfire in ways that are in keeping with the postmodern textual style of producing overlapping images. There is no single story of the Ash Wednesday bushfire, there are many, each one as legitimate as the next. In a sense, this chapter ending in play with images, creating, with the stories already told, an interplay of texts - texts interpenetrated and surrounded by other texts, some of which describe first-hand experience, some of which are evoked by the stories of others. Although not at all radical, this is a calculated attempt to interrupt, in a small way, the traditional style of thesis presentation, to render a serious project a little playful, a little less conventional (though not to trivialise the seriousness of the event being described). As Lather (1991) suggests, the interplay of the traditional style, which to a great extent has been maintained in this work, with citations, references etc, with alternative styles and forms promotes the active participation of the reader, who is engaged in his or her own meaning making in respect of this work.

OMENS

Searing heat
made of wind and flames,
unknown, unseen but suspected.

Mothers gather their young
and dread the parting.
They know the signs
that bind the men to the work.

The beach is cooler,
waves lapping idly
as though a world away
from the nature-sister nearing.
They hover
reluctant to leave the water
fearful of the lull.

They've seen it all before,
and the dogs and birds are restless.
There can be no mistake,
a deep breath
and on to the task.

MY PATCH OF DIRT

You know, he didn't have a hope.
What did he think of
in those last seconds as he ran,
his youth?
his wife?
his life? not to be much longer?

Was he scared?
He was so determined;
our patch of dirt
our land
our sacred space.

We'll never know
anything but the courage.

EARTH SOUL

How can it ever heal?
the burn scars sear so deeply.
It's as though the gods have thundered
down a wrath to hurt so keenly.

The little clearing by the fence
where wild geese flock for water
where kangaroos and magpies come
has turned from home to slaughter.

When nature wounds itself so much
how hard it is to know
that struggle is the food of soul –
a teacher, not a foe.

THE CAIRN

Up on a ridge
behind the forest,
they buried it all.

Deep holes,
heavy earth moving machinery,
they covered it up
forever.

Someone said there ought to be a cairn,
something to mark the spot
of pain,
and loss

A whole town lies buried there,
charred, melted fragments.
All the hopes,
the history, the memories,
gone.

There is no marker
but it doesn't matter.
The people know where it is
and the land is sacred.

CHAPTER 4

NEGENTROPY: REORDERING THE LIFESPACE

> *Commonality with other people carries with it all the meanings of the word common. It means belonging ... being a part of that which is universal. It means having a feeling of familiarity, of being known, of communion. It means taking part in the customary, the commonplace, the ordinary, and the everyday. It also carries with it a feeling of smallness, of insignificance, a sense that one's own troubles are "as a drop of rain in the sea." The survivor who has achieved commonality with others can rest from her labours. Her recovery is accomplished; all that remains before her is her life.*
>
> *J. Herman, Trauma and Recovery*

Antonovsky's notion of salutogenesis, introduced in the previous chapter, also underpins the work of chapter four. Here, however, the focus shifts from the notion of entropic events which create tensions from which people need to recover, to the ways in which that recovery is managed. How it is that people do manage the "ongoingness" of their lives? Antonovsky's work informs the constructions outlined in this chapter, and of deepest interest is his notion of the Sense of Coherence and the core component of meaningfulness which is embedded within it. This sense of meaningfulness is what resonates in the words of the people when they speak of their recovery and of why it is that they choose to stay in this very vulnerable area.

In shifting the focus from entropic disordering to a reordering of lives and space, the notion of negative entropy (negentropy) is introduced. Negentropy is the drawing back of energy from its environment into an open living system in order to counter the energy depletion which is continuous in the life of the system. This chapter identifies the resident group's perceptions of the negentropic factors which drew energy back to individuals or to the community, and which were considered helpful to recovery. In addition to this, conversations with the relief workers illuminate the resident experience, and also describe the negentropic experiences of the relief workers themselves. It is clear from the narratives that, conflict notwithstanding, this was a community with a strong sense of coherence, and that individual residents and relief workers alike were clear about how they made sense of the disaster, the personal meanings that motivated them as they struggled through the difficult days and the memories that they still have of the events that occurred.

Salutogenesis is not a simple concept and only certain aspects of Antonovsky's model are elaborated upon here. It is accepted that stressors vary enormously in origin and type, that resistance resources have complex relationships with each other and to the sense of coherence, and that health does not stand alone, being inevitably linked to wellbeing in other areas of life. In addition, it is possible to speak of the sense of coherence of a group, a community or a social system, such as family, as much as of an individual (1987: xvii). In this study, the notion is linked to many views of the open, living system. Individuals, families and the entire community were subjected to tremendous trauma, and the ways in which they located negentropic possibilities is the subject of this chapter.

The Sense of Coherence

Generally, people have a variety of intrinsic and extrinsic resources that they may call upon to manage stressors. Antonovsky calls these "general resistance resources" (GRRs). Some of these resistance resources are genetic, some are acquired through childhood and socialisation. Antonovsky describes these GRRs as ranging from money and ego strength to cultural stability, social supports and from "immunopotentiators to magic' (1987: xii). As human beings move through life, experiencing states of tension with successful resolution, the resource repertoire increases. These resources help make sense of life experiences and, when repeatedly successful, they generate a strong sense of coherence. Antonovsky believes that answers to the salutogenic question, that is, the question about origins of health, are to be found in this quality he has called the Sense of Coherence. He defines this as:

> ... a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges worthy of investment and engagement (Antonovsky 1987:19).

It is evident from this statement that there are three core components to the sense of coherence:

Comprehensibility

Comprehensibility refers to one's ability to perceive internal and external stimuli as making sense, that is, it is perceived as 'ordered, consistent, structured and clear, rather than as noise – chaotic, disordered, random, accidental, inexplicable' (Antonovsky 1987:17). Those with a high sense of comprehensibility do expect that stimuli they meet will be predictable, or, if unexpected, will still be able to be explained and understood, made sense of.

Manageability

Manageability refers to an understanding that resources are available which one can use to manage stimuli. These resources may be intrinsic or they may be external and even controlled by others. The perception is that the available resources will be adequate to meet whatever is required to make the experience at worst, bearable; at best, salutary. The "others" who may control useful resources range from ones spouse, to politicians, to God – whoever the person feels he or she can rely on. A high sense of manageability is incompatible with a sense of victimisation. There is a sense that life is stressful, but that when untoward events occur, it is possible to cope.

Meaningfulness

Meaningfulness refers to the motivation aspect – one feels that life makes sense emotionally and problems are seen as challenges, worth energy investment. When undesirable events do occur, there is an acceptance of the challenge to grow through them.

These three core components of the SOC are intertwined. It is possible, however, to be high on one whilst at the same time low on others. Antonovsky argues that high manageability is contingent upon high comprehensibility. Understanding that resources are available which will be adequate for the situation requires, firstly, an understanding of just what it is that the situation requires. Conversely, being high on comprehensibility does not automatically result in a feeling that one can manage; it does lead one, however, to search for some way to change the situation, the outcome of which is determined by the sense of meaningfulness. A high sense of meaningfulness will lead one to search for the most appropriate resources and to continue to strive until there is a successful resolution. Without this motivation there is no drive to seek a satisfactory solution (Antonovsky 1987).

Boundaries of the Sense of Coherence

The outside world impinges upon one's boundaries: as Antonovsky describes, ‘the most apolitical person in the world may be drafted, sent to war and killed’ (1987:23). In addition, there are facets of our lives which are beyond exclusion: inner feelings; close and significant relationships; major life activities; and existential issues such as death, failure, and isolation. A person with a strong SOC may manipulate the boundaries to maintain coherence, constricting boundaries when situations are difficult, focussing intensively on the situation and excluding extraneous factors for a time, or expanding the boundaries to incorporate new experiences. In either case the sense of coherence is strengthened. There is a delicate balance between openness and closedness: calling on the known and trusted whilst at the same time tentatively exploring challenges and looking for feedback.

In an earlier publication (Antonovsky 1979), the statement was made that ‘it is unlikely ... that one's sense of coherence, once formed and set, will change in any radical way’. To understand this statement, one must return to the fundamental postulation that the aim is to maintain a balance at a low level of entropy. Antonovsky argues that ‘entropic forces are indeed constantly and powerfully at work in the lives of all human beings’ (1987:121). When a stimulus occurs there is an increase in entropy, of disorganisation, in the system. A person with a strong SOC meets the challenge, deals with the tension and restores the low level of entropy. The person with the strong SOC has the ability to gather negative entropy from the environment, counterbalancing the force toward chaos.

Antonovsky describes his view that life is stressful with a use of metaphor which extends the “upstream, downstream” view that has gained popularity in recent years :

> ... my fundamental philosophical assumption is that the river is the stream of life. None walks the shore safely. Moreover it is clear to me that much of the river is polluted, literally and figuratively. There are forks in the river that lead to gentle streams or to dangerous rapids and whirlpools ... (1987: 89, 127).

In his search for understanding how it is that anyone can stay healthy, Antonovsky asks:

> [w]herever one is in the stream – whose nature is determined by historical, sociocultural and physical environmental conditions – what shapes [some people's] ability to swim well ... and joyously [where others find] even staying afloat a constant struggle?

The answer he proposed was the Sense of Coherence.

The Community, Negentropy and the Sense of Coherence

The sense that a town has of itself as a community was a fundamental factor, in the eyes of many residents, in how the recovery process occurred. Antonovsky argues that a town with a strong sense of coherence has structures already in place that will support individuals to recover and rebuild. This particular coastal community had (and still has) many such structures, built because of the sense that the townsfolk have that there will be times when they will have to provide the supports for themselves and each other as they struggle through the difficulties that life presents.

Of greatest significance at the time of the fire, was the presence of the Country Fire Authority with firefighting vehicles and equipment stationed in the town, and the number of local men who had joined the volunteer fire brigade. After the fire had passed through the town, the organised groups that had been established by residents came into focus. The Red Cross organisation and the Country Women's Association were the principal structures that helped from inside the community boundary. Many of the women in this town were members, often of both. It is worth noting that the women who were most active in assisting through these organisations, were often those who themselves had lost everything in the fire. In addition, groups such as the Lions Club and Apex, organised men's groups, were well established. Church networks were strong, as were those associated with the primary schools. Many sporting groups also created networks. All of these are testimony to the Sense of Coherence of this town, and to the understandings that they have about events that may happen and the ways in which small isolated communities such as this need to be self-sustaining in terms of the wellbeing of the people.

Comprehending the Event

Recalling that comprehension is the ability one has to perceive the event as making sense, the question asked of the residents in this town was how they made sense of the Ash Wednesday fire. Having a high sense of comprehensibility allows one to see an event as predictable, or if the event was unpredictable, it will still be explicable and understood, albeit burdensome and unwelcome (Antonovsky 1987).

Bushfire awareness before Ash Wednesday had a shadowy nature – a presence, but not in the sharp relief that it obtained subsequently, despite the dense bushland into which building had encroached. Few people said that they consciously predicted, and therefore prepared for, fire. The fact that many of the men were members of the local fire brigade and that the Red Cross organisation was well established would suggest, however, that this was less a matter of non-comprehension than it was a matter of facing a reality but refusing to let it interfere with life to be lived.

Looking back after the fire, many people said that they knew fire was an ever-present danger, predictable and inevitable; somehow, though, it was a shock when it occurred – that it could be so mighty, and so absolutely devastating. The shock was also about recognising that the controlling ability of human beings is illusory. About bushfire awareness, one woman said, *'well you weigh up the good things with the bad and the good outweighs you know? You can't stop bushfires'*. Another felt that *'bushfire is Australian, if you're Australian you know that it is something you have got to be prepared to risk ...'* Some people had previous, and often terrifying, experiences of bushfire and yet were not, and are not, deterred. One said, *'well if you have lived through several bushfires you are prepared for it'*. Many people described themselves as "country people" and as such, felt that they had always lived with the sorts of risks that "city people" would neither meet nor comprehend – a reiteration of the construction uncovered in the previous chapter, of country people as "copers". One said, *'it was never an issue that I couldn't live here because of fires'*.

A woman told of her earliest memory of a bushfire that occurred when she was eight years old. Her family home caught fire, but her father was able to douse the flames. She described how her mother would methodically prepare for fire, filling tubs with water, soaking bags for fighting fires and blankets for covering themselves if the fire came too close. She described her mother with a wet bag over her shoulders, going around the house beating out flames and then coming back to talk quietly to the children so that they would not feel frightened. She said they always had a sense that their parents were in control and could manage fire. This woman had many more experiences of fire and thinks that her parents' attitude contributed greatly to her ability to consider bushfire vulnerability without fear.

There is a clear comprehension about the danger of fire now, but such an awareness does not always result in the kinds of behaviours one would expect. Some people prepare, clearing their land; some look out for others, reminding them and helping them where they are aged or unwell. Others, however, even some who lost all of their possessions on Ash Wednesday, still reside in dense bush, refusing to clear the undergrowth, or to cull trees close to their home. This does not mean that they do not comprehend the danger, but that it is an element with which they are prepared to live. This creates the anger previously described, born of fear for the lives of sons and husbands, because it is the work in the main of men, who will be asked to fight future fires. It also indicates the way in which some people feel connected to the environment, the main theme of the previous chapter.

Managing the Event

Manageability refers to an understanding that adequate resources are available to help people manage the event, to make the experience at worst, bearable; at best, salutary (Antonovsky 1987). In the aftermath of the fire, a variety of resources were identified. Some people looked only to friends and family; others needed skilled professional help. Mitchell & Resnick (1981) describe a bell-shaped curve which depicts 10% of people in normal populations who generally do not cope with crises and require a great deal of assistance, 10% who are generally extremely stable and require little to no assistance to manage the ongoingness of their lives, and the remaining 80%, in need of a helping hand but generally able to cope fairly quickly. Such appeared to be the case in this community, but it is useful to recall that this work has salutogenesis as an interest, and so only those who consider themselves to be recovered have been included.

Managing the Ongoingness: Families and Learning

People who lost a loved one identified their families and close friends as their most significant resource. The woman whose husband died in his burning home said she experienced all of the stages of shock and grief that are written about in the literature, and when she reflected on the experience some years later, she said that she realised that her family were the most important resource in her grief. She said, *'on looking back I recognise that they gave me the freedom to do what I wanted to do, how I wanted to do it. There was no like come on mum do this, do that, it's time ...'* She said that it helped her immensely to have *'their love and support and freedom to be'*.

This same woman also described a particular situation when life in general became too unbearable. She was driving her car down to the shops when she felt the urge to *'put my foot flat to the floor and hang the consequences'*, and then she realised that she was not coping and needed help. She had a good friend in the local general medical practitioner and so she went to visit him. She said:

> *I went straight in to the surgery and leaned against... I can see myself doing it, leaning... couldn't even sit down. I said 'I feel I'm getting out of control and need help' and he gave me something to calm me down. I used that only for a little while, I never liked the dopey sort of feeling those things give you, but what I was experiencing was anger...*

This doctor was always available to her when she needed his help, and she knew she could go to him. One situation for which she particularly needed all of her family and friends around her was the funeral of her husband. On the day after the fire, her son came saying that he and his brother would like to manage the funeral themselves. They went to see a funeral director and happened to choose the very man who had taken their father's body to the mortuary. It seemed like fate to have selected this man who knew of the terrible tragedy that had overtaken them. He gave them a plain coffin, the papers they would need to release the body from the morgue, advice about the coroner, and what to do to take the body up to the crematorium. She recalled that he had even offered them the use of his mortuary cool room overnight if they needed it. Rather than do that however, the sons asked her permission to bring the coffin to the burnt out remains of the house, where the family had gathered around the caravan that had been saved. She said that they just drove in quietly, with no fuss and had a little service of their own with the coffin on the tailboard of the car. They talked about grandpa and she told the children to remember always how grandpa loved them all. She described the trip to the crematorium, the little chapel where the attendant put the casket up on the platform and said "when you're ready just press that button". They sat quietly talking and when they felt ready, all put their thumbs on the button together, and pressed it. She spoke at length about the memorial service back in the town, all painful yet healing events and memories. After the funeral was over, she took an eight-week course on dealing with grief and loss and found it gave her a helpful insight. Months later she was invited to do a weekend workshop which involved rebirthing, called 'Loving it All, Having it All,' a self-enlightenment workshop using affirmations. She felt that these were major steps toward her healing. Then, sometime in 1987, she did another long course which she described as *'inquiring into how we are as human beings'*. She said:

> *That really had me being with loneliness in a way that left me powerful. That's what ultimately helped me to become a whole person again. Doing that and a lot of other stuff involved with it. That was a completion for me of not just returning to how I was, nor was I a different person, but I was using whatever's me to be fulfilled.*

She later became a grief counsellor. Her story is a powerful one and one which indicates the salutogenic possibilities in tragedy.

Managing the Ongoingness: People and Organisational Resources

People within the town mobilised to help each other. In addition, help poured in from outside. One newspaper reported *'a shocked Victoria responded to Ash Wednesday with overwhelming generosity in support of bushfire victims'* (newspaper report). They described the aid pouring in as *'housing, meals, clothing, money, furniture, transport, eggs and five tonnes of bananas – almost anything of conceivable use'* (newspaper report). Donations from business and industry started arriving at the local Council. Evidence that this community had a strong sense of coherence is given in the Council decision to have this money managed by those who shared the experience of loss and would know where the real community need lay. They asked a local woman whose home had been burnt, but who had vast experience working in welfare, to join with the Uniting Church minister to manage the funds, which amounted to many thousands of dollars. Initially they concentrated on self- employed people since they were now completely without income and it was vital for them to get back to work. She kept detailed records of everything that was done with the grant monies, and many in the town still express gratitude for what she did, some saying they would never have managed to get back on their feet so quickly without that help. One of the significant aspects of this story is the fact that this woman's home had gone. She had nothing but what she stood up in, she was potentially as traumatised as anyone, and yet here she was dispensing money, goods and advice. Weeks later she was still wearing the same odd shoes she had evacuated in, not having had the time to order a new pair. A nice ending to this story is that when she did eventually order a new pair of shoes, which had to be made for her due to a problem with her feet, the manufacturers gave them to her "with their compliments".

One week after the fire, a newspaper article read:

> *This is a town the residents won't let die. Last Wednesday it was virtually burnt off the map, but its life has continued beating. At the weekend the town was showing signs of recovery... a makeshift surgery was opened, the massive clean up started and beer flowed from the 'taps' among the ruins of the coastal township's hotel. Homeless residents have stayed on at friends houses, determined to keep the town alive* (newspaper report).

Groups active in this community, such as Red Cross, Lions and Apex, all have national links and club members from these and other clubs, such as Rotary, came from elsewhere to help. They collected and distributed money, distributed food and goods and they worked long and hard to clear the ruins of burnt properties. Interestingly, these members of organisations who came in from elsewhere were not perceived as outsiders, and there are no feelings of anything other than gratitude directed to them. Perhaps this is because the work that they did was physical, highly visible and immediate. At the same time though, their work was not accompanied by any fanfare. Their contributions were tangible but quiet. They provided both personal and practical support for members who lost all of their possessions, provided funding for victims, and worked with local relief workers in a quietly facilitating way, helping the local people to identify what they needed.

A local man who had been out with the fire trucks on the night of the fire told of some men who came in with a food van. They arrived to make food for the firefighters and he said *'when we came in each night you're sitting down there at six o'clock to bacon and eggs sausages and hot tea or coffee, cold drinks and so forth'*. He was particularly in awe of these men who had refused a police order to turn back. He said *'they came up to the road block and police said 'no you can't go through' and the guy said 'watch' and he just kept going'*. This man said that it was incidents like these that restore your faith in people and that provide an energy you can feed off. People found that organisations produced some really helpful things. For instance, a distant branch of the Country Women's Association sent packets containing nails and screws. One of the women who was burnt out said that they were *'things that you need all the time but usually have to buy whole boxes of. They also sent a big bag of sewing things, cups and saucers and tea towels, really practical things'*.

In terms of disaster relief workers, the most recognised was the community redevelopment officer, who helped sift through insurance problems or sort out child care in order to let the women go to select tiles or whatever else was needed in the rebuilding, whilst the men got back to work. The word "recognised" is used advisedly because not many people gave this information voluntarily but, when prompted, remembered him. In the main, where health professionals were mentioned, it was in respect of doctors or nurses who belonged to the community and were also personal friends or at least well known. Most residents indicated that they needed "things" – money, tools, and so on, so that they could *'just get on with it'*. It seems that the 80% of people who need a little help (Mitchell & Resnick 1981) needed very little from health professionals. It may be that there is a taken-for-grantedness about services that debrief, offer emotional support and caring rather than offering tangible, physical assistance. These services were used but were not recognised as important, relative to other services, even when prompted. An alternative explanation for this, however, will be explored later in the work. It must be remembered that those who were most damaged are probably not represented in this study, and it is highly likely that they received most of the assistance given by workers such as the mental health nurses.

In addition to all of the resources mentioned so far, there were two unexpected but important things that people spoke of in conversations about what helped them to get on with their lives. The first had to do with humour, the second, and by far the most dominant, had to do with the environment.

Managing the ongoingness: Humour and Having Fun

Many people had humorous stories of the evacuation, of waiting on the beach for the fire to pass through the town, and of the aftermath. Some of these were seen as humorous at the time, others in retrospect. Many stories were told about what people selected to take with them when they evacuated: the green bag full of Mills and Boon novels; seven nightdresses; all the sheets and towels from the clothesline; and the pony put into the car. The narrator of the pony story told gleefully of the *'terrible mess they had to clean up the next day'*. One woman carried her mother's case for her all through the night and on opening it in the morning, found it was empty.

Another story, known to everyone and related by several in this study, was of an elderly woman who had evacuated to the beach on the night of the fire, and who had developed an urgent need to empty her bladder. She had been trying to find a secluded place on the crowded beach where she could squat in private. She located a log and was just crouching behind it when the log moved. The narrator, in this instance a mental health nurse, said:

> *it happened to be a person rolled up in a rug. He said 'what the hell do you think you are doing?' She couldn't stand that and so she hopped in the car and drove back home and when she got there the tree growing through the verandah was on fire. So she found everything she could, I think she found orange juice and beer, and put the fire out. Then she went to the toilet and left again and went back down to the beach. Her house did not burn down.*

Many spoke of the Battle of the Ashes, a cricket match that now occurs each year between residents of this coastal town and an inland town, both devastated on Ash Wednesday. The ashes are literally those from the hotels which burned in each town. The woman who organises this match said *'we still have the annual cricket match, the idea was let's have fun, let's let everybody know we're still here and give the kids a good time'*. She said there was concern for the children of the town: *'The kids had been ... scarred, shall we say'*. Many have commented that the very thought of having a battle for the ashes is a *'kind of black* *humour'*. One woman said, *'It's so Australian isn't it?'* She added: *'there seems always to be always room for that kind of humour in disasters. I think that's the saving grace isn't it, that keeps you sane'*.

Many people agreed that the local hotel was a place to go to, to laugh and be silly. This hotel had burnt in the fire but, because of a by-law in Victoria, it had to keep operating or lose its licence. Locals erected a large tent and business carried on as usual, with many parties to celebrate survival. The rebuilt hotel houses the trophy for the Battle of the Ashes cricket match, and has a wall adorned with photographs of the town, its people and scenes of the fire.

New groups formed to help the townsfolk in a variety of ways. One objective was *'to get optimism going again, where everyone was flat and pessimistic thinking 'this is the end of our town'.'* One group worked to let the world know that the town was still "on the map", in terms of tourism, because much of the income of this small town's businesses was derived from tourism and suffered badly after the fire. The general impression was that there was nothing left to come to. Another group organised events to restore morale. There were bush dances, and a carnival on the river, with stalls and rides and a major 'wood chop' event. A woman described it as *'anything we could think of to have a day of fun. Australians are ... can have a joke once they get over the terrible shock of something, they can joke about it'*. There is a constant iteration of national pride throughout the narratives.

A regional newspaper contained the following, writing that every fire has its survival story – this one is worth telling:

> Three coastal firemen were patrolling near x late Wednesday evening in their new $45,000 truck. They had just evacuated Chas Smith and his wife from their home when the fire cut them off. Parking the truck across the road with the Smith's car on the protected side, they prepared for the fire front. The couple huddled under a blanket in their car and with the truck sprays on, the firemen lay down in the cabin of the truck under an asbestos fire blanket.
>
> With a force that almost overturned the truck the firestorm hit. The pumps and the truck caught fire and as it burned furiously the pump's petrol tank exploded, the truck windows blew in, and fire started in the cabin. Just as the heat became unbearable in the cabin one of the firemen remarked: 'Jesus, if hell is anything like this I have to stay alive'. They jumped out the door of the truck, dived into a drain, crawled into a nearby dam and huddled under the fire blanket with red hot ash raining down. At that point the truck petrol tank exploded.
>
> With the fire threatening to engulf his car, Chas Smith calmly released the hand brake, let the car roll back out of danger and got back under his blanket. 'He was a bloody cool bushman from way back' remarked one of the firemen. 'After the fire had passed we pulled ourselves out of the mud, to find him cursing because the car would not start.'
>
> They had all survived [names and places altered].

Managing the ongoingness: The Environment

By far the most significant factor to which people attributed their recovery was the return of the environment. People photographed the new growth, artists painted it, people walked amongst it, thrilled with the rare orchids that emerged. Some realised that the heath would peak following the fire: *'it was stunning for seven kilometres. I think that helped me a lot. It gives people new faith'*. A local artist explained how she painted and wandered about in the bush alone. She told how she hung a big painting of the burned bush over her piano. She said: *'I don't play from ear, I play from music, but I sat down and composed music I called my Lyric Suite. I played it for years so I wouldn't forget it. That was a way of expressing how I felt about this place. I did love it. I really did'*. Another woman, who had been a professional photographer at one stage of her life, photographed the regreening. She has enlarged prints framed and hanging on her walls. They are beautiful, although perhaps bittersweet.

One of the men told of a day when he was driving down the road to a part of the coast where he liked to surf. He said, *'it was just black, and there was one pink orchid about yay* [indicates] *big. It was a mass of pink amongst all this blackness and I thought ok, well he can get up there so ...'* On the same subject, that of finding a new spirit of healing through the regreening, his wife said that *'freesias really took on a special thing'*. Wild freesias are a wonderful sight in this area and when they arrived in the first spring after the fire they were celebrated. All of this is testimony to the cosmology of belonging to, and of being in harmony with, the environment – so when the bushland is scarred the people feel the pain. As the bushland heals, that healing energy soothes the people.

There was some recognition that the burn scars would continue to cause pain and an effort was made to remove the scars by clearing the rubble as soon as possible, and by replanting people's gardens. A man told of a group who came to the town with plants donated by nurseries. Some were perfect for the local conditions, others were exotics, but the people were delighted with the gifts. Each family received around twenty plants. They didn't all survive, as one woman said, *'because some of them wouldn't survive in this area'*, but the natives, wattles and melaleucas were most appropriate. She said *'that did quite a lot for people down here because they felt somebody was trying to ... somebody cared about us'*. Another "plant" story was told by the redevelopment officer who organised it. He had recognised the love of nature and the effectiveness of flora and fauna as a healing force. His Operation Greenthumb aimed at replanting all the house blocks. This was done with the cooperation of groups such as Lions, Rotary, Apex, the Freemasons, and the Royal Horticultural Society. He put together a committee, obtained some funds, and on one single weekend, with hundreds of helpers, they put in one hundred thousand trees. He said:

> *The logistics for this were unbelievable. A Royal Hort. person went to every block to site the trees. Everybody could choose up to four trees, say two flowering gums and a red gum and something else. Every one of them had to have a hole*

> *dug, a nutrition pellet chucked in the hole, then the tree and then covered, and then a bucket of water. And there were thousands of the bloody things, and that was done in a single weekend. It was just fantastic.*

He added, *'God knows what happened to the trees. I suppose they grew'*. Soon the regreening began in earnest. One woman, an ardent nature lover, said:

> *Incredibly, as soon as we had some rain, the good old gum trees started to shoot out a few leaves. Within a couple of weeks after the rain, there it was, just this beautiful green. And the grass trees, not to be out done, blackened stumps and out from the tops shot the little green leaves and before long, these wonderful flowers, because they only ever flower after fire. Long kangaroo tails, I saw them when they were covered in little flowers and this of course created food for birds and ants and insects. All the stalks were covered with millions of little flowers with nectar and so on and they would have been the first plant to produce this kind of food.*

This same woman discovered a very rare and precious orchid after the fire. It was considered that the heat created the conditions for the germination of this flower, which drew hundreds of botanists to the area. One man commented, *'they thought it was probably as a result of the extreme heat which burnt four inches deep in the ground, the fire which had brought this thing that had been thousands of years just sitting there, this tiny little orchid'*. He was in awe of the moods of nature, ferocious and destructive at one moment, creating this fragile rare bloom the next. Another woman spoke of seeing the first green shoot. She said she was sitting in her home, the only one left in her area, looking out at all the black. She said:

> *I went out there for some reason and looked across and saw a piece of green leaf coming through on a dead tree and that was when I said, 'Right, that's it, I'm just going to get on now, nature's taken over and starting to all come back, there's nothing to worry about, just go and get on'. And that's what I did.*

This woman spoke of going over to touch this new green shoot and of hugging the tree and weeping with the joy of nature coming back. She had never thought deeply about, let alone articulated, such a sense of connectedness prior to the fire. Since the fire she has come to know and understand the deep meanings that nature has for her.

And then the birds came back. One day a woman was washing the black from her windows when she heard the sound of rosellas. One of her friends remarked that it would be worth living in a place like this for these beautiful birds, but another friend said *'No, no, I wouldn't live here for that, I wouldn't live here'*. That she said was the difference between her and this friend. She said *'I've really got to love it here'*. No fire would ever deter her. The big difference, she thought, as she looked back on friends who came through the fire and who stayed, was that they love the place. She said, *'they love the bush, they love the sea, they love the beach. I think they are the ones that stay...'* Another woman commented on the return of the birds. She said she waited so long for them to return, and when they did, it was in droves. She said, *'all our trees were just full of birds, so I got going with the bread and the honey* *and the oats and all that sort of stuff. My husband put a box up out the back and we were feeding the birds and they were coming in by the hundreds'*. The sounds of the birds, the magpies and kookaburras in the previously haunted silence, was like magic.

A community health nurse found that she was quite *'tuned in'* to the stages of people's recovery. She said that there is a time when people actually move from what she loosely called *'seeing the black trees and seeing the green trees'*. She said:

> *I guess it depends entirely upon where you are psychologically. If you are moving on you will start to see the regeneration and the positive things, but if you are still back in being shocked about the situation, devastated about it, you'll still be seeing the pot holes in the road and ... the church hasn't been rebuilt and all those sorts of things.*

She acknowledges that there is much debate about what constitutes a coping personality, but she thinks that if you are a coper in life you will move through devastating experiences fairly well. If you're overwhelmed and very vulnerable and not generally a coper, you'll take longer and need more support. This seems to have a fine resonance with Antonovsky's salutogenesis and with the Mitchell & Resnick bell shaped curve.

Locating Meaning in the Event

Meaningfulness, from Antonovsky's perspective (1987), is the motivational aspect of an event. When one sees that life generally makes sense emotionally, problems are seen as challenges worthy of an investment of energy. When asked about what meaning they made of the Ash Wednesday bushfire so that they had the motivation to get back on their feet, many people said that they *'think it is Australian'*, that *'things happen'*, *'life is tough'* and basically Australians do just *'get on with it'*. One woman said, *'good comes from bad. We are prone to bushfire here and you have to accept that ... being in a place like this is worth it. Don't be bitter. Be sad, sure, but we are Australians, it's just nature'*. This notion of "being in a place like this is worth it" captures the essence of meaning for the majority of people interviewed. Nature was the reason for being in such a vulnerable place; it was the reason why they would never leave and it was responsible for much of their healing. The connections with nature, which saturate these narratives, led to the exploration of cosmology and ecocentric environmental philosophy, which in turn led to the major reconstructive work of this thesis. These are probably the most important themes that emerge from the work.

Many of the people who chose to stay and rebuild, whether permanent residents or holiday-home owners, shared a cosmological belief about dwelling in their space with all other things of the environment. They expected no favours from nature and they did not perceive their personal loss as more tragic than the devastation of their environment. Most decisions to remain in the towns had to do with this personal cosmology. One person said, *'there is an invincibility of nature and this bush environment. When a fire happens, it happens. We don't* *have to manage the fire, we have to manage ourselves and the things that are dear to us. You take the right precautions, you insure the house and then that is that. If you burn you burn'*.

In the rebuilding, role constructions were clear to both residents and workers. In the main, the men were practical, wanting to get on with the rebuilding. One social worker described the men as *'needing to go and hammer in a post or chop out the trees or whatever'*. They were frustrated because they had no tools to use, but they were ready. The women, in her opinion, *'needed time to assimilate, time to ensure that their families were alright, time to cope themselves, just to settle the adrenalin'*. She clearly saw the women reweaving the fabric of the community again. One of the State Red Cross managers agreed with this, saying that it is the women who take the responsibility of recovery in a community. *'Men'*, she said, *'are there brilliantly to do the practical issues, but it's the women who weave the fabric again'*. One of the nurses saw the transition in some women who, because they were managing the rebuilding whilst the men were returning to work, had to make decisions and became so well informed. One said:

> *some of these women didn't ever look back, it was a milestone in their lives that they had to become responsible for themselves, the family, the home: they had to negotiate with the builder; they had to go to the bank, often when the husband wasn't able to have more time off. So there was quite a change, a shift in the role, a shift in the balance of the marriage. Many of the women relished this and never looked back.*

And so they found meaning in their roles, their contributions to their community and their family, and, for some women, in their new found confidence.

The shared experience created bonds that have lasted through the years, and many find meaning in the depth of friendship. The woman who had sheltered overnight in the hotel, along with 200 other residents, while the fires raged outside, said *'I have a real bond with people that I shared that night with, that night in the pub'*. They had withstood this trauma as individuals, families, and communities, and the rest of the world could never understand. The community health nurses agreed with the residents' perception that the fire experience had the effect of bonding people. There is no doubt, one said, that *'going through a disaster and surviving it creates a much closer relationship'*. There is also an impression, however, that this bonding causes a rift in the community today, not particularly visible, but present. So many new people have moved into the area, and many residents interviewed said that those who did not experience the fire could never understand what it had been like to live through it and survive. The community health nurses say that locals do not want to talk about the experience with newcomers. One community health nurse who was present at the time of the fire, and still works in this area, spoke for other residents when she said that, *'anyone that didn't go through the situation is an outsider, can't possibly understand, and can't really identify with us'*. I gained a sense that I was being told I had been given privileged access, but that I should not consider that any amount of listening to their stories would really give me understanding of their experience. This is not to say that the community is unfriendly to newcomers, but there is a clear sense that they are not really a part of that deeper community which was forged from the shared experience of hardship and suffering. The townsfolk also recognise that many newcomers attend post-bushfire memorial services and that they do so out of respect for what the town and their neighbours experienced. Nevertheless, the more that newcomers, the "after the fire" people attend, the fewer the "before the fire" residents attend.

The spirit of those who worked tirelessly in all sorts of ways to help those burnt out in the fire created meaning for many. One man said, *'They* [the courage of the firefighters who died] *have given me a special strength'*. *'I thought I was really badly off'*, said another, *'we lost our home, all our stuff and the family pets but I have to keep reminding myself that we're still alive. We can start another day'*. Another woman said:

> *.. the other night we sat around and cried, not because we were feeling sorry for ourselves but because people have been so kind. We've seen a side of people we would never have seen if we hadn't been burned out ... but isn't it a shame that it takes something tragic like this to make people help their fellow human beings.*

A newspaper reporter agreed that it was a shame, and asked, *'where does it all linger in between times, this collective heart of humanity?'*

Many people found that the experience of the fire was meaningful for them in ways that were unexpected. After finding the courage to rebuild and to move on with her life without her husband who was killed in the fire, one woman said about her life now, *'Oh it's wonderful. I don't want to be anywhere else'*. She had just returned from a holiday and she said:

> *Over this past year in particular, it seems like things have changed more, which I didn't expect. I've grown in that I can celebrate my joy of being here and my freedom of living alone. I can celebrate that now which was unthinkable several years ago and I am grateful because of acknowledging that, being able to acknowledge it fully.*

She was the woman who said that she had learned, slowly and painfully to be sure, but she learned how to be with loneliness in a way that left her powerful.

Because of the positive gains, many people wished to keep symbols of the fire and remnants of their lives before the fire. One family have an exposed face of a burned pole that they left in the garden as they built their new home. Others have relics on display; many have kept the newspaper clippings from the time, or photographs of themselves *'scrounging through the rubbish'*. They say that these relics are *'part of our lives and something we've built up from'*. They are precious reminders about the fire and about their own resilience. The people who participated in this study identified the bushfire as a significant life event that produced many stressors and tensions. Although for some the tensions prevailed, and they were unable to remain, those in this study found that they had the ability to cope and to remain, getting on with their lives. They were able to make sense of the fire as an inevitable risk that goes with the territory; they located the resources to manage the tensions and perhaps most significantly, their relationship with their environment provided them with the motivation to work to restore their lives, their homes and their patch of dirt.

The Disaster Relief Workers , Negentropy and the Sense of Coherence

The analysis concerning the sense of coherence, with its core components of comprehensibility, manageability and meaningfulness revealed some interesting insights into the experiences of the disaster relief workers. In exploring their constructions, they experienced a curious blend of grief reaction, mixed with pleasure at the memory of work well done, and, for many, a desire to be involved again in a role that was so very different and rewarding. By the very nature of their work, with its intimate contact with people through long hours over many months, some of the relief workers had the opportunity to gain insights into how the region fared after the fire. Just as they had been able to gather awareness of what had caused great pain to the people, so they were able to understand what was helpful. Some of this was knowledge gained through their own professional skill and experience, but each person gathered more information about what was useful as they interacted with people. So they were able to utilise the knowledge they had, to think on their feet as unusual or never previously encountered situations arose, and in addition, took with them from the experience more information that would stand them in good stead in future disasters. The experience reconstructed their role understandings and abilities.

Comprehending the Role

A bushfire in this area was certainly seen by the relief workers as predictable. Those who lived in the town had, in the main, experienced bushfire before, both as residents and as health workers. Even for those who came in from elsewhere, who had never experienced bushfire before, it was not difficult to comprehend such an event happening and to predict many of the tensions that would result from it. There was therefore a shared sense of comprehension about the event.

What also made sense to the relief workers was their own role in assisting people with recovery. Each person had a role philosophy and a belief that his or her contribution would be relevant. The community redevelopment officer, for example, believed that part of his role was to encourage the community to see what strengths they had and to promote a positive perception of the town in its recovery. The psychiatric nurses also had skill and expertise that they brought to their task. They knew that people in grief reactions would need personally-tailored consultations. These people knew that if they could give people the time and attention that they needed, appropriate to the stage they were in, the crisis would be far more likely to resolve. They believed that part of their role was to educate people to understand was constitutes normal grief; to trust that their bodies and minds would tell them what they needed to be healthy.

Part of comprehending the role is knowing when to go, and though, as previously indicated, some had trouble with this, others were prepared for the task. The community redevelopment officer felt that it was time to leave probably about a month before he actually went. The department decided that he should stay for one more month to make absolutely sure that everything that could be done for people had been done. He said:

> *... the key for me was that by then I couldn't think of anybody that wasn't in a house, there were no calls for assistance, no more calls on the emergency relief fund and all community groups that wanted to reestablish themselves had done so. And I sensed that when I popped in to visit people to see how things were going, that I'd now got to the stage of intruding on their day to day life, that there was no longer a place for me there. It was finished.*

He then said that he doesn't think he will ever know what he really achieved there, but he '*felt ok*' when he walked out, and he thinks that was probably all he needed to know.

Managing the Role

In terms of manageability, disaster workers were a resource for others and were used for a variety of things with varying degrees of intensity. Depending on their orientation, disaster workers saw people as either needing practical help to get on with it, or needing specialised skilled help, as from health professionals, for example, in order to cope. Each person expressed some satisfaction in their ability to "rise to the occasion" having complex skills which they were able to put into practice to good effect.

Part of managing the role had to do with identifying and understanding the tensions present in the community and predicting the likely phases in grief reactions that people might face, so that they could act as effective resources for them. Through their professional education and experience they were variously prepared for the ways in which townsfolk would react to the fire experience, so when it occurred some were more ready than others. Beyond the frozen shock of the night of the fire and the discovery of loss, one of the first emotions that the relief workers expected and located was the euphoria that swept the area. The psychologist called this the "honeymoon stage" and said that it is vital that relief workers know and understand how people get swept up in the fervour of determination to survive, to rebuild, to carry on. It may be a time of denial of reality: that staying in the town is not necessarily the best decision to make; that building exactly what existed before may not be the most suitable choice. One of the social workers described this euphoria as *'a huge mateship thing, this 'hey we're in this together, we're going to help each other'*. Having experienced this devastating event together, they share a feeling that no-one else understands – a sort of *'us against the rest of the world'*. She told a story from a previous fire experience about a man who, caught up in the honeymoon stage, rebuilt in the same place. Five years after the fire, this man learnt to fly a plane. Ten years after, he realised that he had been looking for ways of escape, and he realised he simply didn't have to be there any more, he could go ... and he did. It took him ten years to feel free of that community will-to-survive. The psychologist identified the role of the relief workers as informing the community of what is happening to them; in particular, to warn them that it is not a stage that lasts and that clinging to it is unhelpful. Lament at the passing of the euphoric stage had not been identified by the townsfolk in this area, although it no doubt underpinned much of the conflict. Since the relief workers here did not work through groups or organisations or conduct meetings, if they addressed this at all, it was with individuals. Perhaps attention to this phenomenon through group means may have averted some of the problems.

Conflict was one aspect of the post-disaster experience that all relief workers had experienced in some form. Again, it was the psychologist who explained that there are many reasons why people hit out, why conflict arises. Some of it, she believes, can actually be anticipated and managed, some can be avoided by careful planning of services. This woman believes that part of sound disaster management is to look for conflict emerging, alerting people to the fact that this is a fact of life following a disaster, but helping them to understand the process so that it doesn't become personalised into relationships and which, if unchecked, can go on for generations.

The community recovery was mostly done in private. The townsfolk wanted to put a zone between themselves and the rest of the world, to narrow their boundaries in the Antonovskian sense, so that they could nurse their wounds and manage their healing together quietly, gently and with as little visibility as possible. Most of the workers understood the desire of the townsfolk to care for themselves, and to be allowed to "just get on with it". They understood that people wanted to have the so-called outsiders, those relief workers who came in to help, leave the area as quickly as possible, although this did cause some of them some confusion and hurt. The redevelopment officer expressed his understanding of the situation as being like *'when somebody dies, you really only want your family around, you don't want people coming to look'*. This man set some interesting goals for himself: to be as useful as possible; to leave as quickly as possible; and to help the community to establish itself again so successfully that he would not be missed when he left. This seems to sum up what those experienced in disaster work believe should underpin all of their efforts.

Whilst the ways in which they could act as resource people to others was important to the relief workers, so too were the ways in which they re-energised themselves, managed the entropy. They needed both an outlet and input. For some, the relative invisibility of what they did was a problem. One said:

> *... it's easy to say people need toilets, it's a very tangible thing, it's easily achieved and people get a sense of satisfaction out of doing it, whereas setting up a community support process is amorphous. You're not quite sure what would happen if it wasn't there. It's very risky stuff in lots of ways and there are no paths and no guidelines and you're open to criticism from every group in the*

> *community. It's a much more difficult task, and yet one which is at the heart of recovery for any individual or community .*

She was well aware that the work that she and others like her did, was very important, but there was less recognition and support for their work and thus less energy being injected from outside. Often their reinforcement had to come from each other or from within. Sometimes, however, a resident would arrive, such as the elderly woman who was so vilified by the community for her conservation interests. The outreach worker caravan was parked opposite her home and each morning she would unlock the caravan and make sure the hot water flask had boiling water in it and that there was a supply of fresh milk. She brought tea and coffee or cakes, wanting, as a social worker said, 'to *be good to us, wanting to give us what she could*' in return for the work that she recognised they were doing.

The outlet was often embedded in humour – what one described as sick, black humour where, for example, they told each other jokes about 'crispy critters,' the people burned in the fires. These were never shared with the community, being clearly recognised for what they were, a release valve, an acceptable way of saying unacceptable things and expressing unacceptable feelings.

Another way that the relief workers restored their energy, was one that was shared with the residents in the community – that is, the enjoyment of nature and the energy they obtained from the regreening of the bush. One of the local doctors said that for him this land *'is where the soul is. I mean this is special country so your soul very quickly gets lost in it'*. A local community health nurse agreed with this, saying that it was the ocean and the surf, the bush, the heath, the wattle and the native birds that she loves. It is so full of childhood memories for her. She spoke of overseas trips, comparing the scenery to home, and she is convinced that there is no place in the world as beautiful. One did not have to be a resident, however, to see the beauty of the place, despite the burn scars that were everywhere. One of the social workers said that whenever things got too much for her, she would lock the caravan, get in her car and go for a brief drive around the forest and drink in the silence and the peace. That would restore her spirits enough to go on with her work, so even the burned bushland was negentropic for some. The community health nurse who spoke of *'seeing the black trees and seeing the green trees'* considers that the change in what is seen constitutes a major turning point. Many people, residents and workers alike, spoke of nature and the regreening as a turning point. The Red Cross manager described going to the top of a mountain after the fire when it was completely burnt out. She said:

> *It was very eerie but there was great strength to be there, like the trees are so insignificant to the earth, they will grow again. It was the earth: still there; still strong; still under your feet. And the paths were still there, the road was still there. That was magnificent. And I went up there when it was brilliant sunshine and I could hear the crack of the blackened trees as the timber had heated and expanded, I could hear these enormous cracks on a very quiet day, just sitting there listening to it. There was no rustling of leaves because there weren't any*

> *leaves. And then to go there when the fog was in and it was very eerie, very ethereal being there with that lovely fog in amongst the trees, that really ... I was really captured by that; it was fabulous.*

The redevelopment officer considered that people really did feed off the regrowth of vegetation. As he said, the bush was one of the reasons most of them were there in the first place. He described it as '*like having great pride in a head of hair and then somebody shaved your head. I mean you just don't feel good until it's grown back again*'.

The trees started to sprout green leaves only a week after the fire. Health professionals noticed a change in outlook with some of the people. A psychiatrist observed '*not all of them, but some people ... even those who were living in makeshift arrangements saw these green leaves sprouting, they said nature is signalling to us to begin all over again. If nature is doing that, we ought to do that too*'. A mental health nurse also thought of the environment as significant. He noticed that when everything greened up again, people were happier. He said it was as vague as that, too. '*In the beginning*' he said, '*it was black and ugly and then the birds come back and there was noise again. I'd say that was probably one of the most significant things for me*'. He found the black, everything-gone feeling to be '*quite weird, and very strong*'. Years later he returned to look around. He had expected to find it barren and dead but it was all green again, and apart from some scarred tree trunks, there was no evidence that a had fire ever occurred.

Locating Meaning in the Role

Part of the sense of meaning for these disaster workers came from their perception of how helpful they had been, how skilful they were, and from how different this work was from that which they usually did. The mental health workers had many stories of people for whom the provision of mental health services made a significant difference. One extremely distressed family was able to get such support from the mental health nurses that then they, in turn, became key support people to others in the town.

When one of the social workers was asked if she felt changed as a result of the experience, she answered that she knows that she is more capable of managing difficult events than ever before. She discovered her ability '*to rise to the occasion of a catastrophic emergency. Not just families in an emergency situation, but a catastrophic emergency and I was able to coordinate, without any training, without anything*'. She found she used quite different skills from those needed for her normal role in social welfare. She did not need to be particularly assertive or controlling, and she found it so different to be assisting people who asked for help, rather than her usual clients who come to her because some authority told them they had to. It was also nice to know that the residents did not expect her to know everything, and that some of them even took care of the carers. And it was unusual and nice to get a thank-you and know it was meant. This woman said that she didn't mind the twelve, or thirteen hours a day. She was exhausted when she finished, but she also had a sense of loss when it was over, a sentiment expressed by most of the outsider group of relief workers. Suddenly she had to come back to everyday life, after riding for some time on what she called *'an adrenalin high'*.

Another social worker compared this outreach work to her usual role. She found it to be very tiring, very emotional, very demanding work but tremendously rewarding. She said, *'It was wonderful, I loved it'*. The other social worker agreed, saying that *'it was, to put it bluntly, an exhilarating time'*. People remarked on what they had learned that would help them in future disaster work, thus strengthening their sense of coherence. At least one, a community health nurse, recognised her connection to her community, her understandings of the needs of the residents and the exquisite skill that she demonstrated in walking some people through the experience and bringing them out the other side to the everyday again. Her investment in this community holds deep meaning for her. The community of which this woman is a member, held a tenth anniversary celebration; she did not go, partly because she found the memorial services changed as more and more people attended who were not part of the community at the time. Also, she says that she has her own *'personal celebration or commemoration or thanksgiving, whatever you like to call it'*. She reflected for a moment and then said, *'It's probably more a thanksgiving than anything else ...'*

The reaction that the relief workers had to being interviewed, and to reading the subsequent transcript, indicated the deep feelings that remain in respect of the Ash Wednesday fire. Every person, no matter whether they were local health workers or outsiders brought in; no matter whether they had sustained personal loss or whether they lived elsewhere and were quite safe from the threat of the fire, became emotional at some time in the process. The redevelopment officer said that he 'couldn't *believe what happened in the interview'*. At the conclusion of the interview, he went in to speak with his deputy director. He told him that he felt he had *'just been blown away: one minute I was chatting about the experience, next minute I'm right back in it'*. He said that it was just the same when he read the interview transcript a week or so later. He said *'I guess it never leaves you,'*, but when asked if the emotion was ok, he said *'Yes, yes it was'*.

Both the Red Cross manager and one of the social workers were surprised at their reactions: neither had expected that recounting their experiences would be so powerful. Both said that it was difficult to find themselves pulled so quickly and so strongly *'back in there again'*. Both, however, said that it was alright and that they *'probably needed to relive it'*, *'to let it out a bit'*. Another of the social workers, who had become quite emotional during the interview, said that she cried when she read the transcript, and realised that doing the interview, and especially, reading the transcript after, was the debriefing she had never had. Each person expressed a desire to stay with the emotion in some way; that it was healthy to be upset and to realise how important the experience of Ash Wednesday had been to them.

This chapter has presented the voices of certain residents as they describe what helped them to recover from their experiences of the fire. In addition, the disaster relief workers' voices tell of the day-to-day struggles with the business of outreach work and what helped them to manage their role. Of particular interest has been the presence of what might be described as the Australian psyche, which appears to be of major significance in the comprehension of bushfire and in meaning-making. This is manifest in a type of stoicism and in the use of humour in recovery – both of which were seen by the participants, certainly by the media, and by me, as typically Australian, and appears significant in managing traumatic events. Australians appear to use humour in an attempt to reduce the event to manageable size. Australian stoicism appears to be linked somehow to nature and the land. It would make sense then that such an attitude of stoicism would render nature and the bushland environment significant in recovery. Indeed in this chapter the impact of the recovering environment has been indicated as greatly significant to people's own will-to-recovery, and is part of the ecological cosmology to be explored further in this work.

There is no suggestion here that the environment is to be romanticised as a panacea for recovery, nor is it possible to generalise any effect of nature to bushfire in another setting, nor to other types of disasters. Indeed, it is timely to present the words of one of the social work outreach women who had experienced a flood. She said '*nothing was really destroyed, it was just not useable. I had all original recordings, some extremely rare. They were not broken but the mud was so deeply ingrained in the grooves they could not be cleaned. They were ruined*'. There was mention by a number of participants that bushfires at least took most things '*cleanly*'. One said, 'with *a bushfire things are destroyed completely, whereas floods leave water marks and mess and smell*'. About the aftermath of flood, the Red Cross manager said that any disaster in any environment is terrible, but floods have that terrible legacy that nothing is ever the same again. In the fire zone, people's homes were gone, but for many their livelihood was intact, whereas the farmer in drought or in flood may well see the green buds in the trees, but there is no crop in the ground. The pasture has been ruined and all of the animals are dead. She said, '*I talk about spring as being a wonderful time, but right now I am thinking about what Red Cross might do as far as supporting people in Victoria affected by the drought, so I'm conscious of the fact that spring, which to me in my urban view is very different, means that there's been no winter rains*'. What is lovely to her constitutes a nightmare for others.

In addition, those who experienced the bushfire in inland communities have had a very different recovery trajectory from those at the coast. For the latter it was and still is always possible to escape to the water, and it is possible to look out over the ocean where there are no burn scars. For the inlanders, there was nowhere to escape to that was completely safe, and there was no aspect upon which to gaze that does not and will not, forever carry scars.

This chapter has been an exploration of the transcripts of interviews from the perspective of negentropy, salutogenesis and the sense of coherence. The chapter explored constructions initially from the perspective of residents and then from that of the disaster relief workers. Particular aspects have been highlighted as dominant; again, these have to do with role constructions and an embedded cosmology of ecological relatedness. The work now moves through a theoretical pathway, traversed because of directions highlighted by the narratives. Together, the narratives and the theoretical constructions will be woven into an ecology of healing. Of greatest importance in this work is the ways in which the narratives and the theoretical constructions are then directed to health care and to nurses in particular, as they go about their healing work.

CHAPTER 5

ANCIENT MYTHS AND COSMIC STORIES: HUMANS IN AN ENCHANTED COSMOS

The Aboriginals looked up at night and they didn't see the stars – they never saw stars. They only saw the campfires of their ancestors on their journey. The bright stars were ancestors who were not long gone; the dimmer stars were ancestors further on their journey.
E. Kneebone Creation Spirituality and the Dreamtime.

The study has, thus far, examined the narratives of residents and disaster relief workers who experienced and consider themselves recovered from the Ash Wednesday bushfire. Throughout the exploration of the fire narratives, contact points for later theory development were highlighted. This development commences here. Significant in the narratives were notions of place and space: the loss of homes and possessions and the difficulty of re-establishing a place that has the essence of 'homeness'; and recognising the connections that people have with their chosen environmental space, so that devastation of the bushland and wildlife caused as much pain as the regreening and return of the wildlife enabled healing. Because of the discovery that people in this study had an understanding of their place in the universe, connected to their special environment, much of the theoretical development builds toward an explanation of these concepts from the perspective of what is eventually labelled an ecological postmodern cosmology. This is a position that recognises the connectedness of all things in energy fields, so that people–nature relationships of pain and healing hold no surprises. To build this position it is necessary to commence with the concept of cosmology and to build an understanding of how cosmological thought has developed through time.

The theoretical exploration commences with ancient myths and stories of cosmology, establishing that human–nature connectedness has always existed. This sets the scene for exploring notions of cosmology from ancient to modern times, culminating in a perspective that not only establishes the ground for viewing the bushfire in a new and interesting way, but may also be extrapolated to inform nurses, nursing contexts and nursing processes. The myths and cosmological beliefs of antiquity explored in this chapter stem from such places as ancient Greece, Babylon, China and India. Following these, particular voice is again given to the myths of Aboriginal Australia. By re-examining cosmic stories, spaces are created wherein narrative may be considered for how it may, as it once did, present elemental questions about cosmology and human beings. Certainly, many of the examples of the narratives given in the previous chapters point to the beliefs that humans have about their place in the universe as part of, rather than greater than, nature, which is a component of a personal cosmology.

It is important to note, and it is stated occasionally in this chapter, that myths are interpreted and that interpretations are disputed. It is possible to present fascinating myths as though they are universal and timeless and it is not the intention in this work to imply that accounts of myth are unproblematic. Agreement on interpretation does not exist amongst experts; discrepancies are rife in the literature about myth, from the most fundamental plot outlines, to the relationships between characters, to the significance of the narrative in its entirety.

Cosmology — Pondering the Universe.

Human beings have always had a fascination for exploring who they are and how and where they fit in the universe. Munitz (1986:4) describes the human mind as having a ‘characteristic, persistent and irrepressible’ need for a cosmology – an understanding of the origin and structure of the universe and the place of human beings within it. Late-twentieth-century science has heightened this interest, but the search has existed throughout history, well before the entity called science existed.

A modern definition of cosmology is the scientific study of the origin and evolution of the universe based on investigation of the distribution of elements in the universe and movement of galaxies. This is a description based on current knowledge of astrological physics. A more historical account would describe cosmology as the branch of philosophy dealing with the universe as a phenomenon seen from a perspective which unites metaphysical speculation with evidence from scientific observation and measurement within some cogent framework (Flew 1979). Cosmology as a concern for origins and purpose, extends back further than formal philosophy, however, and even further back than science. Mathews (1991:11) describes a cosmology as concerned with the actual world in its outlines. A cosmology may include 'not only ordinary concrete items such as material objects but also forces, fields, minds, spirits, even deities, since all these entities are capable of being actual....'. With this description Mathews outlines a view which is both very ancient and, as will be seen as these chapters progress, very postmodern.

Munitz (1986:5) gives two motives for pursuing a cosmology. The first has to do with curiosity, 'a purely intellectual craving and sense of wonder ... ' about where the universe came from, how it started, what it is made of and what purpose it serves. The second purpose is to satisfy a need for understanding where humans fit in it all: to explore what forces created humans and for what purpose; to determine whether there is some great cosmic scheme; and to discover the goals and values to which we should be directing our lives. Munitz suggests that these motives have provided the impetus for the pursuit of cosmological understanding throughout history.

In chapter one, the effect of a view of cosmology as hospitable to humans was outlined (Mathews 1991:12). Mathews also gives the example of a community with a cosmological understanding of the world as hostile to human interests, imagining a world inhabited with evil spirits which feed on the energies of humans. It is not hard to imagine, she suggests, that people living in a world which so reduces humans should become pessimistic and exhibit low self-esteem, low expectations of what they may gain from their environment and low standards of happiness, achievement and self-realisation. How they may appease these malevolent entities would be their main preoccupation. Mathews makes the point that even a bad cosmology may be better than none at all, even if derived from myth and oppressive. A community with a belief in a hostile world may strategise and plan defences; at least there is an awareness of where they stand in relation to the world. In a society without a cosmological belief one would find confused, unmotivated people existing in a world that defies understanding. 'What are they to do in a world ... [to which] no natural directives appoint themselves[?]' (Mathews 1991:13). Self-interest becomes the only possible motive for action. The community under study here was not confused; evidence has already been given regarding how clearly they comprehended the event; they were not self-interested, closing in their boundaries and banding together to help each other as much as possible; nor were they unmotivated, finding meaning enough to re-establish themselves in the same space and to find ways of managing the ongoingness. Clearly they were driven by some sort of cosmological belief that had shared aspects, and a search for what that might be is part of the later focus of this work.

Mythology as Expression

Throughout the ages of human history, cultures have devised mythological stories of cosmology, to account for the origin and nature of the universe and of the place of humans within it. Societal order has been maintained through such myths, some of which are explored in this thesis. Myths are sometimes explained in Western modernity as merely stories, fictitious accounts or fairy tales, events that did not really happen. Some argue that they are ways of preserving an oral culture's past as cosmic legend (Callicott 1994). Others argue that they are 'the infantile products of undisciplined imagination and capricious fantasy' (Kramer 1961:7). To the originator, the conscientious teller and the reverent listener, however, they were never, and indeed still are not, purely fiction. Those who see myths as other than fiction argue that the myths of ancient peoples are:

> [a] profound achievement of the human spirit, the inspired creation of gifted and unspoiled mythopoeic minds, uncontaminated by the current scientific approach and analytic mentality, and therefore open and prone to profound cosmic insights which are veiled to modern thinking man with his inhibiting definitions and impassive, soulless logic (Kramer 1961:7).

Myths do come from imagination, but they are not fantasy: mythic images have a compelling authority that speaks to truth and guides cultural life. For writers such as Lévy-Bruhl (1926), Cassirer (1955) and Eliade (1960, 1964), myths act as mediators between the cosmic and the real. They are different from science and even from common sense; they are a part of the everyday life and of the broader world where they help to create order from chaos. Mythic narratives create a sense of security regarding threats from the unknown aspects of the world. The order that they create is not one of logic, but one of familiarity. Eliade (1964), in particular, argues that myths assure humans that whatever unfamiliar thing they are attempting to do, it has been done before, and successfully. All one has to do is to repeat some cosmogonic ritual and the unknown chaos will be transformed into order. Lévi-Strauss, on the other hand, argues that myths are indeed the stuff of intellect. He writes (1969) that myth is a language that serves to illuminate the ordered activity of the mind and to explain the apparent disorder of precultural existence. Lévi-Strauss argues that there has been a primitive inbuilt logic in humans throughout time. This logic interprets Freud's collective dreams, and this is what Lévi Strauss considers myth to be all about.

Biallas (1986) also outlines several functions of myths, exploring the works of Mircea Eliade, Joseph Campbell and Carl Jung. Eliade, Biallas explains, sees all myth as having to do with creation and with the human need to locate and commemorate beginnings. Eliade separates sacred from profane time, locating as sacred all that is to do with creation, and as profane all that man makes of creation. Sacred time can be recaptured and incorporated into modern life through recalling myth, through ritual, through reconnecting with a religious core and a fundamental longing for paradise (Biallas 1986; Eliade 1960, 1964). It is argued, in this work, that recapturing sacredness is a crucial aspect of an ecological postmodern cosmology. Joseph Campbell describes myths as symbols, stories and explanations (albeit often obscure) of truth. Myths direct mental energy. They are public dreams that shape culture and society.

Campbell (1987:3-61) explains that where myths were stories told for entertainment, they were taken lightly, interpreted as playful. Where other myths appeared in a more religious context, they were viewed as true and as a guide to living in a specific culture. Campbell writes that there is no human society that does not have myths 'rehearsed in liturgies; interpreted by seers, poets, theologians, or philosophers; presented in art; magnified in song; and ecstatically experienced in life empowering visions'. It seems, he ponders, that human beings are unable to live in the universe without some sort of mythical perspective. Campbell assigns four functions to myths: they generate a sense of awe about creation and life, indicating the tremendous power that lies beyond understanding and beyond control and addressing all of the fundamental mysteries regarding human existence; they provide an image of the universe as ordered and understandable in so far as current science has interpreted cosmology, dispelling notions of disorder and chaos and telling of boundaries of time, of place, of species, so giving a sense of familiarity and comfort; they support the current social order and assist people to integrate within particular groups, instilling the values of a society and directing ritual and routine; and they guide people in their own creative development through the inevitable struggles and crises of living, to spiritual fulfilment. The previous chapters can be seen as rife with mythic expression.

Campbell develops his four functions of myth with the framework of what he calls a monomyth (Biallas 1986; Campbell 1987). In this, he synthesises various myths from around the world into one myth by linking together 'the heroes of various cultures and traditions who set out to answer the call of adventure. The call of life itself'. The monomyth which encapsulates the four functions is related by Biallas:

> Impelled by some crisis, the hero leaves the protective but unchallenging milieu of home and sets out feeling he will be incomplete unless he does so. The hero has embarked on a quest for separate identity as a person of exceptional courage and wisdom. After crossing the threshold of the unknown, the hero has to perform some task, perhaps slaying a monster, rescuing someone, gathering up a hoarded treasure, or fetching the water of life from the world's end. Vulnerable and facing the possibility of failure, the hero generally achieves his task. Occasionally, the hero is reluctant to return to his everyday world, but most often

> the hero does return, transformed. In the homecoming he shares the fruits of his labour, his boon or reward for the task, with the community (Biallas 1986:29).

All of this, to Campbell, signifies the spiritual journey that is the task of humans. By taking part in myths and especially in the monomyth, a path is available for individual growth, particularly in the spiritual domain. It is not too difficult to place some of the residents into this monomyth – in particular, the woman whose husband died trying to save their home. There are others, but space limitations have precluded detail of their stories sufficient to see this clearly.

Carl Jung is the third scholar of mythic studies explored by Biallas. Jung's interest in myth, as a psychiatrist and psychologist, was in the expression that they allow to unconscious processes. This expression is in the form of dreams, which do not resemble conscious experience, but are remarkably similar in all people. Jung held the belief that all people have what he termed a "collective unconscious": that all people hold a deep subconscious memory of all that has gone before, the entire heritage of human evolution (Biallas 1986:31). This collective unconscious connects all people throughout all time and across all space. The dream entities that regulate forces of the psyche, Jung labelled archetypes. These archetypes are gods, heroes and saviours. Recognising and appropriating different archetypes leads to reconciliation of the polarised aspects of the personality and, hence, to spiritual growth. These polarised aspects are such things as good and evil, order and chaos, Yin and Yang, and part of our development lies in attending to both poles rather than leaning toward one and neglecting the other. Myths help illuminate the underdeveloped pole. One of the fascinations that Jung found in mythic narratives was the similarity of stories that occurred in myth, no matter where the myth originated. This spoke to him of the universality of human experience. It seems that myths are either about the beginnings of the world, including the beginnings of life, or they are about ways in which people live their lives. The former are those with which we are concerned in the first part of this work: they are the creation, or cosmogonic myths.

Combining the arguments without privileging any particular voice gives a picture of myth as having a function embedded in a combination of reason and emotion, distant from what Eliade calls the "profane world" (the world of everyday life) but not in opposition to it, and transcending time and space. They tell of origins, of purpose and of necessary action. Myth as the expression of cosmology is the core of this work.

Ancient Myths and Cosmic Stories

It seems that the earliest recorded mythology comes from the Sumerians, dating back to 3000 BC. Prior to that time, myths circulated as oral accounts. How far back oral traditions go is unknown, but, as Jordan writes, it is fascinating to consider just when humans commenced perceiving their own spirituality. Just when, he asks, 'did we first contemplate an unseen but discernible world existing in tandem with that of sight, smell, touch and hearing?' (1993:

viii). Jordan speculates that such a coming to question must have been a profound change, since it altered the course of early human struggle from one of survival and natural selection to one of inner direction to goals that may be considered as spiritual. Originally, people wove stories of gods and heroes, their origin and end, their experiences, their successes and failures, their adventures and their acts of both creation and destruction. Many ancient myths describe how the universe began, what the world is made of, how humans came to populate the world and their purpose here, collectively and individually.

Mythic narratives seem generally to indicate that before any ordered universe came into existence there was a 'disordered and antediluvian chaos' (Jordan 1993:29). Eliade (1964) describes this as the sacred time of primordial events, differentiated from the profane time of everything that follows the end of creation – that being what humans make of it. Such chaos is described variously as a featureless void or as primordial waters. Within the void or the primordial waters, or perhaps from what is sometimes described as a cosmic egg, a single entity emerges. The entity itself may be gendered or asexual, although many traditional cosmogonic myths tell of a female, earth mother entity which is responsible for creation. Jordan (1993) writes that Polynesian myths locate a primordial female Vari-Ma-Te-Takere, who lives at the bottom of the world coconut. Ancient Greeks told of Gaia, the earth mother, who came from the primordial chaos, whilst the gnostics told of the chaos giving rise to a powerful intellect with a female persona which they called Sophia, or Wisdom.

The notion of one or more timeless and powerful deities, who separate heaven and earth from the timeless chaotic void, is the stuff of most creation myths. Life is either created by the deity or springs from other sources such as seeds, bodies of slain heroes or landmarks. Some myths indicate the sacredness of the things created or the timelessness of beginnings. Heaven and earth are themselves often gods who give birth to the next generation of gods. Sometimes the space in between is the next-generation deity. Other myths have earth, sky, celestial forms, seas and rivers and so on as second-generation deities. Of the myths depicting spontaneous rather than sacrificial creation, some are a result of sexual union between male and female deities; others occur from one god without the need of a partner. Biallas (1986) describes the belief of the Aranda people of Australia who tell of a god delivering the universe through his armpit. He also relates the Hopi Indian myth where the god Sky Father and the goddess Earth Mother lie close together and, using rain for fertilisation, produce 'as children all the natural forces and creatures of the world' (1986:45). Eventually all living things are seen as sacred, descending from these deities, indicating the interconnectedness of all things, which ultimately stem from the same organic process and belonging as they do to Eliade's notion of sacred (creation) time. This, of course, is not the situation in the biblical Genesis where a great metaphysical gulf exists between the one God and all of His creation (Callicott 1994).

Many myths describe how heaven and earth are one and must be split apart in order to create the space in between where living things can exist. Sometimes the splitting is spontaneous; in other myths it is forcible or sacrificial. An ancient Akkadian (that is, Babylonian and Assyrian) creation story, the *Enuma Elish,* was reworked from even earlier stories in order to 'celebrate the ascendancy of Babylonia and its deity Marduk' (Ruether 1992:17). This reworking tells of a time when the heavens and earth had not been named and all that existed was chaos, sometimes represented as primordial oceans. Within or representing chaos were the ancient Mother Goddess, Tiamat, and her minor consorts. Eventually gods were born but the noisy gods annoyed one of the minor consorts called Apsu, who decided to destroy them. One of the gods, Ea, the god of wisdom, managed to rip off Apsu's crown, placing it on his own head. He then killed Apsu and assumed ascendancy over the cosmos, taking a wife and creating a son called Marduk. Tiamat is enraged over the death of Apsu and wages war on Ea and his son. Marduk was very brave and managed with the help of renegade gods and monsters, to kill Tiamat. He split her corpse with a sword, creating heaven and earth from the two halves. He created stars as residences for the gods, gates through which the sun could arrive and leave, and caused the moon to shine. He created humans from the blood of a slain rebel god. Then he rested and a great feast was held to honour him and his powers (Kramer 1961; Ruether 1992). By way of illustrating the disputed nature of mythic interpretation, Jordan (1993) also gives an account of this myth, commencing in the chaos, before any ordered cosmos had come into being. He describes the myth as appearing in the form of a hymn to be chanted, writing that 'at least one Babylonian temple tablet instructs that it should be recited on the fourth day of the New Year festival in the month of Nisan (April)' (1993:42). The myth as a chant begins:

> *When the skies were not yet named*
> *Nor earth below pronounced by name,*
> *Apsu, the first one, the begetter*
> *And maker, Tiamat, who bore them all,*
> *Had mixed their waters together, but had not formed pastures,*
> *Nor discovered reed beds;*
> *When yet no Gods were manifest*
> *Nor names pronounced, nor destinies decreed,*
> *Then Gods were born within them.*
> (Jordan 1993:42)

The story of Tiamat and Marduk is similar in Jordan's account, although the cause of enmity between Tiamat and Marduk is different, as is the account of her death. In Jordan's account Marduk flings a whirlwind into her open mouth which swells her belly. He then fires an arrow which penetrates her heart and splits her in two. Creation proceeds. In yet another interpretation given by Ruether (1992), Marduk captures Tiamat in a net, kills her with an arrow through the heart and then 'casts her down, and treads upon her lifeless carcass'. He then splits her in half, raising one half as the sky in order to seal off the waters from above and fashions stars and planets in the underside of her body. He then kills the second consort, Kingu, mixes his blood with clay and fashions humans to be slaves, thus releasing all of the gods for leisure.

In an ancient Chinese myth, which Bodde claims is the only clearly recognisable creation myth from China (Bodde in Kramer 1961:369-405), heaven and earth were originally undivided, appearing as an interconnected sphere named hun-tun, within which was a being called P'an-ku. The term hun-tun described the state of chaos thought to reign until an organised universe evolved. Biallas (1986) also describes primordial beginning as chaos in the shape of a giant hen's egg. Eventually the sphere [egg] split. From the sphere, what was bright formed heaven, called Yang, what was dark formed earth, Yin. P'an-ku was the space between them with his feet on the earth and his head resting against the sky, both linking them together and holding them apart. Biallas notes that he stood this way, growing taller and separating them further for 18,000 years, until he was sure that they would stay apart, and then he lay down, and whilst resting, died (1986:40). Later stories add that when P'an-ku died his parts fashioned the things of the universe: the wind came from his breath, his eyes became the sun and moon, his limbs the quarters of the earth with their mountains. Various other parts formed thunder, rain, rivers, stars, minerals, plants and animals, and finally, the parasites on his great body became humans. So, in the Chinese myths, like many others elsewhere, the pursuit of order from chaos is identified. Nature is divided into Yin, the feminine producer of finite things, and Yang, the male principle. These two combine to form ‘the eternal Tao’ (Biallas 1986:42). The Yin and Yang blend, not as antagonists, Biallas writes, but as ‘alternating aspects of all reality, providing a pattern of growth and decline, where everything is balanced by its opposite’. The Tao is the eternal and unchangeable Absolute Reality which pervades the universe, described as the nameless principle that lies behind all of the events of the world.

W. Norman Brown (1961:279-326) describes myths of ancient India, amongst which are many stories of creation. Brown asserts that the oldest creation story from India is found in the Rig Veda, a work of ancient hymns. His reconstruction of cosmogony from the hymns reveals this story: the original beings were Asuras, thought of as “living powers”. One of these powers was called Vritra who has followers called Danavas. Another lineage of powers was called Adityars. The Danavas and the Adityars were at war, with the Adityars appearing less successful. They required a champion, and found one in the appearance of Indra. Quite who Indra was is uncertain, but it is thought that perhaps he was the progeny of the united heaven and earth. Indra was at first hidden, but after locating a powerful drink, he became mighty, and caused the split between heaven and earth, remaining in his mighty bulk, between them. Indra fought Vritra and eventually won. From the broken back or split belly of the slain Vritra, came cosmic Waters — pregnant females who had long yearned for freedom. The Waters gave birth to the sun. Thus emerged the sky, the earth, and the atmosphere — water and the sun for heat and light.

This mythic story is interpreted as indicating a chaotic beginning which, whilst disordered, contained the fundamental elements that were required to create a universe. Some of these elements were inert or inactive. Forces of expansion and release operated to separate earth from heaven, but were struggling against inertia. Ultimately power (Indra) was generated through heaven and earth, which split them apart, overcame inertia, releasing the powers of water and the sun, and creating order and harmony in the cosmos. The story does not end there, because in order to maintain harmony, sacrifice was required. The Powers created humans so that both could offer sacrifice forever. Humans and the gods worked together to maintain the power to overcome constant inertia and the constant trend toward disorder (Brown 1961). Such detailed metaphysical rationalisation of the myth would not have been recognised when the myth originated, but evidence of metaphysical interpretation exists in early writings which appear to be challenging the interpretation or refuting it in favour of others. It is interesting how ancient interpretations strike familiar chords with developments in postmodern science to be explored later in this work.

The ancient Hebrew creation story has some similarities with others. Ruether (1992) describes how in this story God coexists with the primordial chaos and is in control of the process of creation. There is a description of the shaping of the cosmos, starting with light, then to the separation of sky from waters, then on to land and creatures. The creation myths of Genesis stem from these, and are perhaps the most well-known myths, interpretations of which still inform Christian communities today. In the James 1 version of the Bible, the world was created by God who is alone in the void. He created the world in six days; on the seventh He rested. Genesis commences: 'In the beginning God created the heaven and the earth' the earth was dark and formless until the spirit of God stirred the waters, creating light which was called day, and separating light from the darkness which was called night. God divided the waters, creating heaven and earth. God caused the earth to bring forth plants and the heavens to bring forth the sun, moon and stars. He created seasons, fish in the oceans, birds in the skies and animals on the earth. Eventually, on the sixth day '... God created man in his *own* image, in the image of God created he him; male and female created he them' (Trinitarian 1831: Genesis 1:1-31).

None of this creation work is permanent, however, and myths give apocalyptic visions of the end of the world. These may range from outpouring of the primordial waters (from the drain hole into which it disappeared when time began) in cataclysmic flood, to fire and devastation. Jordan describes traditions from Christianity's day of judgement, to the Nordic myth of Ragnarok; the destruction of the world, from the Hindu God Vishnu's predicted destruction of the age of Kali, to ancient Egypt dealing with the suitability of souls for life after death, as evidence of this widespread belief in an end of the universe. Many myths tell of the constant birth, death and rebirth of the cosmos. The destruction is often a prelude to the creation of a better world. Often, however, the matter is simply cyclical and no better way of living will stop the inevitability of destruction and rebirth; in all, a remarkable preview to postmodern scientific myth.

There are creation myths available in writings from other ancient lands: Egypt, Iran, Japan and Mexico for example. In light of the narratives important to this thesis, however, it seems most appropriate to turn to those mythic stories that emanate from Australia. Australia is a land steeped in mythic cosmic stories.

Ancient Stories of Aboriginal Australia

Aboriginal cosmology is about the Ancestors and the legendary Totemic Beings who traversed the continent singing "things" into being: rocks, plants, birds and animals. This is the Creation Story, the Dreaming.

Although Aboriginal Australia is not one cohesive group with similar religious practices, social practices and customs, there are features which are fundamental to Aborigines of any area. Dance, art, and ceremonies are some features whereby, although regional differences exist, the activity itself is common to all. Another is the notion of the Dreaming or the Dreamtime. Charlesworth (1984) gives some of the Aboriginal words that predated the adoption of the western term Dreaming: *altjiranga* is the Aranda word that refers to the time when Aboriginal ancestor spirits shaped the world and taught the law for the way life was to be lived. *Altjiranga ngambakala* means "having originated out of one's own eternity, immortal, uncreated" — a concept that is fundamental to the meaning of Dreaming. 'Altjiranga rama', he writes, means 'to see or dream eternal things' (Charlesworth 1984:9). Thus the Dreamtime has to do with how the uncreated and eternal ancestor spirits created the physical world, how the spirits of ancestor heroes remain in the land both in places and in things, how humans are to live on and with the land, and finally, the life purpose of an individual person.

The stories of the Dreamtime are told at night, around aboriginal campfires. Fire, like the earth, the land, is part of aboriginal culture. Earth is mother, the giver of life, so life and land are the same. Stories of the Dreaming are not only ancient stories, they are modern day stories and they form a continuous concrete and powerful presence in Aboriginal life. Berndt and Berndt (1988: xxvi) describe this as mythology which is vibrant with messages about a 'past-in-the-present'. The mythological stories are believed both by those who tell them and those who hear them since, in Aboriginal terms, as Berndt & Berndt (1988:4) point out, 'they embody truth'. Some stories are secret-sacred and may not be told except to kin of certain gender, at certain times and in ceremonies imbued with sacred ritual. Other stories are *yumu,* or inconsequential; not that they are unimportant, but they are less important than other stories (Berndt & Berndt 1988). The stories of Aboriginal mythology told here are gathered from anthologies whose authors indicate that they may be shared. Once again, these are narratives from an oral culture, most of which have been interpreted and published by non-

Aboriginal Australians. In addition to this removal of the narrative from its source, the narratives themselves alter in interpretation from peoples of one spirit land to another: thus similar stories are told but with essential differences from place to place. The narratives are retold here with the understanding that the interpretations given are particular.

The beginning is timeless: it is prior to living memory but there is no way of determining how far back in time it reaches. In the beginning there was formlessness, but not a void, since the spirits created things from substances already present, probably land and water. Whatever existed was, like the spirits themselves, also timeless. The world was as if suspended in a passive state until it was brought to life by the spirits. The creation spirits arrived at different times and from different places. Some say they came from over the mountains, others say they came from below or above. Maddock (1984:24) describes how spirits left parts of themselves behind to form features in particular parts of the land: 'here, an eye as a waterhole ... or a backbone as a ridge ...'. Berndt & Berndt (1988:6) write that, having turned parts of themselves into features of the land, ancestor spirits imbued the land with social relevance. Some of the spirit ancestors gave birth to people and located them at particular places so that they could call that place theirs for ever. Berndt & Berndt have gathered hundreds of mythic stories which tell of creation and of establishing culture and ritual. One story is typical of those that have to do with creation spirits and formation of nature:

> ... the two Djanggau Sisters, Daughters of the Sun, came in their bark canoe with their Brother from the mythical land of the dead, Bralgu, somewhere in the Gulf of Carpentaria. They travelled from east to west on the path of the Sun. When they reached the Arnhem Land mainland they created special trees complete with foliage and birds. They shaped the country, named places, interacted with other mythic characters, and instituted the traditional customs of Aborigines of this cultural area. Most importantly, the two Sisters gave birth to the first people, the 'children of Djanggau', and put them in appropriate places. Then they disappeared westward into the setting sun. In Western Arnhem Land too, the fertility Mother Wara-murung-goindji with her husband Wuragag and some other mythic being, gave birth to large numbers of first people (Berndt & Berndt 1988:16).

The spirits also created animals. In an Aranda dreaming the bandicoot ancestor, Karora, lay covered with earth and water. Whilst he slept, bandicoots emerged from his armpits and navel, through the soil into life.

Other stories tell of the creation of oceans, of storms, and lightning. Berndt & Berndt (1988:44) tell of Marlgaru and Yaul, two brothers who travelled to the south coast from the desert. The older brother had a water bag which he refused to share with the younger brother. When Marlgaru, the older brother went hunting, Yaul, who was dying of thirst, searched and found the bag. He pierced the bag spilling the water over the land. The water spread, forming the Southern Ocean and drowning the two brothers. Stories such as these do not only tell of creation but teach about conduct and behaviour. Misfortune comes to those who are greedy and do not share. The two brothers became stars in the cosmic Milky Way.

James Cowan (1993), a non Aboriginal Australian author and poet, writes that he finds it impossible to gaze at the Australian landscape and see it in terms of myth. Landscape features that reflect the incarnation of the Rainbow Snake is so alien to non-Aboriginal Australians and to many Aboriginals also, since colonisation and dispossession. But to Aboriginals who have been able to remain in touch with their traditional heritage '... the whole land is full of signs: a land humanised so that it could be used and read by Aborigines who were/are intimately familiar with it, and read as clearly as if it were bristling with notice-boards' (Berndt & Berndt 1988:6). Wherever they went, ancient tribal heroes created special sites where some action was performed; perhaps it was the performance of a rite, or it may have simply been an every day event. Elkin (1974) writes that a waterhole may mark the spot where an ancient tribal hero slept, or became invisible for a time. Another may represent the spot where he finally rested and changed his shape to stone.

A story from the north side of Lake Eyre illustrates this well. It is about fire, discussed in chapter two as of great social importance in Aboriginal culture, being a feature of most ritual ceremonies. This story is about the making of fire and the Dreamtime song, known only to men of the Fire Dreaming, which must be sung for success of fire making. It explains the punishment meted out for unkindness, the colour and placement of certain stones at Macumba, features of the sky and the sudden occurrence of bushfire in the Australian land. It explains aspects of the Rainbow Serpent and it explains the importance of guarding fire carefully, lest it go out of control or be lost:

> The maker of fire in the Ularaga was a Yigauara, a native-cat man who belonged to the country to the north-east of Macumba ... On one occasion this man tied his hair up with string. Being laughed at by the blacks, he made fire ['sang' the fire] and burnt them all up, and on another occasion did the same to a group at Macumba ... [there is] a mass of black stones which are said to be the remains of the blacks who were burnt. There are also ... two standing stones leaning one against the other at Ururuwora, which represent two snakes, or two women (perhaps these are the same) who were caught by the fire as it travelled ... From there the fire spread to the south east, and then back to the place where Yigauara made the fire, and then it spread east burning man and dog. Two of Yigauara's brothers were carrying the skins of Kanmari, the mythical water snake, when the fire overtook them with the result that it lifted them and their snake-skins up to the sky where they can be seen as two black marks in the Milky Way, while Yigauara himself is also up there, a third black mark (Elkin 1974:246).

Of additional interest to this study is the way that the myth describes the sudden starting up of a bushfire, and the sometimes inexplicable ways in which bushfires travel: 'The fire is said to travel inside the ground and to come out a long way off at Wiluumanga, and so, whenever fire breaks out suddenly and unaccountably it can be referred to as a fire started by Yigauara' (Elkin 1974:246).

Many myths tell of snakes. The giant python Yulunggul, whom many call the Rainbow Snake, is said to have lived since the dawn of time in a particular waterhole. Two sisters travelling south camped by the waterhole and began to cook. When the cooking ingredients jumped from the pot and ran to the water they realised that something was amiss. Legend has it that one sister had given birth and that afterbirth blood ran into the water; other stories indicate that the younger of the two was menstruating and this was the blood that entered the water. In any case, they outraged the great snake. As night drew in, a great monsoon arose. The great snake reared up and swallowed the sisters and their children, even as they danced and sang ritual songs for protection (Berndt & Berndt 1988:74). In some stories, the snake regurgitated the sisters; in others he regurgitated only their children. Swallowing and regurgitation are highly significant in Aboriginal creation stories. In some stories they symbolise death and rebirth: often the regurgitated victim is changed in shape to a non-human form, explaining the spiritual and physical affinity between people and other shapes in nature (Berndt & Berndt 1988:176).

An important aspect of mythology in Aboriginal culture is the fact that the spirits link them to a particular site. All of the features of their place are linked to cosmological stories: spirits of unborn people wait in that place and spirits of dead people return to that place. Animals and plants that sustain them were put there by the Ancestor Spirits so the place is their source of life. Tribal people have no desire to leave their own territory for another place which is not their spirit home (Elkin 1974:60), thus, the Aboriginal view of nature is one of respect, mutuality and interconnectedness, not in the sense of a relationship between all black Australians and nature in general, but rather between individuals or small groups to particular places and species of which they are guardians by birthright (Elkin 1974).

A creation spirituality workshop was recently held in Melbourne, Australia. In this workshop modern spiritual cosmology was explored by several prominent scholars. In an Aboriginal response to the question of which aspects of creation spirituality sit most comfortably with the Dreamtime (Fox et al. 1991) Eddie Kneebone said:

> The aspect of being at one with the universe – not just the little piece of land that we stand on, not simply the environment around us, nor the country that we live in – but the universe. It is included in our lives. It is a part of us.
>
> During the daytime we can look outside and we see trees, birds, rivers, the wind in the clouds and the sunshine. This is the environment that is revealed during the daylight hours, that we take for granted. But at night the other half of our environment is revealed – the universe. Every clear night we can look up and see millions of stars. That is also a part of our lives. It is an important part of our lives that we forget about and don't include in our [Western] way of thinking.
>
> In Aboriginal spirituality however, it certainly was included.
> We [Westerners] look up and see the stars shining above and we say "They are the bright suns and around them there are planets – possibly with people we will never see." The Aboriginals looked up at night and they didn't see the stars – they *never* saw stars. They only saw the campfires of their ancestors on their journey. The bright stars were ancestors who were not long gone; the dimmer stars were ancestors further on their journey.
>
> They imagined that the ancestors sitting around their fires were looking back and seeing the campfires of the living, physical Aboriginals at their own campsites.

> The Aboriginals looked up and really believed that their eyes could meet ... (Kneebone in Fox et al. 1991:93-94).

The notion of eyes meeting, those of the past and those of the present, is about the connectedness of all things throughout time and space: a theme of ecological postmodern cosmology which is to be built over the next few chapters. The very old is constitutive of the present and of the future. It is a part of the re-enchantment that this study pursues.

Chapter five has explored cosmology in the ancient world. Commencing with a description of cosmology, the chapter moved to an exploration of some interpretations of the ways in which various cultures constructed cosmogonic belief and developed their social structures around them. The voices of Aboriginal Australia have been particularly emphasised in this chapter, as the thesis explores the situation of bushfire in Australia and healing processes which relate very much to nature and spiritual connections to the environment which are the stuff of Aboriginal myth and legend.

In the next chapter the story will continue, commencing with cosmological views of ancient philosophers. It can be seen that, with the dawn of formal philosophical thinking in the Western world, the power of ancient myths began to fade. Once philosophy became established, mythic fantasy was replaced by rational explanation. For a time, a thin line separated philosophy from myth; later, however, when the quest for knowledge in the form of science began to inform Western philosophy, there was no longer any room for beliefs that were not supported by scientific reasoning.

CHAPTER 6

METAPHYSICS TO SCIENCE:
DISENCHANTING THE WORLD

Men have left God, not for other Gods, they say, but for no God;
and this has never happened before
That men both deny gods and worship gods, professing
first Reason
And then Money, and Power, and what they call life, or
Race, or Dialectic.
The Church disowned, the tower overthrown, the bells
upturned, what have we to do
But stand with empty hands and palms turned upwards
In an age which advances progressively backwards?
T. S. Eliot Choruses From 'The Rock',

The exploration of cosmology began, in this work, with ancient mythical creation stories. The study now turns to how these ancient myths and cosmic stories were replaced over time with world views that rejected myth and reified humanity and science. This chapter commences with the ancient beginnings of formal philosophical thought, which still dealt in enchantment and creation stories, and explores the history of cosmology from the Milesian philosopher Thales in the 5th and 6th centuries BC to Parmenides at the culmination of classical philosophy. The pursuit of cosmological belief then proceeds through the Middle Ages with the shift of emphasis toward the struggles between a religious and a secular world view dominated by reason, and on to modernity with the rise of science, development of the scientific method and the strengthening power of technology.

The story of cosmology continues through the twentieth century. Now, though advances made possible through science are perceived as having made a considerable difference to the lives of people, there is a recognition that it has not always been for the better. Critique is directed to the power of science and technology and, in particular, to the view of science as the only legitimate means of achieving enlightenment aims. Critique is extended to modernity itself and the chapter concludes by claiming that the final product of the enlightenment project has been disenchantment.

Cosmology at the Dawn of Western Philosophy

The general trend in texts which survey the history of Western philosophy is to commence with the Greek intellectual activity of Thales and Anaximander, Milesian philosophers of the 5th and 6th centuries BC. The Milesians coined the word cosmos from the Greek *Kosmos*, meaning ‘a well-ordered arrangement’ (Munitz 1986:24) and their initial questions concerned the composition of this ordered universe.

A Single Substance Cosmology

According to Matson (1987a) Thales was convinced that, despite apparent differences, all things are united by a similarity. The many, he argued, are related by the one: the foundational element, water. This is not to imply that Thales considered water merely as the colourless fluid it appears; it is possible, as Matson suggests, that he may well have been influenced by ancient mythic thinking about primordial oceans as the precursors of all life. Frankfort et al. (1949) also point out the significance of the fact that Thales spoke of water, not of a water god. He was searching for a thing of substance as the first cause, and nowhere before had such argument existed. Anaximander, however, was puzzled by this notion of first cause, considering that ‘the sustaining principle of all determinate phenomena could not be itself determinate’ (Frankfort et al. 1949: 254). Munitz describes Anaximander's cosmology as concerned with an orderly arrangement of the universe both spatially and in terms of change and transformation. He envisioned a spherical universe with the earth at the centre and with the sun, moon and stars revolving around the earth. Changes and transformations which are evident in human experience are explained by a ‘periodic cyclic balancing among elemental powers of nature' (1986:26). The permanent source of the powers he called the Indeterminate Boundless, and though the world is finite, the Boundless is immortal and inexhaustible. In many respects, this notion of the Boundless has persisted in one form or another throughout the centuries, usually likened to the mythical explanations of the void from which all began, or the chaos which existed before order emerged, but latterly as Bohm's implicate order, or as quantum consciousness, to be explored in the next chapter.

All as Flux

Following the Milesians, Heraclitus turned the question from the thing known, to the knowing of it, and with this change, as Frankfort et al. (1949) suggest, the search for an understanding of nature moved to a new plane. Heraclitus argued that the universe is ruled by thought by God's Universal Reason, and that this principle of thought, which steers all things, ruled both existence and understanding of existence. The universe, Heraclitus agreed, is indeed one, but all that is observable in the universe, those things that are distinct from each other, are in a state of flux, of change. All things are in the process of entering or leaving existence and nothing is permanent, so, as Frankfort et al. write, in Heraclitus' view 'the cosmos is but the dynamics of existence' (1949:256). Heraclitus rejected the notion of harmony as an ideal state. Continuance of the world, he argued, depends on 'a strife between the opposites. Balance depends upon conflict, unity upon plurality, sameness on difference' (Hamlyn 1987:20). An important addition to Heraclitus' thinking was that which turns possible chaos into order. A universe which is merely about constant change is a universe of chaos. Heraclitus, however, conceived of some 'dominant measure ...[some]... hidden attunement' that gives order (Frankfort et al. 1949:258). Whether such a force exists and what it might be was always the stuff of myth and remains a topic of heated debate today.

Something That Is and Something That Is Not

The next figure selected to continue the history of cosmological speculation is Parmenides, an Italian philosopher who also lived in the late 6th and early 5th centuries BC. From the remaining fragments of two poems, it appears that Parmenides wrote on the nature of being (later to be called ontology), on the origins of the universe and on the nature of change. Reminding his readers that all translations of ancient documents are interpretations, and that there are many who would not agree with his own interpretation, Matson (1987a) proceeds to outline his own version of Parmenides' work and belief. In his poem 'On Truth', Parmenides rejected the Milesian notions of the origins of things and Heraclitus' explanations of change as unity in diversity. He argued that there is no such thing as change, because everything is the one and therefore change is logically impossible. Things that exist simply are, they do not come and go, there is no such thing as a state of non-being for things to come from or return to. Parmenides wrote '[j]ust one account is left of the road that is ... being ungenerated it is also imperishable ... [i]t never *was*, nor *will* it be, since it *is, now,* whole, one, continuous.' (in Matson 1987a:30). For him then, to think, is to think of something that is: it is not possible to think of something that is not. That things appear to change, Parmenides explained by differentiating between appearance and reality, opinion and truth. Appearances give rise to opinions, whereas reality is truth. The fact that things appear to change leads to an opinion that change exists, but this must give way to reason, Parmenides argues, which discerns the truth of things, and 'reason tells us that if there is a single substance of which everything consists, then there can be no movement or change' (Stumpf 1989:17). Frankfort et al. assert that Parmenides' philosophical absolute – that thought cannot exist without that which is thought about – 'eliminated the last vestige of mythical concreteness and imagery' that existed in Heraclitus notions and vindicated the autonomy of thought (Frankfort et al. 1949:261). From this time forward, reason took over from naive faith.

Yet another theory of the nature of the universe came from the atomists Leucippus and Democritus. Hamlyn (1987) describes each as contributing to the theory that space exists and can be described as being like a receptacle which in some parts contains matter and in others does not. Space, or the void, is the place where objects move. Within the void are particles called atoms. These are so small as to be invisible, are indivisible, indestructible and uncreated, and they exist in an infinite number. Nature therefore exists of two things: atoms, which are being and the void, which is non-being. Atoms move about in the void, and in their movement they collide with other atoms, clinging to others as they are able, to form the physical things that can be seen. The joining together and moving away of atoms from each other account for the apparent creation and passing of things. Thus the atomists produced a mechanical conception of the universe, with a materialist reduction of all things to atoms moving about at random, connecting with and separating from other atoms at will with no design or purpose. No explanation was offered for the presence of atoms nor for their motion.

So cosmology progressed through ideas of fundamental substances to matters of form and change until the Sophists and Socrates turned intellectual inquiry away from cosmological questions of the universe and nature, to matters of man and of ethics. New debate became centred on whether it was even possible for man to know and understand any universal truth, since philosophical thought had so far produced little but disagreement and contradiction. Despite the philosophy of man taking centre stage at this time, however, cosmology did not disappear.

Plato and Aristotle: Forms, the World Soul and a Hierarchy of 'All That Is'.

The many concerns that had emerged since Thales regarding both cosmology and morality were brought together in a unified system of knowledge by Plato. Although his main interests lay in moral and political philosophy, Plato did have interests in science and cosmology which he revealed in his creation story *Timaeus*. The real world, Plato argued, is different from the visible world. The visible world is about change and imperfection, yet it is the world of scientific exploration, and Toulmin (1982) writes that Plato struggled with the possibility of gaining exact information about a world of change and imperfection and eventually decided that his version would be as accurate as such a subject could permit. The visible world is ordered, and a model of scientific reality can be provided for by mathematics and geometry. The visible world is also purposeful, the work of some sort of intelligence. Plato's real world however, described in Timaeus and alluded to in several other works, is a world of Forms. A Form is described by Honer, Hunt & Okholm as 'the idea and structure of a thing that makes it intelligible to the human mind' (1992:105). Forms, they explain, are 'connected to one another by eternal and necessary relations that the reasoning mind alone can trace' (1992: 47), which are found as a kind of raw material in the receptacle and which require some sort of organising agency to arrange them into phenomena. Forms or Ideas are like patterns from which all things are made. The 'receptacle' is space, from which all things are drawn; within this receptacle lies the World Soul, the energising or causal force. The 'organising agency' is a Divine Craftsman or Demiurge who has created the World Soul and who fashions all things. The historian of ancient philosophy, Professor W. Guthrie, considers the Demiurge as not in sole or complete control, having to 'bend to his will a material that is to some extent recalcitrant' and suggests that this implies a universe whose fundamental structure, though rational, is 'infected by an irreducible element of imperfection and waywardness inherent in its bodily nature' (1978:255). The Forms, the receptacle and the Demiurge are uncreated and immortal; the things which are created are patterned after the Forms and come from and return to the receptacle. The outcome of the Divine Craftsman's ordering of a chaos of raw materials is the cosmos, an organic entity with a body and soul, created according to a rational and discoverable plan (Guthrie 1978).

Plato's notion of a Divine Craftsman was rejected by Aristotle, although he retained the notion of the cosmos as 'an ordered whole having the form of a single all-inclusive organic unity' (Munitz 1986:65). Munitz describes how Aristotle brought to cosmology a biological emphasis, favouring ideas about patterns of growth and development of the world of substances, each of which has an essence and can be classified according to particular genus and species categories. Aristotle believed that man alone is capable of rational understanding of the ordered universe. Using logic and disciplined inquiry man 'transforms the latent intelligibility of the world into a world understood' (Munitz 1986:66). Knowledge is a matter of uncovering what exists. Aristotle introduced a 'map' ordering the scale of nature. In this scale he placed rocks at the base, humans at the apex and, in upward steps from the base, all other matter from the inert to the living and reasoning. His main purpose in doing this was to indicate the continuity between all things, especially the connections between the living and non-living. Toulmin (1982:54) describes how this was later to be reinterpreted not as how things are but as how things ought to be: a specification of hierarchy, and the scale of nature became the 'Sovereign Order of Nature' where creatures at a certain level were given domination over those at a lower level and were themselves subject to the authority of any above it. This meant that humans at the apex held domination over everything, everything that is, of the earth. The real intention of Aristotle, according to Toulmin, was the classical Greek conception of *Kosmos*, the belief that the entire universe is interconnected, that it operates according to universal principles which cause a common 'good order'.

Neoplatonism: God, the Soul and Transcendence as Purpose

At the very culmination of classical philosophy stands Plotinus (205-270 BC), an Egyptian whose major contribution was a new version of Plato's work. Matson writes that, like Plato, Plotinus considered that the material world, because it consists of so many disparate substances and is always changing, cannot be the fundamental reality. What is fundamental must be unchanging and therefore immaterial. He concluded that this reality must be God, who is unexplainable and who transcends everything. The One which is God causes two other essential principles: Mind and Soul. These are not essences that came into being subsequent in time to the being of the One, since all are timeless. Rather, it is as though God overflows to produce something 'akin to itself — the Mind which contemplates it' and which in turn overflows to produce the Soul. Emanations from the Mind, which is not divided from the One, are Ideas, objects of thought with life and intelligence. Plotinus writes 'Mind makes being exist by thinking about it' (Matson 1987a: 176-177). The Soul, also undivided from the One, looks upwards to the Mind's eternal ideas and downwards to provide 'a life principle to all of nature' (Stumpf 1989:127). The human soul emanates from the World Soul which also looks up to the Mind from whence it comes and down to the sensible world which it creates as copies of the Ideas. Neoplatonic thought gives purpose to humans, who are able to contemplate, looking upward to transcend themselves, returning as close as is possible to the One. Stumpf (1989) suggests that Plotinus' interest in God, the soul and human transcendence is an indication of the search for purpose that was evident at the time. Plotinus was particularly important in providing the bridge between classical philosophy and the rethinking of Plato within a Christian framework that would occur with St Augustine.

Medieval Cosmology

From 410 AD, the great Western empire fell prey to barbarian raids. Rome fell, and what had been a united Europe split into many separate territories. Over the next hundred years, war, pestilence and famine ravaged populations. Van Doren (1991) writes that Rome alone had a population of more than one million in the second century. By 550 AD that population had decreased to fewer than fifty thousand. It is significant that at the time of the barbarian invasions, Christianity had gained a strong hold in Rome, so that when Rome fell it was a Christian city that was conquered. The period known as the Middle Ages extended roughly one thousand years, from the 5th century AD with the fall of Rome, to around 1500 AD. The first five hundred years, from 500 to 1000, is known as the Dark Ages, so-called, according to Van Doren, firstly because not much was known for some time about those five centuries and secondly because what was known appeared rife with the misery and suffering that preceded and continued through this time.

Christianity and the Triumph of Reason

According to Capaldi & Navia (1977), with the experience of the new brutal regime Christians turned their attention more clearly to God and to St Augustine's notion of the City of God. Augustine, who lived and wrote before the fall of Rome, had argued that two worlds exist. One is the material world of humans; the other, divine and spiritual, existing within the heart and soul of any true Christian. Augustine was influenced by Neoplatonists, but also by the Christian Gospels. In the aftermath of the fall of Rome his followers could see that a life lived for the glory of God and the attainment of immortal life in the hereafter far surpassed the promise of riches and power on earth when that power and wealth could be so transient.

The later part of the Middle Ages, that is, beyond 1000 AD was a time of change. Stumpf (1989) describes how the approaching millennium caused trepidation, partly because of the predictions of the end of the world in the Book of Revelation, partly because of traces of ancient mystical belief. When the new millennium began without consequence, European Christians began to reconstruct their society. Europe flourished; both the empire and the papacy grew in power, augmented by the establishment of monasteries where Benedictines, Franciscans and Dominicans lived lives of piety and devotion to helping others. Amongst their numbers were men and women of great intelligence and reflection who translated the ancient texts and taught their messages, albeit through a religious filter, to other scholars, thus enabling a revival of classical scholarship. Their creation beliefs centred on the newly revived Platonic notion of the Divine Craftsman, but without the notion of the universe as pre-existent. The universe, according to Christian belief, was created from nothing, is mysterious and inexplicable, a matter of faith. Christian theology dominated the medieval period and philosophy became a means by which religious principles and beliefs were explained.

Van Doren (1991) includes Averroës and St Thomas Aquinas as influential philosophers of this period. According to Van Doren, Averroës was an Arabic philosopher who was profoundly important in bringing Aristotle's thoughts about nature to the attention of Aquinas, who adopted and 'Christianised' it, producing a philosophical system that was able to set reason alongside faith. Honer, Hunt & Okholm (1992) write that the complementarity of faith and reason was raised to its highest form by Aquinas, who thought that reason took people part of the way to knowledge of God, both confirming what faith received from revelation, and laying the basis for the knowledge of truth which only revelation could provide. Reaction to Aquinas began immediately. Where Aquinas was attempting to unite faith and reason, many opposed him – some because they placed faith in the realm of the divine and considered that incompatible with reason, others because they embraced natural reason and saw no cause for reason to be subject to the will of whomever rules in the city of God. Scotus was one who argued to dissolve this synthesis. Matson (1987a: 243) writes that, in the Augustinian tradition of their order, the British Franciscans Scotus and William of Ockham emphasised the distinction and separation of reason from revelation. Stumpf (1989) explains that where Aquinas argued that God's will is subordinate to intellect, Scotus declared that this forced a view of God as limited, yet if God's will was dominant that would make him irrational. Where Aquinas said that God commands certain rules because they are good, Scotus argued that moral rule is good precisely because God orders it and if God acts irrationally, moral rules are irrational. Aquinas argued that morality is an intellectual pursuit; Scotus argued that where morality cannot be the subject of rational inquiry it must be the subject of faith. In William of Ockham, Matson (1987a) writes, the distinction between philosophy and theology became almost absolute. Ockham argued that there is nothing that can be known through rational means about God: there is 'no region of overlap containing truths knowable both by reason and by revelation. Religion has no rational foundation but rests entirely on revelation' (1987: 246). The mysticism of Eckhart completed the shift. Eckhart's interest lay in the world within, a mystical world of faith and devoutness. God was perceived as beyond comprehension and so was man's relationship to God. Thus, as Van Doren explains (1991), theology fortified itself against reason, and whilst theology continued to dominate, those whose interests lay in reason and the natural world were able to continue their reflection, building strength until, in modernity, one could almost argue that Augustine's City of God no longer exists and the city of man rules triumphant.

Exploring Modernity

Modernity can be viewed as the modern age, a period which extends from some point in the past to whatever happens to be now for those experiencing it. For people in the late twentieth century, it is generally recognised as the term for the time that has followed the middle ages and a time of extraordinary knowledge development through scientific discoveries.

The ultimate aim of modernity was the liberation of people from natural and religious limits and the solving of all problems through the construction of a scientific and technological world. Holland (1988:43) describes the various forms taken by the so-called project of modernity: Cultural change occurred from the sixteenth to the eighteenth centuries with the humanist Renaissance and the rationalist Enlightenment; the late eighteenth-century American and French liberal revolutions created great political change; and the Industrial Revolution of the eighteenth century, the nineteenth-century rise of industrial capitalism, and the twentieth-century rise of industrial socialism all contributed to massive economic change. Science was paramount because it had the ability to generate knowledge and to improve the lot of humankind, humankind being the pinnacle of creation and the centre of modernity's focus. With the legitimation of science as the source of knowledge came the ultimate gifts of modernity: reason, mastery and progress. Thus the major theoretical discourses of modernity have do to with the products of the Renaissance and the Enlightenment: *humanism* (the term given to the intellectual movement identified by optimism regarding the human potential and their celebration of human achievement), and *the rise of science* (concerned with objective examination of the external world in order to understand the working of things and the rules governing such workings) (Flew 1979; Hamlyn 1987; Van Doren 1991).

The Renaissance

The Renaissance is generally described as extending from the fifteenth to the seventeenth centuries. It was a time of great discovery and change, a period of humanistic revival of classical influence in Europe, expressed in a flowering of art and literature and by the beginnings of modern science. Matson (1987b) writes that, during the Renaissance, the classical works of Greek and Roman times – Aristotle and Plato in particular – became known in their original form, without the censure of theology and without retranslation from Arabic with any consequent inaccuracies. Without the perspective of Aristotle and Plato filtered through religious interpretation, attention turned away from matters of faith toward the human condition and to concerns about nature. A time of great experimentation, exploration and discovery resulted. According to Holland (1988) 'Renaissance man' found himself located between two dreams: the old dream of the Christian world and the new dream of science, technology and the conquest of nature, and both dreams were aimed at the betterment of society. Many contemporary writers on the history of Western philosophy indicate that humanism and science flourished in an atmosphere that, whilst not rejecting religion, accepted that humans and nature could gainfully be explored using methods other than those associated with faith.

An important early renaissance figure for this study was Giordano Bruno, described by Flew (1979) as an Italian philosopher, a sometime Dominican friar and an extreme pantheist. Bruno, according to Hamlyn (1987), was influenced by Copernicus in rejecting a geocentric universe: he envisioned a complex picture of the universe as infinite, made of animate atoms which he called monads in an anticipation of the later work of Leibniz, and as an expression of a World Soul. He viewed God as transcendent but at the same time manifest in the world and in all of nature, and in this he anticipates the later work of Spinoza. Both Leibniz and Spinoza are significant in that they have influenced the thinking of contemporary environmental philosophers and from this perspective, as well as from the perspective of the history of cosmology, Bruno is pertinent to this work.

The humanist Michel de Montaigne was another interesting Renaissance scholar who complained that reading Aristotle told him nothing of how to live his daily life. Stumpf (1989) explains that the tenet central to the skepticism of the ancients, a mood of inquiry coupled with a desire to live a thoroughly exemplary life, was also Montaigne's interest. He wished to develop maximally as a human, so that he could be happy and fulfilled. In skepticism Montaigne saw an end of doubt, since one would not adopt a particular perspective about anything. One would therefore remain in a mood of perpetual inquiry, where the mood of happiness could not be spoiled by reasonable doubt about matters which had no solution. The resulting tranquillity of mind is how one would achieve true contentment. One of the assertions that makes Montaigne interesting to this work is his belief that skepticism would end man's domination of nature. He thought that there was as much a chance that other planets would be occupied as that they would not be, so he could not see any reason to suppose that the world was arranged for the convenience of earthly humans.

In a vein echoed later by Toulmin himself, Montaigne wrote:

> By what authority does Man assume that this admirable moving of Heaven's vault, the eternal light of these lamps burning so proudly over his head ... were established and continued so many ages for his commodity or service? (in Toulmin 1982:126).

This is not to say that Montaigne had an interest in cosmological questions; indeed, according to Toulmin, he considered attempts at making rational sense of astrophysics to be presumptuous. He confined the mood of inquiry to that of human affairs, humans being, after all, at the very centre of things; yet, he challenges man's arrogance in supposing all of creation exists for him, an issue that remains at the forefront of cosmological and environmental philosophical speculation today, evident for example in Rachel Carson's consciousness raising book *Silent Spring*.

The emphasis on humanism in the Renaissance did not stop the development of science and the quest for certain knowledge about the physical world. In particular Galileo and Descartes, the experimental philosophers, would supersede the arguments of Montaigne and the other Renaissance humanists. Indeed, it was the very arguments of humanists about the potential of the human intellect, that opened the door to intense investigation about the true nature of things.

The Enlightenment

One of the outcomes of the Renaissance was a heightened interest in and capacity for systematic and exact observation. Matson (1987b) suggests that this stemmed from developments in works such as da Vinci's anatomical treatises. From this came the production of a new method for discovering knowledge: the use of observation to test speculative hypotheses. Stumpf (1989) writes that the implications embedded in this were firstly, that traditional explanations may well be erroneous and should be empirically demonstrated, and secondly, that if scientists look beyond the superficial they may well produce new knowledge.

The Enlightenment, sometimes known as the Age of Reason, refers to the intellectual movement of the eighteenth century that stemmed from this new thinking, when excitement about the new knowledge that was arising from scientific discovery led to belief that science could solve the problems of humankind and make the earth a better place. The belief also arose that one could apply scientific method to manage other intellectual and philosophical problems, ensuring the progression to a better world. Beilharz describes the Enlightenment as a belief system, a history, a geography, an intellectual movement and as a 'characteristic bundle of ideas: reason, empiricism, science, toleration, freedom' (1994:29). Beilharz argues that the stream of modernity that has been called the Enlightenment had as its aim the rational ordering of life, serious in the pursuit of a better society. The aim was to use knowledge obtained through objective science, and to develop universal morality and law for human emancipation and the enrichment of life. Knowledge would enable understanding and control of nature, and once nature was harnessed there would be no more hunger, no more disasters to befall human beings through capricious elements. Rationality promised release from myth and the darker side of human nature. The potential of humanity could be realised. This was the Enlightenment notion of progress.

The Emergence of Science in Modernity

Of utmost importance in the view of the emerging scientists was the fact that true knowledge was to be born of observation and mathematics. Stumpf (1989) relates how scientific method became the focus, along with the need to create tools for exact measurement. Such tools permitted observation of the larger universe, stars and planets, and also of the microscopic universe, the tiniest components of physical matter, generating an explosion of knowledge, from Copernicus' heliocentric theory and Galileo's discovery of moons orbiting Jupiter, to Leeuwenhoek's discovery of spermatozoa and Harvey's of the circulation of blood. At the end of the Middle Ages, the universe was seen as created by God who has imposed discoverable mathematical and physical laws of order on that universe. Munitz describes how, over the 17th and 18th centuries, nature was seen as a vast and superb machine. A view emerged that 'at creation, God wound up the universe like a clock and let it operate thereafter without interference and according to fixed mechanical laws' (Munitz 1986:66) – the view of God as the mechanic of the universe (Gay 1966). It naturally followed that the path to true knowledge of God's intentions was through science, and the discernment of the underlying mechanical laws through observation and experiment.

Copernicus and Galileo were two natural philosophers whose work commenced the rise of modern science. Stumpf (1989) describes Copernicus, born in 1473, as a Polish astronomer who used observation and mathematics to overturn the dominant earth-centred theories of the universe. Galileo, born in 1564, was an Italian astronomer, physicist and mathematician who used telescopic observations to support the Copernican heliocentric hypothesis, which, as Stumpf points out, was a controversial and dangerous stance for both, since geocentric theory supported theological belief in the location of humans in creation. Copernicus and Galileo dismantled the ancient view which portrayed the world with earth at the centre, covered by water, surrounded by air and with fire forming the heavens. Until the Renaissance, humans were seen as the pinnacle of God's creation, masters of the earth, which in turn was the centre of the universe. The Copernican revolution shattered this. If the earth is not the centre of the universe, what then of the place of humans? Around the time that Galileo was born in Italy, Francis Bacon was born in London. Gay (1966) describes Bacon as the forerunner of the British empiricist tradition. Through several publications, Bacon continued the search for genuine scientific knowledge which would, when properly applied to the control of nature, result in the betterment of human life. Bacon believed that the human mind was unable accurately to reflect truth, having been corrupted by natural passions and errors in traditional learning. Bacon's aim, according to Hamlyn (1987), was to wipe the mind clean of these Idols and to equip it with tools for accurate understanding. Hamlyn writes that Bacon's main interest was the pursuit of a methodology for the acquisition of knowledge, for discovering, through objective inductive logic, the laws that govern the behaviour of things.

Another scholar described by the writers explored for this work as a founder of the modern world view, was Rene Descartes, a 17th-century philosopher and mathematician. Deeply interested in the progress being made by science, Descartes and other continental philosophers, including Spinoza and Leibniz, set out to provide philosophy with rational principles that could underpin the search for accurate information about the universe. Descartes emphasised systemic and orderly thinking and described the mind as possessing two powers, intuition and deduction, with which we are able confidently to arrive at the knowledge of things, provided we guide these by the use of method (Descartes 1637). Intuition, Descartes argued, gives clear notions and some truths about reality. Deduction, he writes, is what one can infer from the certain facts. Descartes used doubt as a starting point to developing knowledge. One of the four precepts which he developed in his Discourse on Method was:

> ... never to accept anything for true which I did not know clearly to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgement than what was presented in my mind so clearly and distinctly as to exclude all ground of doubt (Descartes 1637:15).

Descartes then set out to doubt everything, searching for a single irrefutable truth. This he found in the very act of doubting. *Cogito ergo sum*, I think therefore I am: the truth of his own existence provided the first certainty. From this point Descartes proceeded to explain the existence of his own body as an extended substance and his mind as a thinking thing: the dualism of Thought and Extension. What Descartes required was for people not only to see mind as separate from matter, but humans as separate from nature. Rational objectivity was the criterion for production of knowledge and rational objectivity placed the scientist as detached and neutral onlooker, observing from outside. A contemporary of Descartes (though not at all a disciple, having rejected his conclusions), Baruch Spinoza is often cited in contemporary environmental literature, particularly in that stream known as deep ecology (e.g. Devall & Sessions 1985; Naess 1989). Spinoza, like the other continental rationalists, believed that the mind was quite capable, if only one used the right method, of discovering the true nature of the universe. The method required was mathematics, as Hampshire (1962:16), a British philosopher who is one of the eminent interpreters of Spinoza's life and works, explains, the only means through which pure reason is recognised as the sole arbiter.

Where Descartes perceived two substances, Thought and Extension, Spinoza conceived one fundamental substance with two attributes, Thought and Extension. Spinoza considered that there was only one fundamental causal substance to the universe and that was the all inclusive wholeness of God. He insisted that his writings about God must be understood in the special sense directed by his own particular definitions. Spinoza acknowledged that from those things which can be experienced, humans can form a sense-picture. God, however, is beyond the experience of humans and thus, because it is not possible to attribute to God anything which has its base in human experience, God must be conceived through pure thought. Spinoza extended this notion to the whole of the universe, arguing that confusing sense-experience pictures of a universe which in fact cannot be wholly experienced are inappropriate. Answers to puzzles of the universe and purpose must then come from purely intellectual activity. Everything that exists is an attribute of God, not in the Cartesian sense of extension, but rather as something modified from or inherent in this single substance. There is no possibility of a separation between the creator and the creation; logic defies any other interpretation other than that:

> [t]he unique, self-determining and all inclusive substance cannot, by definition, be created or produced by anything other than itself; therefore the notion of a Creator distinct from his creation contains an evident contradiction, involving, as it must, the conception of two substances, one the cause of the other (Hampshire 1962:41).

Hampshire further elaborates Spinoza's notion of the physical universe by emphasising the fact that Spinoza's definition of God was interchangeable with nature, so that he saw everything as 'belonging to the single and all-inclusive system which is nature, and no cause (not even a First Cause) can be conceived as somehow outside or independent of the order of nature' (1962:44). Spinoza's pantheistic notion of God as interchangeable with nature caused him to be hated and maligned (Deleuze 1988). His seminal work *Ethics* was published posthumously, since it was considered unsafe to attempt publication during his lifetime, and yet, as Hampshire explains, varying interpretations of his thinking have persisted since his time, some seeing him as the pantheist, obsessed with God, whilst others see him as a 'harsh materialist who denies all significance to morality and religion'.

Leibniz, the third continental rationalist to be explored here, was another who published little of his work in his lifetime and reliance in this thesis is placed on some who later translated his original works. Leibniz admired Spinoza but was unable to align himself with his reasoning, wishing instead to make clear distinctions between the notions of God, humans and nature. Leibniz produced the view that reality is composed of an infinite number of substances which are both created and maintained by God who is an omniscient being who acts to create the best possible world out of the substances. 'God', said Leibniz, 'does everything in the most desirable way' [axiom i], he is an absolutely perfect being 'who does nothing that is not orderly' [axiom vi] (Leibniz in Montgomery 1902:3-10). The substance which God creates in a most orderly way, Leibniz called a Monad, or soul, and he writes '[it] is nothing but a simple substance which enters into compounds; *simple* that is to say, without parts ' (Leibniz in Morris 1934:3). Rather than considering monads as lifeless atomistic particles, however, he perceived them as forces, or energy, capable of action without external cause, but with a predilection for harmony which is the result of God's activity. Monads have an 'internal principle [axiom 11] ... [and] we may give the name entelechies to all created simple substances or monads. For they have in themselves a certain perfection; there is a self-sufficiency in them which makes them the source of their internal actions — incorporeal automata, if I may so put it [axiom 18]' (Leibniz in Morris 1934:6).

Leibniz was acquainted with Isaac Newton and according to Flew (1979) whilst the two engaged in argument over Newton's notions of absolute space, Newton's views gained dominance. Newton, another British mathematician and physicist, was born in the year that Galileo died. Amongst other discoveries, Toulmin (1982) writes that Newton produced a comprehensive mathematical explanation accounting for the motion of all bodies. According to Toulmin, Newton wanted more than an image: he wanted factual explanations for things, in particular, an explanation for why the planets moved. Descartes' idea of a vortex conjured for him an image of the space between planets being some kind of 'celestial bath-water' (Toulmin 1982:29), swirling and carrying the planets with it in its motion, an unacceptable image to Newton, since many observable celestial objects did not comply with such a notion. Newton's gravitational theory unequivocally accounted for all motion, both on the earth and in the universe, including the movement of the earth and other planets around the sun and the movement of the moon around the earth. Newton was deeply interested in natural theology and in no way meant his explanations to be interpreted as atheistic. In his view he was simply describing a piece of physics. He countered criticism by arguing that accepting gravitational laws of motion in no way detracted from the glory of the universe as created by God. Indeed it was itself a great tribute to 'the foresight of the Almighty'. The subtle balance between inertia and gravitational force was only one of many examples which could be given: any 'successful and comprehensive theory [would help] to vindicate' the rationality of the universe as created by God (Toulmin 1982: 31, 217).

According to Stumpf (1989), the work of the early modern scientists influenced philosophical thought in two important ways. Firstly, the belief that all basic processes are observable and measurable gave rise to another belief that the universe consists of bodies in motion, 'that everything conforms to a mechanical model' (1989:217). Secondly, there was a rethinking of the place of humans in the universe. Far from being at the pinnacle of creation in an earth- centred universe, humans themselves came to be seen as machines, obeying laws of motion, capable of mathematical description, and present on an earth which is not at all the centre of the universe but rotates around the sun. This did not, however, dampen enthusiasm for the ways in which humans viewed themselves as dominant. The discoveries of the Enlightenment did not confine themselves to cosmological speculation nor to the development of science. This was a time of great expansion of knowledge in every domain imaginable. Countless animals and plants were classified, geologists began to account for the structure and composition of the earth's crust, chemistry flourished. It was, as Whitehead was later to say, as though the very heavens were being opened to allow glimpses of the incredible, ordered universe (Whitehead 1925). With the industrial revolution in England, knowledge development expanded technology rapidly. Factories were established, many powered by steam engines which increased productivity tremendously. Gay (1966) writes that the expansion of human knowledge had allowed such advances as better sanitation, medical treatments and the trapping and treatment of water, and with these advances came population increase, both of producers and consumers. With scientific knowledge and industrial technology came a revolution in agriculture. Advances were made in the knowledge of animal care and land cultivation techniques, and the move was made from public to private property, with land appropriated for development. Everything was in place for the growth of a world where the lot of humans promised to be glorious.

Science as Disenchantment

The explosion of scientific discoveries was exciting and assumed an air of great importance. It is only since the mid to late twentieth century that some effects of viewing science as the only legitimate means to achieving Enlightenment aims are being recognised as unacceptable. Only now is there realisation that the excitement of discovery masked the longer-term consequences of unbridled scientism which, it is now suggested, are the reason for the many disasters that beset the modern world.

Critique of Modernity: Reason, Mastery and Progress

Eisler points out that modernity was a time when superstition was to be replaced by enlightenment, barbarism by humanism, dogma by empirical knowledge. Yet in the late twentieth century, all around us we see evidence of barbarism, much of it driven by dogma. What has happened, she asks, to the glorious Age of Reason? How is it that even 'with the liberation of the human mind by reason "rational man" — the product of the enlightenment ...' (1987:157), species are facing extinction, the universe is under threat and all over the world there is evidence that humans cannot live harmoniously with their neighbours, let alone with the rest of humankind and the environment? The hope and promise of Enlightenment has faded. 'Rational man' as Eisler points out, continues to 'oppress, kill, exploit, and humiliate his fellow and sister humans at every turn'. Justified by science and rational economic and political reasons, colonialism continues. Gender discrimination continues, no longer justified by the fall of Eve but on the grounds of the rationality of male dominance through biological law. Eisler goes on to show how 'rational man' has set out to master nature, subdue the elements and now, to conquer space (1987;157). She speaks powerfully of how 'rational man' has had to:

> fight wars to bring about peace ... murder children, women, and men in terrorist activities to bring dignity and liberation to oppressed peoples ... [how] he continued to amass property and/or privilege ...[how] to make more profits or to meet higher quotas he also began to systematically poison his physical environment, thereby threatening other species with extinction and causing severe illness in human adults and deformities in human babies. And all the while he kept explaining that what he was doing was either patriotic or idealistic and — above all — rational (Eisler 1987:158).

Whilst Gay (1966) writes that the Enlightenment had the capacity to empower and thus free people, Best & Kellner, like Griffin (1988a) cite 'the savagery of world wars and the harmonious co-existence of high culture and concentration camps' (1991:12) as the dark side of the Enlightenment, humanism and modernity. It seems that despite claims to progress, empowerment and freedom, so-called 'civilised' nations appear, as Eliot suggests in the poem that introduces this chapter, to be advancing progressively backward.

A major criticism levelled at modern science is its inability to stem the flood of problems that beset the modern world, in terms of natural disasters, in terms of disease or any of the other many problems that science set out to eradicate. Science for example, created the nuclear arsenal in the world and appears unable to counter the threat of world annihilation. Science created the toxic waste from industry that sustains multinational corporations and wealthy governments and destroys lives and land. What, asks Capra (1982), does science have to say about hunger, poverty and environmental degradation? Science has indeed had little to say about ethics and the use to which its information should be put. In many cases errors that occurred in the name of science were tragic, the effects of thalidomide being just one example.

Spretnak (1991:10) asks how is it possible that humans ignored the signs and symptoms of the ailing universe for so long? How is it, she asks, that:

> the global nuclear arsenal reached fifty thousand cataclysmic warheads before the grassroots outcry became widespread? How is it that many of our landfills reached 90 percent of their capacity before recycling became commonplace? How is it that we have allowed the groundwater to become so recklessly depleted? How is it that hundreds of nuclear power plants have been constructed around the world without safe means of transporting or storing the radioactive waste? How is it that the enthusiasm for the modern nation state overlooked the fate of some five thousand indigenous or long-standing cultural nations who have resisted the rule of capitalist or socialist states, resulting in hundreds of wars and millions of refugees?

There are those who would attempt an answer. Val Plumwood (1993) argues that the problem is not patriarchy or even anthropocentrism, but the more fundamental problem of the philosophical dualism associated with what she calls the 'Master Model', which, since the time of the classical Greek philosophers, has been dominant in Western thought. Nash (1989) explains that both feminists and environmentalists began to see logical connections between exploited women and exploited nature. Humans exploit nature, men exploit women. To be fully human is to be male, to be woman is to be 'other' (other than male). Ancient Greeks called their Earth Goddess Gaia; even today nature is referred to as Mother. Nature has always had an image of femaleness. Nature, too, is 'other', that is, other than human, ergo other than male (Mies & Shiva 1993; Nash 1989; Plumwood 1993). Nature, then, can be seen as the fourth dimension of oppression, along with race, class and gender. Adorno &

Horkheimer (1986) agree although they do not go as far as acknowledging the gendered nature of the problem, they do consider that the emancipatory potential of the Enlightenment turns out to be a matter of power. Knowledge in modernity, they argue, is conceived as abstract and utilitarian. Knowledge is related to technology and technology is related to illusions of power and domination over nature.

Ruether (1992) suggests that anthropocentric claims to dominion, which were presumably given so very long ago, appear absurd in the face of the 4,599,600,000 years in which the earth managed very well without the presence of human beings at all. Yet when the record of human exploitation of the earth is examined the picture is astounding. She explains that some 12,000 years ago the world population was estimated to be 5 million. By 1650, at the commencement of the European scientific revolution, it was 500 million. A mere eighty years later it had blown out to 2 billion and some estimates suggest that by the year 2000 the population of the world will be around 6 billion. The inevitable accompaniment to this is the establishment of the built environment, pushing back natural bushland and decreasing wild plant and animal life through the loss of their natural habitat. The need for vast tracts of land to produce food and clothing for this burgeoning mass of humanity results in devastation of the land, the replacement of natural species with introduced ones, the using up of natural fuel resources and so on. As Ruether laments, '[o]ne latecomer species, humans, seems to be rapidly outrunning their sustainable place in the earth's biosphere, consuming both the basis of their own life and that of the rest of the earth's biota' (1992:47). And so 'Enlightenment behaves toward things as a dictator toward man. He knows them in so far as he can manipulate them' (Adorno and Horkheimer 1986:9). Adorno and Horkheimer argue that '[t]he fully enlightened earth radiates disaster triumphant' (1986:3), because of the practices of the Enlightenment. 'In the desire to contest any form of animistic enchantment by nature', Docherty writes, 'Enlightenment set out to think the natural world in an abstract form' (1993:5), so the world became a place of rational concepts amenable to reasoning by mathematical formulae. Such a mathematical consciousness reduced the world to mere 'position and arrangement ... fact ... matter' (Adorno and Horkheimer 1986:6). Griffin (1988b) writes that, in a culture which rejects the past as superstition and presents itself as interested only in material wealth and technological dominance, and expects to produce a world of peace, freedom and morality, any possible notion of progress is mythical.

Spretnak points out that we have managed, because of our personally and socially atrophied state, to alienate ourselves from the cosmos and this is what has created all of the ailments of the modern condition. As Brian Swimme notes, no other civilisation has so profoundly alienated itself from the larger picture of cosmic reality. We have, he argues, honed away at the notion of relatedness until there is little remaining, and so, having created our bed, we lie in it, 'uncomfortable, dissatisfied and disappointed as we continue to support systems and institutions that will provide more of the same' (in Spretnak 1991: 207).

Galileo, Descartes and Newton are named amongst those who have disenchanted nature, and who, in doing so, have eventually disenchanted science. Griffin writes that the 'mechanistic, disenchanted philosophy of nature, which was originally part of a dualistic and theistic vision of reality as a whole, eventually led to the disenchantment of the whole world' (1988a:2-3). In denying nature subjectivity experience and feeling, mechanistic science has negated nature. In denying experience: 'no role exists in the universe for purposes, values, ideals, possibilities, and qualities, and there is no freedom, creativity, temporality, or divinity. There are no norms, not even truth, and everything is ultimately meaningless', and so the whole world is disenchanted. In disenchanting the world, science itself is disenchanted. Where all is meaningless, science is also. Griffin paints a gloomy picture in which science offers no truth, not even bleak truth. 'The disenchantment' he writes, 'is complete'.

Critique of Modernity: Loss of Soul

Griffin (1988b) agrees with Plumwood, who argues that intrinsic to Western modernity is the notion of radical individualism and dualistic domination. The human soul is an example of individualism: having been identified by Descartes as independent of the body, it requires nothing but itself to be itself (Descartes 1640/1986). The relationship between the individual and the soul, however, is dualistic in so far as the soul is separate from and independent of the body. As argued earlier in this work, between modernist notions of spirituality and the natural world the relationship is also dualistic: humans, with souls and as sentient beings, are seen as separate from and different to the rest of creation. Nature is viewed mechanistically, devoid of sentience and so to be dominated and exploited by humans. In addition to this is the view that God is wholly outside the world, and is not immanent in nature.

Through modernity, there has been a movement away from theistic belief that God, being the creator of all, is immanent in all of his creation, to deism, the belief that God created the world, but remains detached from it in the interests of human freedom. Holland (1988:53) described this as 'the modern deist clockmaker who left the product to run on its own'. In turn, rejection of the deistic creator removed the possibility of intuitive ways of knowing moral and aesthetic norms, and later modernity moved even further away to the almost atheistic stance of secularism. Griffin considers that allied to the transition from otherworldliness to atheism is the transition from dualism to materialism, in which the notion that possession of a soul makes humans unique is rejected. Humans become fully natural and thus have no reason to be treated with respect. Likewise nature. Everything is simply 'one more part of the deterministic, meaningless sequence of events' (Griffin 1988b: 5) and malleable to the whim of the most powerful. The alteration in the relation of humans to moral and aesthetic norms, he argues, is the ultimate step in the disenchantment of the world which commenced with the rejection of myth and the supernatural and proceeded to the stance that no genuine knowledge of moral or aesthetic norms is possible. The end results of the transition from supernaturalism to atheism and from dualism to materialism are many: the denial of values or meaning to guide the way life is lived, the rejection of the idea that humans can effect the course of things and the belief that science is the only method of ascertaining true knowledge, are but a few.

McFague, (1992) a feminist Christian theologian, does not go so far as to suggest that the world is currently devoid of any notion of the divine. She does acknowledge that the notion of God as King and Lord, remote from ordinary mortals and ruling through dominance and benevolence, is the dominant model in Western Christian religion, and that also inherent in this model is a view of humans as sacred, of males as 'naturally' superior to females, and of human fulfilment as the goal, regardless of what this might mean to the wellbeing of the planet. This is a model which, in its androcentrism and anthropocentrism, has proven dangerous although McFague would not go so far as to agree with those ecophilosophers who charge Christian religion with the responsibility for ecological disaster. Her argument about the danger has more to do with the support that the dualistic and hierarchical model gives to arguments about one nation's superiority over another and the 'validation of a nationalistic, militaristic, xenophobic horizon' (1992: 48).

This chapter has traced, in a way that may be described as a breathless rush through history, the development of cosmological thought from ancient philosophers to modern times, culminating in the explosion of knowledge, the excitement of scientific discovery and the sense that man truly is master of all that he surveys, for whom all else exists in instrumental relation. The aims of the Enlightenment project: reason, mastery and progress, are criticised however, when science and technology working for the betterment of humans is seen as destructive to the universe and to all but the privileged on the planet. Some of the critiques that have stemmed from environmental philosophy, from theology and from the women's movement have been described in this chapter.

The end of the millennium is nearing, however, and Toulmin suggests the era that is truly ending is that of Modernity. He writes that, whereas many had assumed that the 'tide of Modernity still flows strongly, and that its momentum will carry us into a new and better world', it would appear that the 'river has disappeared into the sand'. The momentum, he believes, has gone and there is an increasingly urgent need to fashion a new era (1990:3). The Enlightenment project promised peace, freedom and personal fulfilment, so long as the principles of instrumental rationality were embraced. These are failed promises, and increasing numbers of disenchanted people are searching for whatever it was that they lost, without realising they were losing it. The search is for ways of relocating purpose, of relocating connectedness and relationship rather than living with loneliness and alienation.

As we ponder the bleak harvest that has been reaped through the unbridled pursuit of progress there is a dawning of understanding that this has come about through a lack of reverence and there is a sense in which recapturing reverence and a sense of the sacred is going to be necessary for reconstruction of a hopeful future. No longer can the universe be viewed as a giant machine, but rather as a living universe which has evolved life in all sorts of manifestations, and which has evolved intelligence in humans. In humans, the universe has created entities which have the ability to see, to reflect and to understand what is needed to maintain the evolutionary creativity of this living universe and, in addition, to see, reflect on and understand the ramifications of the current course of progress. No doubt human intelligence is itself on an evolutionary trajectory, the present rudimentary nature of which may well explain the lack of reverence and certainly the lack of care and compassion so characteristic of modernism.

In the continuing pursuit of cosmology, the next chapter examines some possibilities for the new millennium. In that chapter, an ecological postmodern perspective is built with a cosmology of relatedness, evolving to care and compassion and laced with mystery and reverence. A claim will be established, that science does not have to be disenchanting and that a new postmodern science, amongst other streams of thought from philosophy and theology, may contain the means of re-enchanting the universe.

CHAPTER 7

NEW COSMIC STORIES AND CREATION MYTHS: RE-ENCHANTING THE WORLD

> *The most beautiful thing we can experience is the mysterious. It is the source of all true art and science. He who can no longer wonder or stand wrapt in awe is as good as dead, a snuffed out candle ... To know that what is impenetrable to our senses really exists, manifesting itself as the most profound wisdom and most radiant beauty, which our dull faculties can comprehend only in their most primitive forms, this knowledge, this feeling, is the centre of true religion.*
>
> *A. Einstein, I believe: Nineteen personal philosophies.*

The charge of disenchanting the universe has been brought against modernity, particularly modern science and the Enlightenment project. For many who critique modernity, there is now a sense that it is a period at an end. Indeed, Griffin (1988a&b) argues, it must end if humans are to avoid destroying themselves and everything that they survey. There is ample evidence of a growing dissatisfaction with modernity from the perspective of the legacy to be inherited by future human generations, if indeed the speed of human destruction of the universe leaves anything to be inherited. As Griffith writes, 'A new respect for the wisdom of traditional societies is growing as we realise that they have endured for thousands of years and that, by contrast, the existence of modern society for even another century seems doubtful' (1988a:ix).

Paradoxically, whilst modern science has been credited with causing much of the disenchantment, the prevailing cosmological perspective is undergoing a forced review because of advances in science. In this chapter then, science is restored to honour. Postmodern science is now seen as giving rise to new views of the origins and nature of the universe and the origins and place of humans within it. This view, Griffin (1988a) argues, is an enchanted view and through it, postmodern science is re-enchanting the universe.

There are many who believe that the shift in world view that is occurring is so profound as to warrant a name that recognises it as at least a moving forward to late modernity that is quite different, if not a moving to a totally new epoch. Some argue that the ending of both the twentieth century and the millennium is stimulating a preference for a new epoch. Postmodernism is the word being used across many disciplines to describe this shift, however defined. This notion of postmodernity from the particular perspective of affirmativism is now explored. Much of the work that is being done at present in this affirmative strand of postmodernism is underpinned by process philosophy, by concepts from postmodern science and from theology. Ideas from each of these areas are explored and what is woven from them is a way of perceiving humans as interconnected with all else in and of a universe which is alive, is spiritual and is continually evolving, under guidance, to a higher order. This is ecological postmodern cosmology, the major reconstruction of this work.

Affirmative Postmodernism: A Revisionary Perspective

Much has been written in debate and argument about postmodernism: what it is (Best & Kellner 1991; Docherty 1993; Docker 1994); how the 'post' in postmodernism is to be understood (Habermas 1983; Baudrillard 1987; Falk 1988); and how various perspectives of postmodernism may be identified. In respect of the latter, the perspective adopted in this work is labelled by Rosenau (1992) as affirmative postmodernism.

Affirmative postmodernism is concerned not only with constructing a world view, but with constructing a postmodern world that will 'support and be supported by the new worldview'

(Griffin 1988a). This means that in affirmative postmodernism there is a moving on from deconstructivism with its pessimistic view of the contemporary world and its trajectory toward inevitable doom. Griffin (1988b:82) writes of the usefulness of the deconstructive postmodern sensibility in so far as it ‘helps emancipate us from colonising forms of knowledge associated with both evident and disguised structures of domination ...’: the prediction of crisis in Western civilisation has been inevitably consciousness raising. An affirmative discourse holds grave concern about growing global crises, but is more hopeful with regard to the ability of humans to see the broad picture and to develop the will to care more for the universe. The trajectory to destruction is not seen as inevitable. Deconstructivists argue that affirmative postmodernism, because it is hopeful and visionary, clings to outdated ideas by trying to retain ‘positive meaning not only for the notions of the human self, historical meaning and truth as correspondence, which were central to modernity, but also for premodern notions of a divine reality, cosmic meaning and an enchanted nature’ (Griffin 1988a:xi). Affirmatists argue that the revisionary perspective is both more adequate for human experience and more genuinely postmodern in that it revises and transcends modernist thought rather than merely taking it to its negative end point. Gilmour (1990:5) argues that through ‘synthesising the traditional and the modern, the mythical and the rational ...’ we may be inspired to explore our assumptions and reformulate the ways in which we see the world. The past intrudes, like it or not, and it is important not to indulge in a nihilistic rejection of the past but rather to embrace it even though it may place a limit on the ways in which we dream of the possibilities of a future.

Rather than persisting with representing postmodernity as rife with dualisms and establishing discourse around styles in a conventional way, the preferred stance in this work is to acknowledge that a privileged voice has been given to an affirmative stance and then to describe what this stance entails.

Affirmative postmodernism is considered by one of its main proponents, David Griffin, to be postmodern simply because it moves to a view beyond the modern. It is affirmative in that it envisages a positive and hopeful future, revisionary because it leads to a revised world view, and constructive because it is concerned with constructing a world that ‘will support and be supported by the new world view’ (1988a: xiii). Affirmative postmodernism argues that humans have a capacity to ‘transcend the violence, poverty, ecological decay, oppression, and injustice of the modern world’ (Falk 1988:82). The failure of modernity, it is argued, has to do with false boundaries which create conflict; boundaries which supposedly separate people from each other, from places and from things in a framework of individualism. Age, race, religion, are only a few of the many forms of boundary-related conflict. In process philosophy, Whitehead (1929/1978) teaches that there are no boundaries between people, nor between people and anything else in the universe; rather, everything is interrelated, everything is one. In the affirmative postmodern view, modernity can and must be transcended, not by rejecting all of modern science as the pinnacle of modern achievement, but by taking note of and acting on the irrefutable evidence of the destructiveness of aspects of modernity which threaten the survival of the planet earth. Griffin (1988a) argues that this evidence provides the impetus for striving for a world where humans can relate to each other, to the rest of nature and to the cosmos in more harmonious ways. The ecological movement is one of many movements supported by affirmative postmodernism, which emphasises the necessity to transcend modernity, not to reject it: in fact to celebrate the advances made and to turn the negative aspects around.

Affirmatives are generally oriented to process, either that of emancipatory struggle or of visionary but personal projects such as the so called 'new age' lifestyles. There is generally a commitment to certain value choices as superior to others (a stance abhorrent to deconstructivists) and many would strive for mutually supportive and politically-orientated coalition movements – Greenpeace is an example. Affirmative postmodernism rejects any privilege of the present over the past, the modern complex lifestyle over the premodern. To this end there is a revaluing of things traditional and sacred, not as better than anything else, but as not having the irrelevance attributed to them by modernity. Graff (1979) writes that ‘all that modernity has set aside, including emotions, feelings, intuition, reflection, speculation, personal experience, custom, violence, metaphysics, tradition, cosmology, magic, myth, religious sentiment and mystical experience ... takes on renewed importance’ (in Rosenau 1992:6).

Postmodern Myth and Cosmic Story Telling

Brian Swimme writes passionately about the loss of cosmic stories. Cosmic stories are those accounts of the universe which people have told to their young for over 50,000 years. They instruct people about how to live in their world. Swimme writes that ‘the rituals, the traditions, the taboos, the ethics, the techniques, the customs, and the values all had as their core, a cosmic story’ (1988:48). The stories of modernity have been stories about human ascendancy, about heroes and technological advancements, about the human control and takeover of nature. We in the West, Swimme asserts, tell human stories rather than cosmic stories; the universe and even the earth are mere backdrops. He writes ‘all our disasters today are directly related to our having been raised in cultures that ignored the cosmos for an exclusive focus on the human.’ Our discovery of science was so intensely exciting that it blinded us to what we were leaving behind. We ‘traded myth for mathematics’ and before long, found ourselves on this path leading to disenchantment. And, he argues, much of our quest has resulted in failures: we fail in the ways we use the land, the ways we use technology and, worst, the ways in which we use each other. Our failures are so grotesque, Swimme adds, because we have never been initiated into ‘the realities and values of the universe. Without the benefit of a cosmic story that provided meaning to our existence as Earthlings, we were stranded in an abstract world and left to invent nuclear weapons and chemical biocides and ruinous exploitations and waste’ (1988:49). Brian Swimme suggests that cosmic story telling is ‘the central political and economic act of our time’(1988:47).

In truth, however, there are a great number of cosmic stories in the late-twentieth-century world, expressed as ever in myth. Some of these explain the developments that have led to the extraordinary constructions which today constitute postmodern science.

Myths of the Running Down Universe

In the mid-nineteenth century, physicists discovered the laws of thermodynamics and from these, modern stories of cosmogony are derived. The first law of thermodynamics states that energy remains constant; no energy can be lost or gained although it can be transformed from one kind of energy to another. The second law states that although the total energy may not change, not all of the energy will be available to do work. Clausius, in 1854, redefined this second law in terms of entropy, a concept that was introduced in chapter three as a way of perceiving the early effects of the bushfire experience. In his definition, entropy is 'the property of a body that increases when an infinitesimal amount of heat is added to it at a constant temperature' (Flew 1979:107). The increase in entropy is equal to the heat that is added. Since heat can only flow in one direction, every spontaneous energy change in a closed system must be irreversible. If this is so, then each change must result in a decrease in energy available for work. Entropy measures this loss — the greater the loss the greater the entropy (Flew 1979; Dillon 1983). Ultimately, within a closed system the energy levels will tend to even out; this state of equilibrium means that there is no free energy available for work; entropy is at the maximum. In a closed system then, entropy always tends toward maximum. Flood, Jackson & Keys (1989:17) define a system as 'a complex association, group or collection of related parts that operate constructively together through interactions'. Open systems are entities that exchange matter and energy with their environment. All living systems are open systems. Closed systems, on the other hand, are isolated from their environment and thus are incapable of taking in energy and matter.

Negative Entropy: Order in Open Systems

Living organisms, societies and ecosystems are all open systems. Whilst stimuli bombard the organism and irreversible processes do occur, producing entropy, the organism as an open system also has the ability to take in energy-rich matter. This negative entropy assists the organism toward order, not to equilibrium, since from a thermodynamic perspective, equilibrium means death. There may be states of equilibrium within aspects of an organism, but no organism can be considered to be in equilibrium or in constant steady state whilst alive. Through its ability to take in energy and matter from the outside, the organism can not only avoid the increase of entropy with the subsequent total disorganisation and death of the organism, but actually increase its order and organisation. Notions of entropy and negentropy were introduced as ordering concepts in chapters three and four. A view of the people in the coastal area of the fire as open systems, bombarded with the entropic cascade of events that were the fire and its sequelae, is a useful one where the outcome is seen as a rise in entropy levels and disorder unless some negentropic source can be located.

Mathews (1991:3) writes that a systems perspective provides a way of understanding individuality in the context of interconnectedness – a valuable insight, given a cosmological understanding of humans as open systems belonging to and inseparable from their worlds, bombarded by stimuli from that world and striving to maintain order. She highlights the flexibility of living systems, the ways in which they are able to carry out their functions under different conditions, and their ability to strive toward a steady state, a state of dynamic disequilibrium where energy is available for maintenance of adequate order within the disequilibrium created through constant exchange with the environment.

Physical Cosmogony: Tall Tales, but True?

Many cosmologies throughout the ages have depicted humans and all other entities in the universe as part of 'a single unfolding reality' to use Fox's phraseology (1990:252). Postmodern science provides the contemporary world with a new cosmogony which has humans as a mere strand of an evolutional tree 'which has developed from a single seed of energy and has been growing for some fifteen billion years' (Fox 1990:256).

Early relativistic cosmology commenced with the astronomical discoveries of the spatial distribution and the red shift of galaxies. Empirical data allowed explanations for alterations in the size of the universe over millennia, the density distribution of matter, and calculations of the age of the universe based on information about entropy and the expanding but decelerating universe. Later work uncovered the background radiation phenomenon, 'noise' in the universe that points to a Big Bang theory of cosmogony, and the discoveries in quantum physics that offer explanations for the emergence of particles and their combinations and transformations which form the matter of the universe.

The universe began, scientists of today theorise, with a huge explosion of energy which has been labelled the Big Bang. The theory postulates that, as the exploding particles hurtled out into space, they began to slow and to cool and to form planets and stars (Rifkin 1989). In 1929 the astrophysicist Edward Hubble observed that when one scans the sky in any direction, it is possible to determine that distant galaxies are speeding away from Earth. From this he deduced that the universe is expanding. He further speculated that if galaxies are speeding in a particular direction, away from earth, it must be away from some hypothetical mid-point, they must at an earlier time have been closer together. Perhaps, as Hawking writes, there may even have been a time when all was one at a mid-point, 'infinitely small and infinitely dense' (1988:9).

In the 1960s, various American physicists were picking up unexplained noise which experiments indicated was emanating from beyond the galaxy. From a hypothesis that the universe at the beginning of time must have been white hot, and, given new space-time understandings must still be detectable as microwave activity, explanations for the 'noise' began to emerge. This microwave detection of energy has given scientific weight and credibility to the Big Bang theory (Dossey 1982; Hawking 1988; Prigogine & Stengers 1984).

Speculation currently exists that the universe may not expand infinitely. The theory of the pulsating or cyclic universe (Dillon 1983; Rifkin 1989) argues a twofold demise of the universe. Firstly, the second law of thermodynamics predicts a situation of heat death, where the universe will proceed to equilibrium and maximum entropy, where no more activity can possibly occur. Secondly, the particles that were thrown out with the 'Big Bang' will, through irreversible energy transfer and rising entropy, eventually experience a gravitational pull which will slow their speed away and eventually pull them back with ever increasing speed toward their point of origin. The pieces returning together will generate tremendous temperatures until another explosion occurs and the process begins again. The determining factor, it is postulated, will be whether the velocities of the particles are greater than the total mass of the universe. The total mass of the universe is unknown, but if it is large enough, Dillon (1983) suggests, the pulsating universe theory, or the Bang-Bang-Bang theory, will hold. In a universe that is running out of unbounded energy, the time left is a direct measure of the energy available for work, which is why the British astronomer-physicist Sir Arthur Eddington described entropy as time's arrow. If the second law of thermodynamics is correct, there is an irreversible and inevitable movement of the entire universe toward chaos.

Paul Davies (1995a) writes that at the same time as thermodynamics uncovered a degenerating universe, Darwin's theory of evolution was introducing a different arrow of time to the universe: one that indicates a world moving to greater complexity, producing order out of chaos. Davies points out that debate over complexity vs entropy rages today and that basically each is a cosmological view based on myth, either of which may be adopted since there is nothing at present that indicates one should be favoured over another.

Postmodern Tales of the Origins of Life

It is theorised that human life owes its beginning to the carbon synthesised in far distant stars many billions of years ago. It was the explosion of these stars which disseminated carbon throughout the universe, some of which landed on earth. From this fundamental element the evolution of life slowly began. One of the greatest questions that astrophysicists and others are addressing at the present time is how it is possible that non-life may ‘beget life’ since, as Davies argues, even the simplest living things are tremendously complex (Davies 1989:115).

All theories about the origins of life remain speculation and some current ideas are outlined by Davies (1989). One suggestion is that primitive organisms arose from clay crystals, evolving more complex practices over time until interactions with organic substances led to organic molecules taking over the genetic functions, leaving behind the original clay crystals. Others argue that the origins lie in primeval chemical structures that could function genetically without the presence of enzymes, or in the emergence of simple proteins whose genetic capability appeared quite slowly but eventually resulted in the emergence of DNA. There appears to be strong evidence that life evolved from some primordial substance reactions and that, gazing back as far as one can at present, everything about the universe has evolved from the same origins. Life may well have emerged by accident, a chance mixing of some elements in the primordial soup. Perhaps there has always been some greater plan, some cosmic scheme guiding the entire process. What is clear, is that whatever their origins, humans populate the earth today; they emerged from something and have searched diligently throughout the ages to find some purpose for their being.

In addition to speculation about how life started are theories about where it started: perhaps on earth, perhaps elsewhere then transported to earth by means of collisions of asteroids, or other cosmic structures, with earth. This opens speculation about whether life currently exists elsewhere and, according to many postmodern scientists, there is no reason why it should not. If it does, what might humans of a modernist colonising persuasion seek to do about that in the absence of a stonghold for the ecological postmodern perspective that is argued in this work.

Davies (1977) points out that if the universe were younger than it is, life would be impossible; it has required those billions of years for evolution to reach its current stage. There needed to be the starting explosions, the false starts, the slow development, in order for conscious life to eventuate. The age, and indeed the size and temperature of the universe are all connected to the very fact that humans now inhabit the earth. That the universe has always been on an evolutionary path toward the production of intelligent life is called the Anthropic Principle (Gribbin 1984; Hawking 1988). This is not to say, however, that postmodern scientists generally accept that the ultimate production of intelligent life has only to do with humans, nor that human beings are the highest order species, the pinnacle of creation and the reason why the universe has evolved as it has.

Given that current evidence points to the fact that humans may simply be a chance evolutionary occurrence, and that all characteristics of human life and the properties of the cosmos are interconnected, it is a curious fact that humans persist in envisaging themselves as superordinate in the scheme of things. There is a view that the world is designed for humans who are its keepers, a view preferable to our being a cosmic irrelevance, 'adrift in a godless expanse' (Dossey 1982:117). Dossey offers a third perspective: that humans are indeed special, but being so interconnected to the universe, so is the universe special. As Watts argues, humans are not made-up fragments of the universe, they *are* the universe (Watts 1975). The third view is pursued in this work, primarily through process philosophy, which indicates that the universe and everything in it, to the smallest component, is an organism intimately and irrevocably connected to everything that is. This perspective is described as that which arises from the faltering of dualistic and materialistic views of nature (Griffin 1987).

Postmodern Science: Dualism and Materialism to Organicism

Modern science has presented a view of the elementary units of nature as insentient which, as Griffin explains, leads to dualism and materialism as the only possible perspectives (1988a). The dualism between those things which are considered sentient and those which are not breaks down when one considers the detailed contrasts embedded within them. It is a fact that humans have (or are) a mind which experiences things and they also have a body which appears to interact with the mind, each affecting and affected by the other. The body itself, however, is seen as composed of fundamental elements that are themselves incapable of experiencing. How is it that these completely unlike elements, the experiencing mind and the non-experiencing body, can interact? Griffin writes that, on deeper reflection, the real questions become:

> [h]ow can the impenetrably spatial relate to the non spatial, the non temporal to the temporal, the mechanistically caused to the purposively acting, the idea-less to the idea-filled, the purely factual to the value-laden, the externally locomotive to the internally becoming? (1988a:17).

Materialism is as problematic as dualism. Materialistic belief, that everything is either matter or dependent on matter for its being, would have conscious experience emerging out of a certain configuration of neurons, as part of the evolutionary process. Neurons do not in themselves have conscious experience but they give rise to the thing that does. Conscious experience, however, is not a property of a thing, it is 'what we are in and for ourselves' (Griffin 1988a:19). The question then becomes how is it that something that is a thing for itself can emerge from a conglomeration of things that are nothing for themselves? How is it that neurons which do not have conscious experience causally produce a brain that 'is metaphysically unique in being not only an object for others, but a subject for itself?' (Griffin 1988a:20). In addition to this, there is a denial of the interaction between things that result in conscious experience. That is, we may be aware of the objects of our scrutiny, but only from our own perspective – we cannot know that thing in itself. Somewhere a line is drawn between those things which are adequately described as physical and those that are not. Some materialists take an extreme mechanistic view of the world, denying emotion and talking instead of particular neurons firing. Organicism, on the other hand, identifies all things, living or apparently non-living, whether appearing as structural wholes or as components of wholes, as organisms.

Sheldrake (1990) considers that organismic theory is synonymous with holistic and systems theories. In organismic theory, the wholeness and unity of the universe is emphasised. The life of organisms may be seen as different in degree, but not in kind, from other parts of the physical world. In this theory, all nature is seen as alive and thus as composed of organisms. From this perspective, crystals, atoms and molecules are all organisms; they are 'structures of activity, patterns of energetic activity within fields' (1990:80). He adds that physics has produced the vision of a universe that is an 'all-embracing cosmic organism ... [with] ...

galactic, stellar and planetary organisms that have evolved within it' (Sheldrake 1990:80). As Haught describes, 'beneath ... even the placid facade of the rocky mountains [Uluru or the Great Barrier Reef in Australia] there lies a story of process. It is a story in which the energy events that compose natural phenomena have engaged themselves in a dance of becoming and perishing, inheriting and 'feeling' [in the Whiteheadian sense] each other for millions of years' (Haught 1984:33). Organismic theory is not a twentieth- century phenomenon, being located in the work of Leibniz and others; its most notable proponent has been Alfred North Whitehead, whose work is kept alive and is further developed by contemporary process thinkers, notably Hartshorne, Griffin, Birch, Cobb and others.

Alfred North Whitehead and Process Philosophy

Whitehead's notion of the composition of concrete reality differs from that of scientists who classified atoms and particles as the fundamental substance of matter, both in terms of how he views the content and the fundamental relationships of primary substances. Whitehead's publications are devoted to his deep belief that the stuff of the universe, the fundamental entities of which the universe is comprised, are not separate particles which relate in cause — effect sequences, but are processes which are interconnected, connectedness being the essence of all things. This is also the conclusion of postmodern physics. Whitehead argued that 'neither physical nature nor life can be understood unless we fuse them together as essential factors in the composition of 'really real' things whose interconnections and individual characters constitute the universe' (Whitehead 1966:150).

Whitehead gave the name 'actual entities' or 'actual occasions' to these processes, which he described as the 'final real things of which the world is made up' (1929:18). All actual entities are equal in importance; they are 'drops of experience, complex and interdependent'. God is an actual entity and so is 'the most trivial puff of existence in far-off empty space' (1929:8). Being a process, a single entity has no form and is not able to be observed; actual entities are only experienced as aggregates within which the entities are related both to each other and to other entities. Actual entities are constantly becoming, occasions come into being in some form, which is what concrete reality is. Entities then perish so that they have no permanent identity or history. The perishing, Whitehead wrote, 'is [the entity's] assumption of a new metaphysical function in the creative advance of the universe' (1933:198). The universe has simply moved on to the next actual occasion, with some imprint of the former remaining in the flow of the process.

Creativity is what the processes of nature are all about, being the way in which occasions occur and are related to other occasions, constituting a conjoined rather than disjoined universe. Creativity, the process of creation and organisation, comes from eternal objects, rather resembling Plato's Forms. Eternal objects are pure potential rather than actual entities; like the Forms, they are uncreated and eternal and they have a self-identity which remains, independent of the changes which constitute the universe. Whitehead described entities as selecting an eternal object, which then imprints its character on the entity. God is the one timeless actual entity. God is not perceived in the biblical sense as the creator, the one who was before anything else came into being, but rather as that entity which grasps every conceptual possibility of eternal objects and mediates between the eternal object and the actual entity, picking out possibilities and presenting them to the entity for selection, persuasively rather than imposingly. Whitehead claimed that when God's lure is accepted, harmony reigns and novel advancement occurs. When it is not, there is disharmony and evil in the world.

Whitehead distinguished between primary individuals and others, and between final and efficient causation. All primary individuals are organisms which exhibit some sort of purposive causation. Not all visible objects are organised as compound individuals like humans and animals, some are organised non-individuated objects, such as stones and planets. From this organisational duality it is seen that some things behave in respect of both efficient and final cause and others exist without reference to final causation. One way of seeing the world of experiencing things is to see the world as consisting of enduring individuals, physical from without, relating to others in terms of efficient causation, but conscious and experiencing from within and living in accord with final causation.

Haught (1984) explains that when dealing with Whiteheadian process philosophy we define concepts such as feeling, experience and perceptivity in an analogous sense, something akin to what we as humans call feeling. The feeling in rocks, for example, is about occasions or events that have 'feeling' as a constituent aspect of their essence. He concedes that we may not be able to see the ‘dynamic dance of mutual feeling’ that constitutes the foundation of the apparent stability of things. But it is reasonable to infer from the fact of nature's intrinsic continuity with our own mental experience that there must be at least a rudimentary type of feeling that binds all things to one another. What better word than 'feeling', Haught asks, indicates ‘the power of attraction that binds the multiplicity of occasions into the organic unity of a universe’ (1984:39).

There are two distinct though connected streams in this work which stem from Whiteheadian beginnings. The first continues the journey through science and ecology; the second explores notions of sacredness. Both are intrinsic to cosmology in the late twentieth century; both are intrinsic to interpretations made of the fire narratives. From a scientific perspective, with his vision of a world comprised of actual entities, Whitehead espouses a single substance cosmology. His work underpins much of the affirmative postmodern stance adopted by philosophers and theoretical physicists such as David Bohm, David Ray Griffin and Fritjoff Capra, biologists such as Charles Birch, and ecologists such as John Cobb Jr, and many others whose work is described throughout this thesis. Charles Birch writes that because of Whitehead's emphasis on ‘internal relations as constitutive of all individual entities in the universe, [he] is the ecological philosopher par excellence' (1990: xiii). This, in his view, is what makes process philosophy as relevant as it is today.

The idea of entities coming into being from some realm which is primary and where all things are united as one, is the main theme of the work of the respected theoretical physicist David Bohm, who has constructed a vision for what he sees the postmodern world sorely needs: a 'truly creative movement to a new form of wholeness' (Bohm 1988:59).

Bohm and the Implicate Order

Bohm writes that he has had a deep interest in the nature of reality for as long as he can remember. As an adult, he devoted his life to the pursuit of an understanding of everything in and about the universe as a coherent whole (Bohm 1980). Bohm has become somewhat of a 'guru' in contemporary ecological literature, being seen not only as a physicist who has produced exciting work in the area of quantum theory, but as a speculative philosopher pondering questions about the nature of the universe.

Where modern physics has depicted a universe comprised of concrete and separate particles conceived as building blocks, Bohm is persuaded that this deeply-held belief in separateness is responsible for the disharmony in the world. It is because people see themselves as different and independent that they strive so desperately for their own survival, identity and location – as individuals, as members of a particular group or as a species. His movement to wholeness notion, he believes, will found a new order; one which incorporates the best of what has preceded it and rejects the rest, and which carves its new understandings of humans, society, and the ways in which we must learn how to interrelate with the universe in order to remain a part of it.

Bohm (1980) extends thinking about quantum theory beyond sub-atomic physics to include the whole of life and even to understanding the nature of consciousness. He argues that quantum theory implies that elements that are separated in space are non-causally and non-linearly related projections of a higher dimensional reality. Central to his vision is a unique concept of a hidden order which he calls the implicate order, which is always at work behind matter and is the source of all that is visible in the space – time universe. That which is visible, he calls the explicate order. Bohm describes that to which, until recent times, physics has directed its attention, as this explicate order which has to do with the mechanistic view of entities as separate, outside of each other, existing independently in space and time and interacting with each other by way of forces which are also external to themselves and do not alter their essential natures. Any machine illustrates this order. The questions posed by Einstein and others, from both relativity and quantum theories, have seriously undermined this mechanistic perspective. Bohm proposes that behind explicate matter is a field where matter and consciousness have their source and are united. The implicate order is the background of everything, whether physical, psychological or spiritual. Beyond this may well be other 'super implicate' orders wherein lies some force that organises the whole.

Where in the explicate order things are '*unfolded* in the sense that each thing lies only in its own particular region of space (and time) and outside the regions belonging to other things' (1980:177), in the implicate order everything is mutually enfolded. Each thing enfolds in itself all other things of the universe, which means that there is an internal relatedness between all things. The implicate order is about things in a state of potentiality and it becomes the explicate order as things unfold. Where relativistic physics describes a point event as the ultimate element of the process which is reality, Bohm proposes that the fundamental element be a moment. This moment, in his view, is not something that can be defined using notions of space and time, since the moment may vary according to context. He argues, for example, that 'a particular century may be a "moment" in the history of mankind' (1980:207). All moments have particular explicate order, and all moments are related to all others in the whole, in so far as they hold all others enfolded within them.

Bohm can be thought of as espousing Whiteheadian process philosophy. He writes, '[n]ot only is everything changing, but all *is* flux. That is to say, *what is* is the process of becoming itself, while all objects, events, entities, conditions, structures, etc., are forms that can be abstracted from this process' (1980:48). The process that he is discussing, is the 'unknown and unknowable totality of flowing movement', a movement without borders which he calls the Holomovement. Clearly then, Bohm has a constructionist view, where he sees a reality separate to our knowing of it because we are unable to know it. Our constructions continue to grow in sophistication, presumably moving closer to what is really real. Capra indicates that by studying the order enfolded in holomovement, Bohm deals with the structure of movement rather than of objects, and so he manages to deal with 'both the unity and the dynamic nature of the universe' (Capra 1982:88). In order to explain how it is that humans may come to understand such a notion of wholeness and the implicate order, Bohm incorporates consciousness as an essential feature of the holomovement. He argues that the whole world is internally related to our thought processes through enfoldment in our consciousness. What we think about is what we perceive and know, what gives meaning to our lives and is the well from which our 'intentions, wishes, motivations and actions' arise. Bohm writes that 'even imagining what life could mean to us without the world of nature and society enfolded within us is impossible' (1988:67). Bohm speculates on the relationship between mind and body and concludes that if one is to think of unbroken wholeness and the implicate order as the commencement point, one cannot identify mind and body as causally affecting each other. Bohm explains that the mind enfolds matter in general and therefore body as particular. The body enfolds mind and, in addition, the entire material universe in so far as it comprehends through the senses, and it is comprised of atoms which are enfoldments of all matter throughout space. Neither the body nor the mind are primary: both are projections of some higher dimensional ground in which they are really one. In exactly the same way, it would be inaccurate to describe humans as independent of and interacting with other humans and nature since all of these are projections of a higher dimension which is a single totality (1980:210).

What is of importance in Bohm's work is not the notion of movement from potential to actual, so much as the way he conceptualises this implicate order, which Skolimowski (1992: 7) describes as ‘the way in which all things are connected in a most fundamental, primordial, cosmological sense’, where the entire universe is an indivisible unit. In terms of a new cosmology, the implicate order gives a picture of some huge multidimensional sea of unimaginable energy, the holomovement. Bohm speculates that perhaps some 'freak wave' in the cosmic sea is the real explanation of the Big Bang, and that perhaps the expanding universe is really a series of ripples moving out from the freak wave. The universe we know may be only one of many stemming from other such 'freak waves' in the cosmic energy sea. Both implicit life and implicit inanimate matter are enfolded in the implicate order; both become explicit but neither, because of their enfoldment, can ever be truly considered separate or separable. No form of life is separate from other life, no life is separate from nature.

Stephen Toulmin (1982) and David Ray Griffin (1988a) argue that postmodern cosmology is about rethinking the universe as an integrated system united by universal principles in which all things, and by all things Toulmin and Griffin mean human, natural and divine, are seen as in orderly relation. In this postmodern cosmology humans are returned to science, science, philosophy and theology are in dialogue and the universe is reinvested with enchantment. ‘Cosmology’ as Toulmin writes ‘need not remain forever a source of disappointment or disillusion’ (1982:16). One outcome of postmodern cosmology would be to allow humans to once again **feel** at home in the universe, fully aware of how they must act if they are to **be** at home in it.

Spretnak (1991: 9) writes that the ‘monstrous reduction of the fullness of *being*’ that has occurred through the dynamics of a consumption oriented, growth-obsessed society, is the target of the thoroughly subversive teachings and practices of what she calls the ‘wisdom traditions.’ By wisdom traditions she is referring both to the ancient traditions of Buddhism or North American Indian traditions, for example, as well as to the ecological postmodern position that she espouses, all of which are fundamentally wedded to notions of being in relation, to notions of felt connections between individuals, between individuals and families, communities, species, Earth and the universe. Modern notions of dualism and materialism are transcended through the organicism of postmodern spirituality. Postmodern persons are not alienated from their environment; rather, as Spretnak (1988) argues, they are at home in their world, feeling a deep relationship with other entities. Having such a relationship denies any possibility of exploitation or domination. The freedom that is thus ascribed to all of nature is ascribed to humans, who have the capacity for self-determination, the ability to respond to situations in which they find themselves.

Wisdom Traditions: Holding Sacred Space

From a time when indigenous earth-based spirituality and associated practices were seen as pagan, and the target of eradication, there has been a shift in the mid-to late twentieth century, toward exploring indigenous spirituality. In some examples it is a superficial appropriation that makes no attempt to connect with the deep realities of the cultural understandings and beliefs, but embraces ritual practices often with reinterpretation of meaning through Western eyes. In other instances, the exploration is a journey of deep meaning born of a longing to be reunited with something which has been lost.

Thomas Berry (1988) sees postmodern culture as the spirituality of the ecological age and as the fourth in the unfolding of the spiritual phases of human development. First was the primal tribal stage with shamanism and nature as the abode of spirits, next the classical stage where organised religion transcended nature, and third the modern industrial age with science and technology as religion, controlling and eventually threatening to destroy nature. Like Spretnak, he considers that the ecological age fosters an intense awareness of the 'sacred presence within each reality of the universe and returns us to a creative communication with the deep spirituality that resides in nature. Haught (1984:3-4) considers that it is possible to reconcile a spiritual approach to hope in some cosmic purpose with the messages that we have received about nature from science. The central core of a religious consciousness, he writes, is 'a fundamental trust, primordially expressed in symbols and stories, that reality is ultimately caring'. He argues that despite overwhelming evidence that life is often tragic, that suffering and death are all around us, we exist in an environment which is not negative. This essence of religion is a 'basic confidence that the ultimate environment of our lives is trustworthy and fulfilling rather than indifferent or hostile towards us'. Haught frames the ecological postmodern spiritual view as one which sees the universe, in its transcendent depths, as a 'graceful, caring, enlivening environment'. We can experience that environment when we sit in quiet reflection, when we gaze in silence at a scene of great beauty, when we hear the happy laughter of someone we love: these are sacred moments that come into being, perish, but in their unfoldment give us a deep joy that remains in our hearts and memories when the moment has perished. In the perishing, the moment of joy returns to the implicate order, where it remains as part of the continuing evolution toward universal care and compassion.

Charlene Spretnak writes of taking her newborn child out into the garden of the hospital, to have a 'cosmic coming-out party' with some friends. She introduced the child to plants of the earth and the stars and planets of the heavens. Interestingly, over the years that followed she forgot having performed this ritual, and she asks why it is that these moments of connectedness are so fleeting and so easily overwhelmed by the pressures of daily living; yet having recollected how she felt after wilderness trips, her mind was flooded with examples of such interconnectedness. How difficult it is, she finds, to bring moments of connectedness home, to keep them with you, yet how stubbornly they re-present themselves, ever on the border of the busy life, refusing to be relegated to fantasy. To the average Westerner, they are on the periphery. To indigenous peoples they are central, and the ways in which Western peoples live their lives is considered inside out. Spretnak (1991:103) explains that at the centre of indigenous people's lives are 'experiences of deep communion with the cosmos'.

There is evidence in the words of the participants in the study that their region is familiar and dear to them and I share this sense. We know the land and its boundaries, we know the water, the hills, the forests. We know the climates, what grows here and what does not. We know the fierce winds and the salt in the air. We know the birds and their calls and those that have left as development continues. All of these things we know and they are a part of our being. The more humans pay attention to the ways of being of the nature around them, the more they become grounded in that place, the dearer it is for them. Humans are part of the experiencing universe and so we feel pain when the land is burned and scarred, even though we know deeply that fire too is part of nature and that the hurt is a construction we place on the land. The land will heal, fire cannot harm the land, but it harms the ways we have come to know the land. And it can and does hurt the non-human inhabitants that are also a fundamental part of that which we have become by being here. There is a real sense in which this chosen place is sacred space. This is not so everywhere, however, and this is why Ruether (1992) argues that a healed relationship is needed between humans and nature, and that this requires a new consciousness and a movement to this new postmodern spirituality. Not only do we need to alter our own inner psyches, she insists, but we need to transform the ways in which we 'symbolise the interrelations of men and women, humans and earth, humans and the divine, the divine and the earth'.

Ecological Postmodern Cosmology: Highlighting the Spirit

In her text *States of Grace: The Recovery of Meaning in the Postmodern Age*, Spretnak (1991: 4) writes of her own interpretation of postmodernism as one that critiques modernity and attempts to move beyond it, accepting those advances which are positive, rejecting those that have failed in such devastating ways, but overall presenting a perspective which is radical in the ways in which it is 'rooted in ecological sanity and meaningful human participation in the unfolding story of the Earth community and the universe'. This she calls creating an ecological postmodernism, and because it provides a better fit with the theoretical construction explored in this work, is now adopted instead of the more general affirmative notion. Spretnak does not reject deconstructive postmodernism, which she describes as deconstructing concepts such as humanism, God, nature, gender and so on, which people take to be natural or universal, so that they are seen as cultural constructions. Indeed she considers that such deconstruction is important, but she is critical of the conclusion that such cultural construction is all there is, considering such conclusions to be 'spiritually adrift'.

Spretnak's own interest is in the revisioning of theology, one informed by ecology, by postmodern science and other important fields. Her hope is modest, she claims, but she is adamant that '[c]ontemporary theology, if it is to help people think and act holistically, must make its understanding of the God/world relationship consonant with contemporary views of reality'. She points out that the information from postmodern science in particular, is so very awesome, rich and provocative that the potential imaginings for the relationship between the divine and the human as we move into the next millennium leave former perspectives pale by comparison. In relating our awareness of the cosmos to sacredness, Spretnak writes '[t]he universe is laced with mystery, undulating in rhythms of novelty and unity' (1991:86). She writes:

> [w]hen one experiences consciousness of the exquisite interrelatedness and subtle vibratory flux of the life of the material world — a perception that extends our understanding of the 'sentient' beyond the animal kingdom — one is filled with awe. One has experiences of immersion in ultimate value, the sacred totality. Hence one has known grace. Reverence for the grand communion and gratitude follow, the roots of worth-ship, or worship (1991:86).

Spretnak suggests that this view of a world alive with a life force with which all things are connected is far more than 'a 'mere' narrative of projected idealism' (1991: 18), in so far as it has been the teaching of a great variety of cultures throughout history 'from the cultures of the Upper Palaeolithic era to those of the contemporary fourth world'. It is central to the teachings of Buddhism, Taoism, and the Hindu and Confuscionist philosophies of organicism. Even in the twentieth century it persists in the work of process philosophers and theologians, and the postmodern systems theorists. All of this underpins the notion of ecological postmodernism, which advocates a movement beyond the apparent failure of modernity and nihilistic interpretations of disintegration, to an ecological understanding of the universe and everything in it. Through ecological postmodernism we are encouraged to seek a broader picture so that we move beyond fragmentation to what Spretnak calls the 'Grand Unity, the ground of the sacred' (1991:20).

Sometimes within the fire narratives, words used to describe the environment and the things people did to manage their pain and to heal express a sense of sacredness. These were mainly allocated to the negentropic section of meaning making in chapter four. The words of a local doctor in respect of this area of countryside provide an example: '*this land is where the soul is. I mean this is special country so your soul very quickly gets lost in it*'. This clearly directs the listener/reader to a spiritual dimension in some way. It is not unusual to equate things of great beauty with the ways in which they move and energise spirit. Recall the social worker who said that whenever things got too much for her, she would drive around the forest and drink in the silence and the peace. That would restore her spirits, re-energise her soul for the difficult work she was doing. Nature is frequently aligned with soul, spirit and sacredness, and all of those, with healing.

In both chapters on myth and cosmic stories, there was a recognition that Aboriginal Australians are identified as closely connected to their land. A statement was made in chapter five that this connection belongs to everyone. Postmodern science gives us extraordinarily compelling messages about the ways in which we are related, not only to all of the living things on this earth, but to everything that exists in the universe. The fundamental interconnectedness of all things in the universe has been explored previously through theories of the Big Bang and evolution and the panexperientialism of process philosophy. The atoms of carbon that came from exploding stars are the same atoms of carbon in our bodies — we are truly children of the stars, as Darryl Reanney (1994) has so eloquently stated. Reanney writes that the atoms of iron in our haemoglobin are the same as those that once were at the very heart of a giant star. He describes the genesis of that atom of iron in our blood as an 'unbroken line that ... winds its way out across a journey more fantastic than the strangest dream of the wisest seer' (1994:35), as it wends its way from the violence of the exploding star which hurled it into space, to lodge in the rocks of a newly-born planet, to be loosened into the soil, taken up by a plant and consumed by a human. Recognition of our descent from the stars allows us to see that we are simply an expression of the universe, a seamless part of the whole. Not only are we all children of the stars, but when we perish, our body, our physical unfoldment with all of its component elements, returns whence it came. All of these elements have been circulated through the 'things' of the earth billions of times throughout the evolutionary history of the earth, and after the extremely transient time that any one of us inhabits the earth, those elements will be returned to recycle yet again. Death, then, is about living; it is a friend to the life process. The interconnectedness is what gives rise to the sense of compassion for all things of which we are but a part. This notion is simply and beautifully expressed by Collins:

Every particle of every thing
rock, water, flower, human
has been in the same place flaming
in the heart of our ancient sun
before the earth
came flying out of it.
L. Collins 'Only A Little Planet'

How is it possible that we could gain true awareness of this and retain any arrogance about our superiority? Ruether (1992) believes that a profound spirituality is the result of actually experiencing this and bringing awareness of the relatedness of all things into our consciousness.

McFague (1992) sees the common creation story as important not only in the ways in which it allows humans to rethink their place in the universe, but in so far as it is available to all, not only to those who follow a particular religion, as has been the case until now. The story is accessible to any who are interested enough to pursue it. It belongs to all people who, simply by being humans on the earth, have a place in it. It is therefore a prospective place for all people of all religions to meet in harmony. Just as Haught (1984) stated so clearly earlier in this work, McFague makes the case that as citizens of the universe we are connected to everything else so, she bluntly states, 'we had better *live* as if we were ...[and make the decision] to live responsibly and appropriately in our common home' (1992: 53). From her perspective, one that resonates with this work although divinity is not necessarily recognised as the God of the Christian texts, McFague locates God not as the distant Lord of Creation, but as 'the source, power and goal of the fifteen-billion-year history of the universe', of continuing to create, part of all that is and yet transcendent.

Henryk Skolimowski, a Polish ecophilosopher, has outlined links between cosmology and action which are mentioned here and which will, in later chapters, be used to inform the world of nursing. As Skolimowski (1992: 12) writes '[a]s we read the universe so we act in it'. If we misread the universe, we will act incorrectly in respect of it, and our incorrect actions will become evident in their consequences. Skolimowski argues that cosmology is our matrix for action and that we are, in the late twentieth century, in dire need of a new cosmology because our current action, directed and guided as it always is by our modern-day cosmology 'continuously misfires' (1992: 9).

Since action is the carrying out of that which is directed to certain goals, and the goals of modernity have been discussed and critiqued earlier in respect of their disastrous outcomes, it will be evident why a new cosmology is needed. Any cosmology that directs action in ways that do such disservice to the planet and to humankind can be considered outmoded and in dire need of revision. If, for example, we imagine a universe containing nothing but physical matter, there will be little place for notions of spirituality; if we imagine as Mathews (1991) did in chapter five, that the universe is hostile, humans will act in self-preserving ways. If, on the other hand, we imagine a universe that is harmonious and gentle, a place for creative and guiding divinity and locate purpose in striving to regain unity with that divinity, human action is more likely to be egalitarian and mutualistic. It is in the interests of harmonious existence and maintenance of the planet which sustains life, then, to create and be guided by a cosmology that endows the universe with meaning and with beauty.

There is an interesting connection between Skolimowski's words '[a]s we read the universe so we act in it' and the actions of people in this study. The reading of their environment is a microcosm of how they read the wider universe, and it is a place of beauty notwithstanding the occasional upheavals of nature. Their chosen place is a place of nature first, and their being there is, in a sense, an intrusion and that intrusion is to be minimised. Some will clear a little around their land for safety, whilst others will not even do that. The intention is clearly to live connected to nature in this place and to deal with the risk by insuring and leaving in times of danger, taking things that are dear with them. If they do not collect the dear things, that is sad but they learn not to collect again ... one of the 'trade offs', one of the 'deals that one must do' to live here. If they do not get out in time, that is a tragedy for those who mourn them, but it is also 'part of the deal'. The remaining problem is the risk for those who fight fires, who feel a keen responsibility to save life and property even when individuals have made decisions to live with risk but with no intention of endangering the lives of others with their own decisions. Herein lies the disconnection, because the firefighters act out of humanitarian interests, often at extreme risk to themselves, and those who will not disturb nature in order to decrease their own risk, contribute greatly to the risk of others who may not share their sensibility. There seems, in the actions of some people, to be a sense in which spirit is reasonably easily seen embodied in nature but not so easily seen embodied in other humans.

On the other hand, '[a]s we read the universe so we act in it' also describes the many individuals and organisations, both local and those who came in from elsewhere, who worked hard in the aftermath of the fire out of a deep sense of care and compassion, to help those hurt in some way by the fire. This is not to ignore those who were self-serving or who intensified hardship for others in the midst of their tragedy, but the overwhelming response was one of kindness. The identification of spirit in all things was evident as people offered their homes, money, and their physical strength in clearing and rebuilding. They worked for individuals, for the community in the sense of rebuilding communal structures like halls and churches, and for the environment in clearing land and replanting, collecting injured birds and animals for treatment, and in burying the collective debris deep in the ground to remove the painful scars as much as possible. There is surely a cosmology about connectedness that drives such immense efforts to help people and the environment to heal.

Living with Nature in Humility

The words of the participants in the study that commenced this chapter are only some of those expressed. There is a sense of deep spiritual connection sometimes overtly expressed, sometimes unspoken but clearly present in some part of every one of the interview transcripts. These people, who chose to remain after the fires destroyed so much that was dear in their lives, did so out of a love of the environment. Most spoke of their love of the ocean and the bushland, the flora and the fauna of the area: the heath, the wattle and the native birds. There is a clear sense of nature affecting some deep essence, the individual soul, and in this instance, the connection with the soul of the universe, for the woman who said:

> *I can always remember as a child a connection with the sea. I like the horizon in particular. I feel very much at home by ocean beaches, I know them, I feel confident around them. That would be my connection...the ocean, the sand, the tranquillity. I always felt a certain freedom down here and also... I knew my place. I always feel humble when I'm walking on the beach and with the sea coming in it always reminds me of where you are in the world and not to...I suppose to think of yourself as over important.*

A couple who share a sense of self that is intimately bound not only to the environment but to the universe and the greater transcendent being or divinity, spoke of their beliefs and how they remain unshaken by the fire; in fact, they perhaps explain the fire in terms of spiritual lessons to be reinforced. Their words inspired the development of this chapter to a large extent, so it is relevant to include this aspect of the discussion with them here and to use their words to draw this section to a close. They spoke of the aftermath of the fire:

> **T.** *..anyway, it wasn't really a tragedy, it's only a tragedy for the actual material part of it really. I mean the bush recovered; it's only a drop in the ocean as far as time goes. It's no tragedy really'.*
>
> **S.** *We think we humans are so special, when something happens to us, we say 'oh it is a disaster', but nature shows you that you are not dominant over it after all.*

Of the losses sustained in the fire they said:

> **T.** *Is it really bad? I mean black's not better than white or white's not better than black, you know, it's the old Chinese Yin Yang concept isn't it really? You need a balance of everything. You've got to have good and you've got to have evil, you can't say that something is good unless you have something to compare it with. It's not really bad in the overall long term. A plane crashing into a mountain isn't bad, it's neither good nor bad really, it simply is, especially if you're thinking along the lines of Eastern philosophies, of reincarnation and Karma. So if I go and get run over by a car, maybe that's something I was meant to do in this life, and maybe it's balancing something that has occurred in a previous life.*
>
> **S.** *If we do survive but we've lost the house, what's the problem? We're insured. And I mean what if we do die? I think 'that's it, so what'? We'll go and see what happens, what's next. It's only because we hold on to life... we think it's so important this life. We put man up there, at the top, higher than nature. But we are a part of nature, that's why I came to this place, I love it here and there's no fire or anything that going to stop me living here.*

Lama Anagarika Govinda is a Tibetan Buddhist whom Rene Weber describes as both a scholar and a sage. He states, one cannot 'moralise about nature or ... extrapolate our notion of ethics to the natural world' (in Weber 1986: 41). Bushfires are not a matter of justice, it does not have anything to do with Karma. Natural forces, he argues, 'act according to their own nature. They are neither good nor bad, neither just or unjust.' Lama Govinda goes on to remind humanity that suffering is the lot of humanity and that to live a life free of suffering would rob one of the opportunity to learn about compassion, a view that Skolimowski also promotes.

Another concept present in the words of participants, and which is familiar not only to Christians but to students of philosophy, readers of fine literature or poetry, or students of any artistic medium and much more, is that of soul, the immaterial essence of an entity. As far back as the Classical Greek scholars the soul has been a focus of speculation. Cousineau (1995) traces notions of the soul from the philosopher Socrates to black American 'soul' music and throughout his work is a description of soul as present in things of great beauty. Sarton, a novelist and poet, writes of her uncertainty about whether the inner work she is undertaking is causing her sense of wellbeing or if it is the autumn light. Whatever it is, she feels differently. She noticed the new sense as she walked amongst the lovely offerings of nature in her garden and she experienced this reconnection of her outer with her estranged inner self as 'like getting a transfusion of autumn light right into the vein' (1995: 129). Bly, another poet, writes of Thoreau that he was sure humans could have 'an original love affair with the universe', but adds that this will only be possible if they 'decline to marry the world' (1995: 130). By this he means that humans need to move beyond preoccupation with worldly things, with acquisition, power, material success, to contemplate that which Whitehead has described as 'really real'. Bly expresses this as the need to 'give up tending the machine of civilisation and instead farm the soul. We can' he writes, 'sense the boundaries of the soul, whose stakes are set thousands of miles out in space, only if we disintegrate property boundaries here on earth' (1995: 130).

Care of the soul is the real task of human life, and it is this journey that is fraught with darkness and struggle. Thomas Moore writes that the soul speaks to longings that humans feel, but is not a path that avoids the shadows, the struggles and ultimately, death. A soulful personality, he writes, 'is complicated, multifaceted, and shaped by both pain and pleasure, success and failure' (1994: 139) and the greatest malady that exists in our time, which is implicated in all of the troubles of individuals and the world in general, has to do with loss of soul. There is a sense in this work, that for some people the bushfire engendered a feeling of deep loss and in some ways individuals felt that when the bushland environment burned so badly its soul fled, and in the flight took a little of their own souls. One woman interviewed was a senior Red Cross administrator, who also experienced a 'close call' with the Ash Wednesday fire in one of the inland towns. She spoke of her experiences with disasters and the ways in which people have spoken to her about them. She said:

> *... One of the things I used to talk about that always got an instant recognition for the last ten years is something around the loss of innocence that people have who've been through disaster. Their feeling that they had a belief in some sort of benign world or a benign God, not in a religious sense and that was rocked to their foundations and nothing has ever been the same since. They retain that feeling of not being sure any more and that's the worst thing that they carry with them for the rest of their lives. That feeling, as you say they can't be sure any more. They often talk about it as a loss of innocence and it's not an innocence you need to lose. You can go through life without that and it doesn't... some of them feel it hasn't added anything to their lives.*

Something from their very essence has gone, this little bit of soul.

This chapter presents the view that postmodern science has recently been weaving a new cosmic story, and it is a common creation story that internally relates all things of the universe. This is the story of the emergence of the universe, and ultimately life, from the cosmic fireball. Swimme (1988) believes that poets, mystics and nature lovers should tell the cosmic creation story, to move it from the world of fact and theory to a world of value and meaning. Everything, he argues, stems from the telling of the story: the health of people, the land, the sky, the soul, the planet. Now that the view of scientist as observer has broken down, the standpoint of spectator in cosmological questions has gone with it. Now as participants in the universe we raise questions again about cosmology and natural religion, about who we are and what our place in the universe is. We need, as Toulmin (1982) argues, to feel at home in our universe and in order to do that we need to discover on what conditions the universe will continue to provide a home for us.

In this chapter, notions from postmodern science and eco-cosmology have been examined for the ways in which they depict a universe that is evolving to higher order, alive with a spirituality that is present in everything, and which feeds the souls of all things in and of the universe. A sense of the sacred, from the perspective adopted in this work, is not particularly directed to a religious sensibility, but rather to a metaphysical sense of something greater than oneself, some mystery, some persuasively creative or organising force which gives order and purpose to the universe and to the lives of its inhabitants. Underneath this perception is the longing to locate the purpose to each of our lives, so that the suffering we encounter and the ways in which we struggle to cope, to heal, to be well and to live meaningful lives is not for nothing. There is a sense in which belief in purpose is fundamental to finding strength to keep going and that to believe that human lives are a mere accident of chemistry, or that we are part of a cycle that begins and ends without meaning is to live with despair and indeed removes any reason to continue with such a struggle. The spirituality that ecological postmodernism promotes is one that is relevant to daily life, one that helps us with the problems we face, one which guides our inner development and which helps us to heal from the stressors of being human, perhaps by the bestowal of grace. Stressors, as suggested earlier in this work are omnipresent and ubiquitous, and Skolimowski suggests that healing is the 'most important practical and spiritual work of our times'. He argues that we need a 'new spiritual response to the splintered world we have created' (1993: 9).

Considering sacredness and notions of soul, spirituality and grace embedded in the perspective elaborated in this chapter, creates a reconceptualisation of human to human relations, and to the notions of care and compassion for all things as the fundamental way of being in the world. It remains now, in the next chapters to translate this to the world of nursing: to examine nursing's cosmological foundations and the ways in which such a cosmology does or could inform nursing's self-understandings, roles and processes. If the thrust of this work is to be heeded, nurses are particularly well-placed to contribute to the planetary agenda of evolving care and compassion, since nurses have a particular mandate to enaction care and compassion in healing work, which is soul work.

The next chapter commences this aspect of the work with the exploration of cosmology, described as a leitmotif for nursing. A leitmotif is a constantly recurring theme, and along with enchantment, cosmology is one of the dominant themes in this work. Nursing can sometimes appear jaded, as nurses struggle with the daily grind of working in soulless environments, in places that are more geared to pain and procedure than healing, and in soulless routines forced to suit the fast pace, throughput oriented, economics-driven establishment rather than to nourish the human soul and struggle for healing that is taking place within the walls. Nurses are often powerless to affect change to this environment and where that is the case, their need is to find ways to humanise the environment, to *be* the environment where that is needed, in order to create healing spaces.

CHAPTER 8

ECOCOSMOLOGY: A LEITMOTIF FOR NURSING

In nursing in the twentieth century, spirituality was separated from art, and art was separated from science. Nursing must be radically reimagined if it is to restore its caring-healing fine art and the view of mind/body/spirit unity that is the basis of its practice. In this revision, nursing art and spirituality — the sacred — need to be seen again as one.
P. Chinn & J. Watson, Art and aesthetics in nursing.

From building an ecological postmodern cosmology, which was the focus of the previous three chapters, the thesis now turns to the question of what a philosophy of nursing would look like if it was to be constructed from this perspective. This question is now addressed, commencing with a brief mention of Nightingale as nursing's first scholar, and Martha Rogers who constructed a revolutionary model for nursing. Chapter eight then turns to a succinct summary of the ecological postmodern perspective and describes in detail how this shapes the four traditional pillars of nursing's philosophy: person; environment; health; and finally nursing itself. It is not the intention in this work to be building a 'new' theoretical model for nursing, although it is acknowledged that a 'readerly' text (Rosenau 1992) is one where interpretations are the province of the reader and interpreting the work as model development well may be the end result for some readers. The 'writerly' intention is to illuminate the notion of the mind/body/spirit unity that Chinn & Watson (1994) describe in a way that would lead inevitably and irrevocably to a way of being in care and healing.

Choosing for the title of this chapter the word leitmotif, indicating a dominant or recurring theme, seems an appropriate way to connect nursing with the recurring cosmological theme of the work. Given that cosmology is about the universe, its origins and inhabitants and for the interests of this work, human inhabitants, cosmology is of fundamental interest to nursing. Nurses are part of the unfolded cosmos. They inhabit and they *are* the environment of others. They are part of the interconnected web of relations and have a particular remit to compassion and care for others and their work is about healing. Cosmology underpins all of this work. The search for who we are and how we fit into the scheme of things has been a feature of history. The sense we make of why catastrophic things happen and how we manage the ongoingness is related to our understandings of cosmology, of purpose and meaning. Humans have struggled for millennia to locate *the* cosmic scheme that explains the purpose of suffering. Mathews' (1991) description of a cosmology which is hospitable to humans, detailed in chapter one, is attractive. It is the view of the affirmative postmodernists who are hopeful of a positive future for the world and for themselves and who strive for self-realisation and fulfilment.

Thinking about Nursing

Nursing has been defining itself and developing its body of knowledge, that which makes it a discipline, for decades now. Articulation of theory for nursing commenced with Nightingale, who had much to say about the effects of the environment on health and healing and who conceptualised notions of Person, Health, Environment and Nursing which generally make up theories of what nursing is about today.

Nightingale: Theoretical Beginnings

Martha Rogers describes Nightingale's writing in *Notes On Nursing*, as 'an exciting and far-reaching compendium of ideas and statements concerning the purposes and scope of nursing, the essentials of good nursing practice.' She adds that within it '[t]he thoughtful reader can find the underpinnings for much of what is going on today' (Rogers 1992: 58). Jean Watson considers Nightingale's voice to be timeless, a call to nursing to accept the remit to human health, caring and healing as its consciousness with the development of knowledge and wisdom that is as desperately needed today as it was in her time. Watson laments the fact that, from her twentieth century vantage, she can see that 'nursing has never fulfilled the promise of Nightingale,' that there exists the same urgent need for reform today in human caring-healing, health knowledge and practices, with a commitment to exploring 'knowledge rooted in ancient feminine wisdom and knowledge, a cosmology of wholeness, connectedness and harmony' so that nurses will once again practice with the compassion and commitment of Nightingale, with as she suggests, a passion for nursing (Watson 1992: 81).

Nightingale established the four pillars of Person, Health, Environment and Nursing as those on which nursing's philosophy would be built throughout its Western history to contemporary times. In her *Notes On Nursing* (1859), Nightingale placed great emphasis on the physical environment, not merely that of the hospital or private home, but of society in general. Fresh air, sunlight, quiet, cleanliness and warmth she saw as essential to health. She saw disease as a reparative process and the business of nursing as assisting that process, by restoring much that nature provides and with which humans in their ignorance, interfere. Illness and suffering she described as symptoms 'not of their disease, but of the absence of one or all of the above-mentioned essentials to the success of nature's reparative processes' (1859:6). As knowledge increased, Nightingale added sanitation and infection control to her list of essential requirements for health and wellbeing and worked to improve public health and medical care, cleanliness and education about matters of health. This is not to indicate that she believed in germ theory as it emerged: Nightingale was an adherent to the miasmic and vitalist thinking of her time (Holmes 1991b; Smith 1982), considering the heavy air from decomposing organic matter to be a cause of ill health, in that it removed individuals from the possibility of fresh air and drained the vital force, that inexplicable force in organic things which is responsible for life (Flew 1979).

Nightingale also subscribed to what might be described as an holistic view of persons in that she saw the body as housing the mind, physically united and whole. In one of her letters to Jowett she indicated her disagreement with dualistic thinking, writing 'I believe that the laws of nature all tend to improve the whole man, moral and physical, that it is absurd to consider the man either as a body to be improved or as a soul to be improved separately' (in Welch 1986). In seeing symptoms as manifestations of some deeper problem to do with the breakdown of normal relations between a person and their natural environment, Nightingale's thinking has been continued by a number of nursing scholars over recent decades. Whilst these scholars are acknowledged for the important work that they have been and are engaged in, as they further the discourse of nursing, one in particular has been singled out for comment here. Martha Rogers pioneered important and radical work in nursing, bringing the abstract and complex worlds of contemporary scientific understandings and philosophy to nursing in a way that continues to stimulate exploration today. The work of later theorists such as Newman (1986), Parse (1981), Fitzpatrick (1989) and Sarter (1988) is derived from Rogerian beginnings, and it may be that their own courage in daring to be different, in also exploring highly abstract and complex metaphysical notions, stems from her own.

Nursing into the Quantum Age

In her seminal work *Introduction To The Theoretical Basis Of Nursing* (1970), Rogers defines nursing as 'a humanistic science dedicated to compassionate concern for maintaining and promoting health, preventing illness, and caring for and rehabilitating the sick and disabled' (1970: vii). In a later work, however, (Rogers 1990: 6), she moved away from a perspective of nursing as a verb describing nurses or what they do, to nursing as a noun signifying 'a body of abstracted knowledge' from which theories are derived which in turn guide practice. Her definition of nursing had, by 1990, evolved into the study of unitary, irreducible, individual human and environmental fields: people and their world. It is the *purpose* of nursing, she argued, to 'promote health and wellbeing for all persons wherever they are'. She differentiated between nursing as science and art, an old but recurring debate, writing that art is the creative use of the science of nursing, for human betterment.

Rogers acknowledges her interest in the work of Alfred North Whitehead amongst others, and there is much of process philosophy in her work. She writes that the process of life and death are 'dynamic events of great complexity' (1970: 41), and sees them as moments in the Whiteheadian sense, suggesting that an understanding of the distinctive characteristic of life, that entities experience sequential happenings or moments that they react to in some way, explains complex human behaviour. Fundamental to Rogerian science are unitary human beings, wholes who cannot be known by reference to their parts, and whom she sees as open systems in constant interaction with the environment, which is the source from which humans achieve negentropic outcomes from their life experiences. The human/environment unity she sees as an interconnectedness that is also not reducible. Rogers describes the person – environment unity as an energy field, and because energy fields penetrate the entire universe, humans are subject to any influence at all that exists, a range far in excess of those which are easily apparent. The human/environment unity is a field with energy patterns in various frequencies, flowing from low to high, constantly in flux and always creative. Any behaviour or characteristic of the field is a manifestation of pattern, and could be expected to change as the entity continually evolves. This is not to suggest any linearity in terms of development but rather a growing diversity and differentiation. Life processes are characterised by a constant repatterning by both humans and the environment. The patterned wholeness that is external to humans is the way that Rogers explains the environment and the constant interchange of matter and energy between the environment and humans is, as she argues the foundation of human becoming and in the mutuality of human environment changing and being changed, evolution proceeds. Change, Rogers reminds her readers, is inevitable and unidirectional; there is no going back, but what is not predictable, is the nature of the change. Unitary human beings have the capacity to participate knowingly in the processes of change and innovation, bringing certain possibilities into being in preference to others. This is a process of participation in the unity rather than any suggestion of adaptation to or controlling in order to alter the environment (Malinski 1986; Rogers 1990). Change then, is not predetermined and human freedom and choice will affect the course of history as much as the evolutionary trajectory through which the universe would unfold even in the absence of humans. In terms of attempting to predict the nature of the increasing diversity and higher frequency of field pattern, Rogers, in conversation with Sarter (1988: 63) has indicated three sets of correlates: '(1) from pragmatic to imaginary to visionary, (2) from sleeping to waking to beyond waking, and (3) from materiality to ethereality... [so that] the individual manifesting higher-frequency wave patterning would experience (and be experienced as) visionary, ethereal or beyond waking manifestations'. The nature of change finds expression, Rogers asserts, in three principles of homeodynamics:

1. *The principle of integrality:* the inseparability of human and environmental field processes, where changes in the life process are not 'caused' but stem from interactions between the two in mutual, sequential and continuous revisions;

2. *The principle of helicy:* where continuous innovative change proceeds sequentially and unidirectionally, but not linearly, in negentropic evolutionary emergence with inseparable human and environmental energy field patterns increasing in diversity characterised by non-repeating rhythmicities;

3. *The principle of resonancy:* that change in energy fields is propagated by the rhythmical flow of energy waves oscillating at various frequencies. Resonating waves of complex symmetry unite human with other energy fields, and change in the wave pattern, fast to slow, rising and falling, sometimes harmonious, sometimes cacophonous, but always present, characterises the human environment interaction through the life process (Rogers 1970, 1990).

Rogers summarises these principles of homeodynamics as ways of perceiving unitary human beings. She writes that mutual and simultaneous interaction between humans and the environment at any point in space-time means that change in one will automatically result in simultaneous change in the other. Furthermore, such change will be irreversible, non repeatable, rhythmical and will show evidence of evolving complexity in pattern and organisation. Change proceeds, she concludes, by continuous repatterning of the unified human/ environment energy fields by resonating waves.

The following is a summary of Person and Environment from the perspective of Rogerian science:

Person	Environment
°Irreducible, indivisible multidimensional energy field, coexistent with the energy field of the environment. °Identified by wave pattern and organisation manifesting innovative wholeness, continuous change and active in its evolution unidirectionally along space - time continuum °Open system exchanging energy with everything in the universe °Sentient and thinking	°Irreducible, indivisible multidimensional energy field coexistent with the energy field of the human °Identified by pattern and organisation that is infinite and undergoing constant change toward innovation and diversity °open system exchanging energy with everything in the universe, including humans

(Marriner-Tomey 1989; Rogers 1990).

It was never Rogers' intention to detail the ways in which her conceptual system could translate into professional practice. Her life work was devoted to the establishment of the metaphysical construction that underpins nursing and it remains the task of others to illuminate the model in practice. There are countless nursing scholars who nearly thirty years later, continue to do this, further developing the model as they proceed. She has much to say about what she believes nursing to be however and although she does not define health it is possible to discern some of what she believes health to be:

Health	Nursing
°Manifestation of pattern, an expression of the life process, the meaning of which can only be derived from understanding the life process itself °Rhythmic consistency between persons and the environment °A positive value denoting wellness and absence of illness and disease.	°The study of unitary, irreducible indivisible human environment energy fields °A learned profession, creative and imaginative, grounded in knowledge, judgement and compassion, independent but collaborative

(Marriner-Tomey (1989; Rogers 1990)

In describing the purpose of nursing, Rogers suggests that it promotes symphonic interaction between persons and their environment; strengthens coherence and integrity of humans; and directs and redirects patterns of interaction between persons and the environment for the realisation of human health potential. Barbara Sarter writes that no other conceptual model for nursing has proven to be so controversial, being in 'clear contradistinction' to other models of the day (1988: 59). It has received stinging critique from those who have found it to be abstract, highly complex and difficult (Daily et al. 1989). Holmes (1991b) is one who considers the text to be basically poorly argued and simplistic, with outdated sources even at the time of publishing. He cites the ways in which she writes highly abstract accounts without explanation, such as '[t]he universe does not flow around man. It flows through him' (Rogers 1970: 49) — as one of many examples. Sarter (1988) has conducted a depth study of Rogers metaphysic and, like Holmes, considers there to be a lack of philosophical clarity and consistency in the work that has allowed misinterpretations. Despite this critique, Sarter is deeply admiring of Rogers' work and considers that rather than adopt the criticisms and reject the model it would be of great benefit to nursing's search for a philosophical base, for Rogers' work to be clarified and strengthened. Rogers conceptual system was an important work in its day in so far as it differed radically from any theories being advanced in nursing at the time, attempting to put the cutting edge of science into nursing theory, and its continual development by Rogers herself late in life and by Rogerian adherents subsequently, has helped it to better articulation and argument as it keeps pace with contemporary thinking.

There are clear alignments between Rogerian science and the ecological postmodern cosmology which has been constructed in this work. As science has progressed, post-relativity and quantum exploration has given rise to much that either clarifies or gives alternative explanations for constructs in her work which find resonance in the perspective developed here. In addition, postmodern science offers new constructs that are woven into this perspective.

Summarising the Ecological Postmodern Position

The ecological postmodern perspective that has been created for this work is one that recognises the cosmological view of humans and human life as enfolded in the implicate order, one with everything of and in the universe. Unfoldment brings actual entities or occasions into being for a moment, however that moment is defined, before they then perish. In their unfoldment entities become explicate and observable. On perishing there is a return to the implicate order where all that has been remains in cosmic memory. That which unfolds from the implicate order, or is a manifestation of universal consciousness, does so under the guidance of a silent intelligence. The silent intelligence, however it is named, does not manipulate entities and their interactions with each other and with occasions, but rather selects and presents choices so that humans have a fundamental freedom to direct the journey of their own lives. God, if that is what one chooses to call silent intelligence, is not a puppet master and does not pull strings in an inevitable dance of fate (Davies 1995b). Intelligence works with a gentle persuasion which has universal harmony and compassion at its core.

Because of the cosmic web of interrelations there is a sense of compassion for all else in the universe. Nature does not exist for instrumental purposes; humans are no more nor less important than anything else that has unfolded or that exists in the implicate order. In their unfoldment in the explicate order humans are part of the network of open systems, exposed to reduction of energy through the various stressors which constitute life in the moment. A reduction in available energy for work causes a rise in entropy and a tendency to disorder. This tendency can be reduced when the open system has the capacity to draw energy back in. Actual entities that are all part of the implicate order are all in compassionate relationship with each other; there is a sense that energy is available from multiple sources if one is able to be aware of just how connected one is to everything else. Through awareness of this interconnectedness, there is hope and purpose. Hope for a positive future for the world and for all within it, including humans, and purpose in striving for self realisation and fulfilment.

This account of an ecological postmodern perspective is only one among many possibilities, but one which proves useful for understanding the experience of the individuals in this study. There is so much more that could be added about the components of the ecological postmodern cosmological perspective, just as there was so much more in the fire narratives than the aspects described in chapters three and four. Hopefully enough has been explained so that it can be seen as a valuable lens through which to view nursing 'moments'.

Ecological Postmodern Cosmology and Nursing

Consider nursing as a human-to-human caring encounter (Watson 1988). Consider humans, both those caring and in need of care, as Whiteheadian ' actual entities' engaged in a series of moments of becoming and perishing. Consider life events as Whiteheadian 'actual occasions' that arise, many of which result in the need for care, and consider caring encounters themselves, all as moments of becoming and perishing. Entities become, and in their becoming they experience, are impacted upon, respond, feel. The events, or significant occasions perish but remain in the enfolded implicate order. Entities perish and, likewise, remain in the enfoldment. Whatever occurs in the unfoldment impacts on everything around and following it. Consider also that from the perspective of both contemporary physical cosmology and ecocentric environmental philosophy, the whole universe is a web of interrelations, like the jewelled net of Indra which stretches out to infinity and which has a magnificent jewel in each 'eye' of the net. Because the net is infinite, so is the number of jewels, but in each jewel is reflected the infinity of jewels. All of the jewels which are reflected in one jewel, in turn reflect all others. An infinite process of reflection is occurring (Callicott & Ames 1989). The jewelled net of Indra symbolises the cosmos, where all relationships are infinitely reflected and every part is at once the whole. As Salman Rushdie (1980:126) writes in *Midnight's Children*, 'to understand just one life, you have to swallow the world'.

Despite a universe tending toward harmony and compassion, the human journey is filled with strife and suffering as the entities, unfolded as human open systems, constantly experience stressors amongst the actual occasions which make up their life process. The person in unfoldment remains connected to everything else of and in the universe and so it makes sense that anything that affects the environment with which the person has some strong affinity, will also affect that person, both in terms of creating tensions or creating healing possibilities. Having said earlier that how far one is removed from awareness of connection to the environment is of significance; it is also possible to suspect that those connections can have some effect even if one is not conscious of them as a causal factor. If the enfoldment is real, lack of awareness of it does not render it false, merely invisible. In the main the people interviewed for this study were quite conscious of their connections to their environment and their narratives are full of examples of how those connections both caused deep pain, and created healing opportunities.

The discussion of ecological postmodernism has repeatedly rejected any notion of anthropocentrism, arguing the place of humans as part of the cosmic web of relations rather than apart from it, the pinnacle of evolution, or the only organism on a path to perfection. Turning the focus to nursing, however, requires a focus on humans since care and compassion about the processes of the human life-journey through trials and tribulations, is what nursing is about. Nurses as individuals enter a field where human life is their professional focus and personal interest, and whilst part of their work is to help other individuals to reconnect with the broader universe which sustains them, much of their work has to do with the physical entity that has unfolded, with the experiences of suffering of that physical entity, existential or otherwise, and with helping others to wellness, to health and to healing.

A personal cosmology such as is outlined here informs the practitioner, but in so far as it is described in this work at present, it lacks much that would help nurses in their mandate to care. It requires further articulation and translation to render its use in the contexts and processes of nursing practice visible. It may be useful to reexamine the cosmological perspective under the familiar pillars of person, environment and health and then to add nursing and its remit to care and compassion in the healing role.

Person

Persons are energy; consciousness. They are human entities which have unfolded from the implicate order. In the patterning of their unfoldment each is unique, yet each remains interconnected with everything else that is and, because of their origin in the implicate order or universal consciousness, they are also connected to everything that is not unfolded, but that exists as possibility.

Person as Mutually Influencing Occasions of Experience

Like all things in the universe, an individual person is made up of various levels of actualities which can and do interact with each other. The person is described by Ford (1987) as a 'society' consisting of five types of events: psychic; cellular; molecular; atomic; and sub-atomic events. At every level the organisms 'prehend' (Whitehead 1929/1978), that is, they come into being in experience. There are two sides to an occasion of experience: there is the experience of self coming into being, receiving experiences from prior occasions and determining 'how' to be, that is a self-determining aspect; and then there is the entity which has become, which *is*. Now it does not experience, but is experienced; as Griffin (1987: 140) writes, 'what had been a subject for itself is now an object for others ... still exerting power, only now it is not the immanent power of self-causation but transitive power, the power of causal influence upon others', and this is so for every level 'from electron to mind' (1987: 151). When an entity is considered as an object, inert and having only physical qualities such as size and shape, it is difficult to appreciate that it may have a causal effect on something else. When it is considered as having been an experiencing entity, however, that it may have a causal effect on something else becomes a possibility. Thus, writes Griffin, the cells of the brain can be influencing the mind at this very instant, since each of those cells is a continuous and rapidly occurring series of events and each of those rapidly occurring events is both a 'centre of feeling for itself and then a source of objectified feelings for me' (1987: 141).

The human mind has enormous power; much more than an individual cell; cells have much more than individual molecules. On the other hand, each level has more entities than the level above it, so for example, the mind interacts with billions of brain cells and, as mentioned earlier, the relative amounts of power may well be equal. Griffin explains that this view is one of a human as a 'hierarchy of experiences which are inside of more inclusive experiences, etc'. (1987: 148), where the lesser experiences serve as body for superior ones, and superior ones act as mind for that body. From this complicated description, what emerges is a view that every part of the human is internally related: the human mind influences every particle of matter in the body and every particle of matter influences the mind. Relationships are not only vertical, but are horizontal where neighbouring cells interact, and even simultaneously vertical and horizontal, where a molecule in one cell may be influenced by the experiences it receives from a neighbouring cell. Neither is the human immune from actual events outside its own apparent physical boundary. The human is an energy field, interacting constantly with everything in the environment, so that immanent and transitive experiences from environmental entities affect the human and are in turn affected by the human at all levels. There is a mutual influence that pervades all of nature.

Weber (1986: 12) wonders whether mystics have learned to harmonise their awareness with their deep sub-atomic components and thus with the very depths of nature where all is change and flux. Quantum mechanics indicates that this is how matter operates at the micro level, in contrast to the macro level where, as Weber writes, 'we function mostly as isolated, separate units stuck in our own Cartesian space – time grids and inflexibly hanging on to our patterns and time bound personalities'. If we could only let go of our egos, she laments, we could be aware of and in tune with the transformations in nature; we could live in knowledge of and harmony with the ceaseless flux.

Person as Quantum Consciousness

The interconnectedness that has been argued throughout this work is not only in terms of the physical relationship of human persons to all that exists, but, in keeping with a rejection of dualities, there is also a developing awareness of a universal knowing. A fascinating exploration taking place in this late twentieth century is that which is attempting to answer the perennial 'who am I?' question with ideas about quantum consciousness. Ecopsychologists such as Theodore Roszak, Mary Gomes and Allen Kanner (1995) and scientist/philosophers such as Danah Zohar (1991) and Darryl Reanney (1994) contribute important perspectives to work in this area. Quantum consciousness is the view that the entire universe is but a vast sea of consciousness made up of quantum waves from which humans have the ability to select that very small and particular part that is necessary for physical survival. Consider the radio waves that saturate the environment. It is possible 'tune in' to particular frequencies through radio or television sets and as particular channels are selected, it is with clear understanding that what is being accessed is the most minute part of what exists.

According to Reanney (1994), physical consciousness is that consciousness made up of quantum waves that embody physical things — those things that Bohm would argue have unfolded in the explicate order, and Reanney describes as having 'sharp edges'. This physical consciousness operates at the level of the wakeful state. There is also a consciousness that seems to be deeper than this, that operates in the mental world. It is what allows humans to 'know' things when they are unseen. It is the knowing that enables the making of mental pictures, that allows one, for example, to find the way around some familiar environ in the dark. Reanney has some fascinating things to say about this mental field, which he calls the 'field of *imaginal consciousness*, the world of images, symbols, ideas, metaphors, myths, archetypes' (1994:73). This field of consciousness exists all around and accessing it is to select from what is offered. Humans have at present a limited evolutional ability to access this domain, but every time someone thinks a thought, that person has tuned in and selected that thought from the possibilities that are there. This means that thoughts already exist as possibilities from which we could chose. This suggests that the sea of consciousness that surrounds us, the quantum waves, have the essential character of thoughts.

Humans have the ability to enlarge their field of awareness by altering the state of consciousness so that the brain is not so in control, monitoring what can 'get in', this being the immanent, self-determining aspect of becoming. Reanney suggests that humans have a far greater capacity than they have exercised so far, to tune in to this field of consciousness. Reanney's notion of the imaginal consciousness as the 'wellspring of human creativity' is that humans access some quantum ripple in the field by somehow opening their minds to the possibilities that 'hover like phantoms on the edge of reality', they pick an option and that action of choice unfolds the option into some explicate order, and once it is unfolded, it can be written down, painted or played it if it is music. The creative moment can only occur when the mind is in some state of readiness, and these are usually moments where the insight comes in its entirety, what Reanney calls 'all-at-onceness' and the one who accesses the insight knows it to be right with perfect certainty, like a 'a magic instant of knowing' (1994:75). Sleep time he suggests, is a time of altered consciousness, so is that induced by states of meditation. This universal consciousness is unbroken, it is constant and our participation in it is also unbroken; humans are always conscious, awake or asleep, alive or dead, they are part of the unbroken whole.

Reanney appears to relate this quantum consciousness to the human mind. Following the previous discussion of multilevelled interactionism, however, it is more appropriate to see quantum consciousness at every level; every cell, every molecule experiences. There may well be vast untapped resources available to humans where an experiencing entity at some level can be influenced so as to repair, to reject some change process that would prove harmful, or to adopt some change process that would be beneficial. Whereas this occurs at present, in Western eyes, only through medical interventions, the possibilities for energetic interventions may well be limitless. It is important to reiterate however, that neither matter nor consciousness are ultimate; they are sourced as Rene Weber writes, 'in something beyond themselves of which they are the outcome and expression, in which they are rooted and reconciled' (1986: 15). This is the ultimate reality which cannot be known. Here, as Weber says, there is only silence.

Process philosophy suggests that there is a processing of possibilities at every level and that there is a gentle persuasion at work with which individual entities may or may not synchronise. This gentle persuader is what has been called the Silent Intelligence, some force that may be guiding the evolutionary process, from prior to the Big Bang to whatever lies ahead. The word guiding is used deliberately, since what is offered is an infinite selection of possibilities, with a subtle persuasion toward good, but always with freedom, choice and responsibility maintained. The point of this exploration is to arrive at the notion of integrated consciousness as intrinsic to the notion that all is one as is the interrelationship between all physical elements in the unfolded universe. The deep knowing that is available to one is available to all; there exists the possibility for collective knowing of the human species. This includes the fact that minds can resonate with the same knowing at the same time. And so, the life of each person is a continual process of actual occasions which impact on the entity who, as an open system feels, experiences and reacts. The actual occasions of life perish but remain in universal consciousness. In becoming and perishing as well as in the choices made throughout the life process of a human entity, the human is a co-creator of the continuously evolving universe, and the ways in which the unfolding evolution manifests is in diversity, greater complexity and in what seems to be a rapidly evolving human ability to connect with universal consciousness in new and dynamic ways. This view of person interacting with the environment, forming an irreducible whole, describes both the person in need of care and the person caring.

Environment

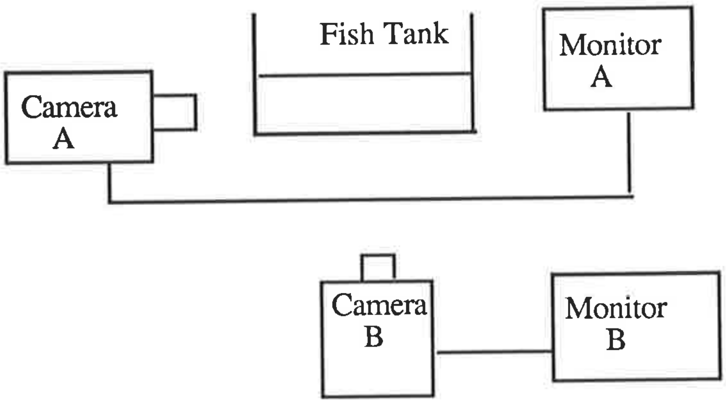
The environment, defined from the perspective of the human who is the concern of nursing, includes all that exists in the world surrounding an individual human entity: consciousness; the implicate order; and all that has unfolded from it that is not this one human person. All physical unfoldments are energetic systems, open and exchanging energy with all other unfoldments, including humans, which is why all that is in the universe is seen as negentropic. In addition, this interaction of energy systems along with the shared origins from the implicate order and from the recycling of elemental parts from the time of the 'big bang' explains why it is that all things of and in the universe coexist and are interrelated. The entities of the universe are particular unfoldments that can be identified by their pattern and organisation — that which makes them individual. Like the human person, all things in the environment come into being in experience, exist for whatever their moment is as causal entities, and then perish. In their perishing they return to the enfoldment, to cosmic memory, at the same time as their physical elements continue to participate in the continuing evolvement of the universe.

Whitehead's prehension or Griffin's panexperientialism is pervasive throughout the universe. Hartshorne writes that ‘every well-integrated creature which acts as one...feels or senses somehow’ (1987: 83). Rocks and mountains do not fit into this category since they are inactive. The atoms and molecules of which they are composed, however, are very active and can themselves be considered as a well-integrated creatures; therefore, they prehend. As Hartshorne writes ‘a man's cells are not asleep and neither are a tree's’. From a process theory perspective, the multilevelled events of anything are to some extent sentient, and at every level they exert some causal effect on the becoming of all things. This gives a different understanding to the statement of chaos theorists that ‘a butterfly stirring today in Peking can transform storm systems next month in New York’ (Gleick 1987: 8); the sensitive dependence on initial conditions.

Much has been written in this work about the environment, particularly in terms of the natural environment, and it was the participants’ experience of the bushland with its flora and fauna that precipitated this whole journey through cosmology. The environment is more than just the natural surrounds, however, it includes the built environment and other people, and any of these can and do impact on multilevelled interactive human entities in both gross and subtle ways. The environment then is all that surrounds us, the natural and the built environment, and all organic and inorganic entities on the planet Earth and whatever exists beyond. It is in this sense whole and cannot be understood in any other way.

Health

Health and illness are not dichotomous entities, nor are they opposite ends of a continuum. Health is not the absence of disease, nor is it a matter of adaptation to stressors in the environment. Neither is health a perfect state, that to which we should strive at all costs. From the perspective of this work, health and illness are one and are part of the unfoldment, occasions that may come into being and perish, that impact on the human entity in some way, if as possibilities in the enfoldment they have been selected by the experiencing human entity. From this perspective, health and illness is viewed in a most unconventional way, where illness and disease are synthesised in a dialectical fusion of opposites (Newman 1986), or perhaps more like a transcendence of that synthesis to complementarity where health includes disease and disease includes health, which, Jantsch (1980) argues, is the process view. Bohm's illustration of the television cameras is a helpful way to make sense of this notion. Consider two television cameras which are trained on a fish tank from different angles. Each camera simultaneously records its own image and projects its image on to its corresponding monitor screen:



(Bohm 1980: 187). Whilst it is clear that the images that appear on each of the monitors will be different, it is also clear that the images are related. The fish move out of the range of one camera and disappear from that monitor just as they move into the range of the second camera and are reflected on the second monitor. The two images, writes Bohm, 'do not refer to independently existent though interacting actualities (in which for example, one image could be said to 'cause' related changes in the other)'. Instead, they reflect the larger reality which is common to both. As Newman writes, 'they are manifestations in two-dimensional form of a phenomenon of greater dimensions' (1986: 11).

Newman carries Bohm's illustration further, substituting the concepts Mind and Body for the images on monitor A and B respectively and explaining that what becomes clear here also, is that one does not cause the other, but that mind and body are manifestations of a larger reality. Finally, she proceeds to substitute the concepts disease and non-disease respectively on each monitor, and again it becomes apparent that each is a reflection of a larger whole. She states '[r]econsideration of the original synthesis of health and disease yields a new concept' which is the pattern of the whole (1986: 12). From this it becomes apparent that health, encompassing disease and non-disease, is an explication of the enfolded pattern of the person/environment. Those things which are manifestations of the pattern, such as vital signs, behaviours, signs and symptoms, are the means by which we can see and understand the pattern.

Panexperientialism and Health

Enough has been written in this work that explains the multilevelled interactionism that is panexperientialism. The important point to be made here in respect of health, has to do with mind-body interaction and harmony. The mind is generally the controller of the body, though not in a deterministic sense: the mind may simply be more powerful than small numbers of organisms at other levels, say a cluster of cells for example. It may not however, be more powerful than the cellular collective nor does it alway 'win' simply by way of its possible greater power, and any consideration of disease gives a clear picture of cellular, molecular or atomic power. Consider the immanent and transitive power of levels below the psyche. At the molecular level, for example, Griffin (1987) indicates that a molecule can act as soma for the cell at the same time as acting as psyche for the atom, so that the notion of 'mind' does not only pertain to the immaterial human mind. Change to patterning producing health or disease may well occur at these levels without the human psyche being involved at all: it may occur through interaction of the human psyche with cells, molecules, atoms and/or sub-atomic events anywhere, and it may also occur in the opposite direction. This gives new meaning to psychosomatics and somatopsychics, and one which is intrinsic to the view of disease and non-disease and to the work of healing in this thesis. These interactions relate equally to the ways in which lower level organisms interact with each other horizontally and vertically, as well as the ways in which higher levels interact with the lower levels and the lower levels interact with the higher. Presumably, it is possible to influence the pattern of 'coming into being' organisms at any activity level, from the highest, considering quantum consciousness, to the lowest sub-atomic event, and thus influence disease or non disease outcomes.

Hartshorne (1995) considers mental health to be a harmony of feelings and thoughts, and physical health to be a harmony of bodily parts and functions. Disharmony in one frequently causes disharmony in the other, so interrelated are they. Healing work then, needs to be considered from an understanding of this relationship, so that it is done through an interrelationship of physical with mental, emotional and spiritual means. This is a view of healing through harmony of means to achieve harmony of ends.

Adopting the perspective described in this work necessarily leads to an altered view of health and illness from that traditionally seen in nursing models, and an altered view of holism from that which has to do with humans whether or not they are sums of or greater than and different from the sum of their parts, as long as that view omits the energetic interrelatedness with all that there is. In addition, there is in this perspective an emphasis on the environment in terms of healing space. Finally, it is important to acknowledge, when dealing with health and healing matters, that entities *will* perish, there is nothing surer than human mortality. There is no intention in this work to suggest that healing is exclusively about curing physical ailments or that all entities can be healed of all problems. What health and healing is about in the context of this work is discovering and living one's wholeness, living life to the fullest and developing a philosophy of compassion and care that is alive in the way life is lived, so that a clear sense of responsibility to ourselves and the continuing evolvement of compassion in the universe is evident.

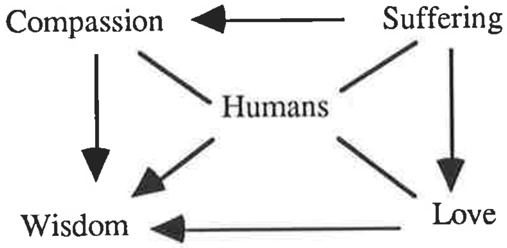
Suffering and Humans in Search of Wisdom

The human entity struggles with the existence and passing of the moments of each occasion and eventually with the passing of his or her own life moment, where mortal life ends and the entity returns to the enfoldment. Many of the occasions of the life of an individual human have to do with suffering and it is human suffering that brings about a need for healing and for individuals and groups to create their life work in seeking wisdom in and for healing. Suffering has been described previously as the existential lot of humans, and it may be that it is the fate of the universe at present also. Indeed if all is considered as one, it is inevitable that the universe is to suffer since the suffering of the universe is created by humans, and unsophisticated human entities, that is, we humans who have recently come into the universe, have not yet learned how to take our place with humility and harmony. As humans evolve with the universe toward care and compassion, the suffering of the universe will decrease, as indeed will the suffering of humans, since so much of what causes our grief has to do with our lack of reverence for each other and our lack of awareness of purpose in our journey. Suffering however, will not cease.

There is often a sense in which suffering *ought* to be able to be eliminated, instead of being seen, as Borysenko & Borysenko (1994: 73) describe, as inevitable to humanity, and to be transcended so that people may learn and grow from suffering as they journey the path to 'peace, joy, wisdom, and compassion ... not dependent on any outside condition'. All humans are already whole and the task of their life journeying is to remove the obstacles that would blind them to the totality of who and what they are — one with the ordering force, God, the Silent Intelligence, whatever name one wishes to use, so that they can dwell in the place of wholeness. This is not to say that, having discovered this place, all human woes would disappear: struggle and suffering is part of what it is to be human, but the ways in which individuals greet struggle and learn from suffering would alter if there was some understanding that what unfolds in every moment is from a universe of unlimited possibilities and that choice is always available. If choices are about love, kindness and compassion, humans can influence their own healing and the healing of others. As Borysenko & Borysenko write:

> we become a little kinder, a little lighter, and through our own healing we heal those who will come after us, and also those who have gone before. It's all a matter of remembering who we are and that when all is said and done, the entire awesome pageant of life is a drama about learning to love (1994: xix) .

Skolimowski (1992) is one who has much to say on this subject. He lists the higher human ideals as love, compassion, inner peace and wisdom. The ecological person, he suggests knows that suffering is the means through which humans may grow. He illustrates:



(Skolimowski 1992: 132), suggesting that suffering is a fundamental part of both compassion and love and that wisdom comes from all three. Suffering is not therefore to be avoided, but to be embraced as a necessary component of our lives and our evolutionary development. Surely, Skolimowski (1992) agrees, spurious suffering should be eliminated and any suffering should be minimised, but it is through suffering that humans come to know the meaning of an individual life and gain a sense of the human condition.

Compassion comes from knowing suffering, but not only the suffering of one or more humans: it engages with the suffering of all things, seeing human suffering as of no more nor less significant than the suffering of any other creature, or indeed of the universe in its present state of human-induced devastation. The fact that human suffering is not seen as worthy of greater attention does not result in a sense of detachment from human woes, because connected to compassion is love, and love cannot be detached. Love in turn is attachment but not possession, so that love and compassion balance each other in ways which are neither obsessive nor possessive. Wisdom, in Skolimowski's words (1992: 143) is generated by the interrelations of the three, culminating in what he calls 'right knowledge'. Wisdom then is 'knowledge enlightened by love, enshrined by compassion, refined by suffering'. The task of humans is to live in wisdom, in right relations — in harmony and balance, with all else in the cosmos.

Nursing

Rogers' (1970) description of nursing's purpose as dealing with whole persons: promoting symphonic interaction between persons and their environment; strengthening coherence and integrity of humans; and directing and redirecting patterns of interaction between persons and the environment for the realisation of human health potential provides a good fit for the ecological perspective.

When the person enters the health care system, the nurse becomes a component of the environment, one of the resources available to help prevent whatever the presenting tension is from escalating to maximum entropy and chaos. Nurses acting as resource aim to create as gentle and nurturing an environment as possible so as to allow healing to occur. Nurses can influence that environment not only in useful ways but in harmful ways: nurses can themselves act as stressors to others. There is a clear awareness that some of the things that we do create anguish in so far as they are invasive, painful, rob people of dignity and privacy, and much more. In addition, the nurse too is an entity, unfolded from the implicate order and subject to entropic forces. The ways in which the nurse manages entropy will in turn impact on how available he or she is and how positive a resource it is possible to be in a given moment. The caring encounter itself is sometimes entropic to the nurse. The narratives in chapters three and four give many examples both of relief work as entropic and yet at the same time negentropic, which is a good reason for separating this group of participants out from the rest. These are useful for care workers to ponder and will be explored in the next chapter. The work of nursing, then, is to consider whole persons with care and compassion, and in promoting symphonic interaction strengthening coherence and integrity and directing and redirecting patterns of interaction, nursing carries out its healing role.

Nursing and Quantum Healing

In the introduction to Shealy & Myss (1993) Bernie Siegel writes of the mystery of how wounds know how to heal, how a fertilised ovum knows all that is needed for the development of a human being. Where in the DNA, he asks, is the blueprint for all that we are, all of our physical, psychological, spiritual and emotional dimensions? Deepak Chopra would not speak of DNA as a blueprint, considering that DNA is by no means static. Describing a 'mind's eye' experience of DNA, Chopra sees a process filled with richness and dynamism. Everything that exists in life, he writes:

> pours out of DNA — flesh, bones, blood, heart, and nervous system; a baby's first word and a toddler's first step; the maturing of reason in the brain's cortex; the play of emotions, thoughts, and desires that flicker like summer lightning through every cell. All of this is DNA. To call it a blueprint is to take the husk and miss the fruit (1989:243).

Chopra gives the example of going to a car dealer, paying a large sum of money and being given the blueprint of the car; rather than the car itself. Then he asks the reader to imagine the blueprint turning into the car, not only that he writes, but 'starting itself, driving down the road, and replacing its own spare parts'. Then, he suggests, the blueprint would come close to what DNA really is. He adds that there is an even more amazing skill that this car blueprint would need — that is the ability to have each part, from 'the carburettor... [to a] chip of paint on the door' know how to turn into the whole car. Chopra is in agreement with Shealy & Myss that this dynamic ability of DNA is nowhere visible in its component parts. The molecules appear as passive participants in the processes, yet these same molecules seem somehow responsible for, or at least active participants in, all that is. An explanation for this is available in panexperientialism. Chopra suggests that no satisfactory explanation for how this is will be obtained from a search that focuses purely on the molecular level. He considers genes for example, are merely particular wires in the 'DNA's radio'. Time, like space, movement, sights, smells and everything else, comes from silent intelligence, and this silent intelligence he suggests, is where we really live; we are not separate from those things that we experience — we are those things. As Chopra reminds us, it is not possible to locate the source of the music by taking a radio to pieces, and neither will we locate the secrets of space-time or the many other mysteries of our experiencing the universe by looking at DNA, or any other material thing. Chopra identifies the level where the music is to be found as bliss, the vibration that the silent intelligence sends into the world. Chopra's silent intelligence sending a vibration is similar to an unfoldment from Bohm's implicate order or the selection of quantum waves from Reanney's sea of consciousness.

What has this to do with nursing? To return to the words of Bernie Siegal as he introduces Shealy & Myss (1993), everything we need for our life journey is available to us through the choices made available by this silent intelligence. Cure may not always be possible, but healing always is. Using Bohm's notion of the implicate order as the background patterning from which all things unfold, health becomes one of the patterned unfoldments. Seen in this way, disease and its accompanying symptoms become informants to the processes of the energy field of the entity as it interacts with the larger energy field. The information, if interpreted with wisdom, leads one to recognise, as Newman has, that 'the illness reflected the life pattern of the person and that what was needed was the recognition of that pattern and acceptance of it for what it meant to that person' (1986:3). In seeing more clearly, we can create positive patternings in the direction of an expanded consciousness, and this is healing. Nursing can play a vital part in this process since nursing, the fourth pillar of theory development, has as its function care and compassion in healing.

Chapter eight has explored the ecological postmodern perspective gleaned from the study in order to provide a theoretical grounding for examining nursing. Nursing is seen in the Rogerian sense as the study of humans and their world, and although many similarities can be located between the Rogerian science of unitary human/environment energy fields and the ecological postmodern cosmology of this work, there is much that is different. Rogers' work is seen as prior to and informing, and it may be that the perspective here is a corollary of Martha Rogers' work in nursing. Also in chapter eight, a little of the work of Nightingale was examined. Florence Nightingale has been described as nursing's first scholar (Johnson 1992), and it was she who established the four pillars which still today make up nursing's metaparadigm: person; health; environment; and health. The ecological postmodern perspective has been examined under the rubric of these four pillars so that the ways in which it may guide practice can be more clearly appreciated. The view of nursing derived from this perspective requires that one reconceptualise these notions of person, environment, and health.

In the next chapter, ecological postmodern cosmology is applied to the contexts within which care is delivered, which may be people's homes or may be places to which people go when in need of particular care. Of interest are the effects of environments on the health and wellbeing of people and what nurses can do to nurture both individuals and their environments so that they become healing spaces. Chapter nine also examines the practices in which nurses engage as they care for others. There is an examination of technological practice and the experience of places of pain and procedure, as well as nursing as person-to-person concern in places of care and healing The focus is on the client, but the perspective is as useful to nurses in their own lives as it is to their view of caring for others. If nurses are to consider their own health and wellbeing as they work with others in moments of care, they need to seek ways of managing their own entropy levels.

CHAPTER 9

ECOCOSMOLOGY: CONTEXTS IN CARE AND HEALING

To me, for example, a dwelling is truly a sacred space. I don't mean this romantically of fantastically, but I think there is a kind of spirit, an inherent sacredness, within a home ... within a region ... within trees, bodies of water, any particular place ort terrain.We don't have to look up to the sky, to some infinite emptiness, in order to find the sacred. That search has its place, but a sense of the infinite is only part of a much fuller spirituality that can encompass ordinary experience as well. *T. Moore, Embracing the Everyday.*

An integrated self is then ready to laugh at oneself while taking the whole world seriously ... Living from the heart with one's feet firmly on the ground can be very heavy when the lightness and nourishment of the cosmic view is forgotten, for it is only then, in forgetfulness, that we go alone into practice.
F. Reeder, Response to Karl (1992) Being here:Who do you bring to practice.

An important aspect of this study has been the ways in which people experience their lived space both in terms of its everyday taken-for-grantedness and in its coming into sharp relief with major disruption. Given the premise of this work that nursing is about human-to-human care and compassion in healing, and that human energy fields are not separable from the environment, this interrelationship is what is studied when one purports to study nursing. The human–environment perspective of this work has been detailed earlier and it remains now to marry earlier conceptualisations with ideas about lived space and disruption in the fields.

The human–environment encounter is the initial focus of this chapter. Aspects from human geography are introduced in order to highlight some important issues about how people experience their lived world. In particular, notions of at-homeness, rootedness and insideness capture the sense of harmonious interconnected energy fields and explain how it is that people can be so aware of how they are connected to their place, that they feel no surprise in finding that an event which occurs and impacts on the one, will in turn affect the other. Following this, some of the person/environment events that occurred subsequent to the bushfire are recalled: what happened when the lifespace was disrupted by a sudden event beyond the control of the inhabitants. The examination of contexts considers both residents and relief workers. Attending to the experiences of the nurses in the study leads to a consideration of other nursing environments, particularly hospitals. In this study the nurse entered the usual lifespace of the client and this also occurs in some more 'ordinary' client — nurse relationships. At other times, however, people are relocated to a new place, usually inhabited by the nurse. Of interest then is how these environments impact on nurses and on the clients for whom they care, and how these environments facilitate or act as barriers to healing.

The client context includes the nurse as an intrinsic component of the environment, so that who the nurse is and the ways in which he or she can manage 'being there well' (Karl 1992) for others, impacts greatly on the client. The working environments of the nurse may be soulless places of pain and procedure where neither the spirit of the client nor of the nurse is nurtured. Alternatively, they may be places of care and healing. In a culture where care is not given the same standing as cure, where the role of the nurse is often invisible and nurses themselves feel powerless, nurses may feel that they lack the energy or the ability to influence the creation of healing environments for people and for themselves. Chapter nine challenges this perception and provide ideas about ways in which nurses can, through replenishing their own energies, influence the lifespace in positive ways.

Spaces, Places and Human Energy Fields

Spaces and places have dramatic effects on the human spirit. Simply driving down the coastal road in the area of this study, one is struck by oddly-shaped homes in hard-to-get-to locations, half-way up a steep hill, with a winding vertical driveway and all but hidden in dense scrubland, or down a steep winding track that appears to drop over the edge of the cliff to the ocean below. There is something mysteriously compelling about these half-hidden homes. Because homes on these cliffs can command at least a 180 degree vista of the sea, many of the homes are built in fascinating structural arrangements aimed at capitalising on the spectacular views. These ecological home owners go to great lengths to immerse themselves in the environment. The unusually designed homes draw the eye and, like the mysterious half- hidden homes, give a sense of deep pleasure and an urge to move beyond the barriers imposed by gates and doors and ask if one may explore the nooks and crannies. In this area, every one of these homes is vulnerable. Many of the oddly built ones have been built and rebuilt over the years as fires destroy them. It is a remarkable testimony to environmental connectedness and the sense of what is really important to people that they remain and that passers-by who see them, love them, despite clearly seeing their vulnerability.

Not everyone is so 'lucky'; many people live in places to which they have become tied for economic, family or health reasons, often subject to the soulless lifespace of the densely populated and polluted cities. There is worse; there are those who are condemned to a life of mean dwellings and poverty and who struggle for their everyday existence. How difficult the struggle must then be to connect with energy fields that feed the soul. When we understand the power of structural architecture on ourselves in terms of the effect of beauty and ugliness, we can grieve for the modern world of planning, engineering and architecture that can only approve geometric technical excellence, expediency, functionality and practicality and largely ignores the human aesthetic sensibility which also need nooks and crannies, irregularity, circles, grottos and sacred spaces. Concrete jungles of cities, super highways which choke the cities with fumes from countless cars, and high-density living sap the spirit. Those who can manage to escape for a time do so, searching for oceans and rivers, forests and mountains where the energy and the spirit can be restored and renewed. Those who cannot, live with their decreasing energy and saddened spirits. Rebellion against the geometry, the density, the closed-in-ness, is what leads many of those who escape the concrete jungle and move to places such as this coastal area, to build their half-hidden or irregular, nook and cranny homes with spectacular views.

Dwelling in the Lifespace

Relph (1976: 141) uses the term *insideness* to describe the extent to which humans feel associated with important centres of their immediate experience of the world; where there is a fusion of both the human and the natural order. An individual who feels inside a place, feels safe, enclosed and protected. Seamon (1979) calls this at-homeness, and when experienced at the deepest level, is existential insideness — where the home, as Lang writes, is ‘incorporated and assimilated into the fabric of embodied existence’ (1985: 201). Existential outsideness on the other hand, is being homeless and alienated from people and place; there is no sense of

attachment to wherever they are. Notions of at-homeness, insideness and outsideness take on deep meaning when examined from the perspective of the fire narratives.
Seamon (1979) gives five components of at-homeness and when these are interwoven with the experience of the disrupted lifespace it becomes evident how deep and multifaceted outcomes can be. The first is *rootedness,* which he describes as 'the power of home to organise the habitual, bodily stratum of the person's lived space' (1979: 79). The home is the place to which one is bound by being the base for departure and return in an unconscious familiarity. Godkin (1980) also writes about rootedness and uprootedness. Rootedness, for him, is about a sense of belonging in safe environments, a sense that contributes to feelings of self-worth. This is not always about one's primary dwelling place, which some people experience as unhappy, unsafe and cold, rather, it may be a place of temporary refuge. Godkin's work is about the nature of place for recovering alcoholics whose memories of place throughout their lifespan has tended to be bitter. It is not uncommon to find that when one's primary dwelling places are filled with pain, the natural environment becomes the place of refuge: the freedom of wild places where the spirit can roam and be whatever it wants to be; the quiet gentle places where the spirit and the self are nourished so that the difficult journey still has an element of hope for something better.

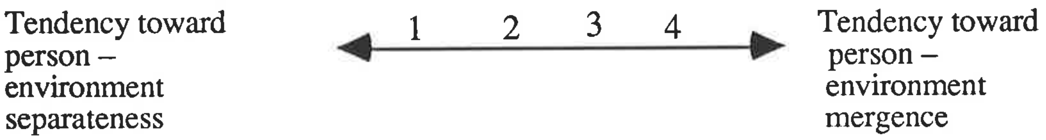
Appropriation is the next component. This is about possession and control, a sense in which a person is in charge of his or her own place and will develop and protect it. Deep attachment gives rise to a sense of territoriality from which the protective urge arises. Intrinsic to appropriation and territoriality is the notion that power resides in someone, and that this power will be adequate to ensure the inviolate nature of the place. When a disturbance occurs, the sense of appropriation is likewise disturbed, usually resulting in at least irritation if not hostility. Interestingly, Seamon writes that whilst the emotional response to disturbed appropriation lasts, the person is not truly at home.

The third component is *regeneration*, which is about the restorative powers of the home. In at-homeness one can really rest: physically, psychologically and emotionally one can replenish energy. When one is disturbed, upset, distressed, one goes home to the place of comfort where one can be at ease. *At-easeness* is the fourth component and is about the freedom to be. In one's own space one can do or be whatever one wishes; there is no need for a public facade, for performance, for maintenance of an image. The fifth and final component is *warmth.* Warm places have an aura of happiness and companionship and a sense of concern. Warm places are where at-easeness is maximised, where individuals have their deep roots and may rest and heal from violations to place that leave them recognising their powerlessness.

Buttimer (1980) identifies with Seamon's notions of at-homeness and Godkin's rootedness, and adds a further component: the notion of home and horizons-of-reach. Home as existential place has been examined above. Reach may be considered in terms of physical movement in and out of a place to regions beyond. This might be in terms of thought and imagination, moving one beyond walls without the need for physical movement or in terms of social affiliations with known people with whom one might visiting. The degree to which one reaches may be a mark of how strongly one identifies with at-homeness, and how much one requires nourishment from elsewhere. Buttimer, however, considers that personal identity and health require a balance of this dwelling and reaching: the location of one's self in a restful and spirit-nourishing dwelling place at the same time as the creation of a regional identity that reaching would strengthen. Seamon seems to agree with this, considering the home to include the broader aspects of one's existence. Home, he says, 'is a prime root of personal and societal strength and growth' (1979:71). Strong links are generally more noticeable in smaller rural communities than in cities, indeed the very notion of community is anachronistic in large towns where property is bordered and residents are anonymous. The strength that the community of this study had to regroup itself and move forward stemmed from what was already in place and was directly related to people's sense of belonging, of caring deeply for their own place and reaching out into the community, connecting with others to grow the relationships and the organisations that were intrinsic to the recovery of this place and its people. This is not to suggest, however, that in this community relationships are always harmonious and many examples of conflict and discontent have been discussed earlier in this work.

Encountering the Fields

Exploring ways in which we encounter the world are instructive from the perspective of this work. Seamon describes an awareness continuum of person/ environment relationship:


Tendency toward person – environment separateness
1
2
3
4
Tendency toward person – environment mergence

(Seamon 1979:107).

He locates *watching* at (2) on this continuum with only *oblivion* at (1) to its left. Watching is about looking attentively at something for a period of time. Generally one's attention spans both inner and outer concerns and only comes to focus intently where attention has been caught for some reason. For the purposes of this work, Seamon's notion of watching as 'an extended span of attention between an individual and place' or perhaps more curiously as 'to have one's interest occupied as mutually the world receives that interest' (1979:107) has interesting connotations for the human environment energy fields when one has a sense of at-homeness, and when one's lifespace is seriously disrupted, requiring healing of both fields. The mutual interest in energy fields may be the restorative or healing force for both. In other words, it may not be a one way phenomenon that individuals in the study found their natural environment to be healing: perhaps the natural environment gained much of its recovery ability from the interest of those who locate their at-homeness as tied to that environment. *Noticing* is third on the continuum. Noticing is a sudden awareness of a thing, and may be facilitated by one's inner state. Positive moods, for example, enhance the noticing of positive things. Negative moods, on the other hand, highlight more unpleasant things. A useful example of this is the black and the green awareness that the community health nurses noticed among people in the community after the fires. For a long time some people could only see the blackened stumps of trees and could only smell the damp smoky atmosphere even though trees were shooting. Something in their mind state prevented them from noticing the shift, but there would always come a time when something shifted the mood and they noticed, quite suddenly, that nature was regreening and from that point people seldom turned back in their recovery.

Heightened contact is fourth. Seamon writes that when 'the person feels a serenity of mood and vividness of presence; his awareness of himself is heightened, and at the same time, the external world seems more real' (1979: 111). Once again mood is integral to this concept, also described as a sense of being at peace or in harmony with everything that is and open to experience. There is a sense of reverence, almost sacredness, about the moment and the place and it is in moments of heightened contact that one is closest to awareness of person/ environment unity. Seamon's research indicates that heightened contact, like noticing, is sudden and unexpected, but this is not a finding that sits comfortably in this work. Individuals who have developed a personal cosmology of human – environment inter-connectedness, and if one examines the literature this appears to be a rapidly growing community of people, are more likely to live with heightened contact, and are at pains to foster their awareness and their life processes accordingly.

Loss of Dwelling

Places can be disrupted by many things, usually to do with other people or uncontrollable events. Disruption can be caused by forced relocation to another area either temporarily or permanently — to the home of a relative, a hospital or a nursing home for example — or it can occur when one is still present in the dwelling place. The death of a loved one alters the at-home place forever. Disruption can occur through the invasion of the place by burglars, by vandals bent on wanton destruction, by a neighbour's disrespect for other persons or for the environment, through new building or by removal of natural surroundings by those planning to build. Disruption can occur because of industrial pollution, ugliness, smells and noise or countless other happenings. In this study disruption was caused by the powerful and destructive bushfire, over which no human had control and which simply took everything in its path.

The concepts gleaned from the work of Relph, Buttimer, Godkin and Seamon outlined above, combine in a process used here to examine the ways in which people reconstruct their lived space following a disaster. Seamon, in particular in his 1985 publication with Mugerauer, presents a pattern which he thinks depicts the transition from old to new place. Seamon examined the series of four Emigrant novels of Vilhelm Moberg, novels which trace the relocation of sixteen Swedes who leave their native home to resettle in America. Seamon explores the notion of dwelling and journey in his essay, using Moberg's novels as the empirical context in which he identifies what he thinks are more general stages of the dwelling — journeying process. His spiral pattern is adapted here:

DWELLING
Creating community 7.
1 Loss of lifespace
Coming together 6.
2 Decision
PEOPLE
3. Process of rebuilding
Becoming at-home 5.
MOVE IN
4.
Settling

Adapted from Seamon & Mugerauer (1985: 229).

Using this pattern, the experience of one resident as she struggled to relearn how to 'dwell', is examined. This woman, who was called Elizabeth in the prologue, left when the fire was almost upon her. The flames were so close that she knew her husband, who had run back to the home, could not possibly survive. She returned three days later, sick at heart by what she knew had happened. For a time she lived with her daughter and her children in a borrowed house in the area and she interspersed this with visits to other family members and friends, staying in a caravan and eventually staying in a borrowed home whilst she sorted out what she would do. She experienced deep existential outsideness, having lost her home and her husband, and needing to relocate outside the region even if just for a time. Homeless and alienated from people and place, there was no sense of attachment to wherever she went, there was no place of at-easeness, no place to be herself. Even though she was mostly with loving family, she suffered this deep sense of uprootedness and so it was not too difficult for her to move from the first point on the spiral, losing her dwelling place, to the second, arriving at the decision to rebuild on the same block of land. This is not to say, however, that deciding to rebuild meant deciding to live in the new house.

Making the decision to rebuild did not remove any of the stress; it was almost as though that decision was easy compared to what followed. She engaged an architect and told him what it was that she wanted, but was unhappy with the resulting plan. She tried another architect, with the same result. She knew that both of these plans had been fine and that the problem lay within her. Eventually family members sat with her and tried to help her to be clear about what it was that she was searching for. In the end, she realised that, whilst she did not want a house as big as the previous one, she wanted what she called ‘a flavour of it’. The architect planned a smaller version of the previous house, the building commenced and she arrived at the third point of the spiral. Elizabeth did not speak of the actual building process except to say that at times she felt angry at having to make decisions by herself when all previous decisions had been shared with her husband. She felt deeply angry about his death. However, she chose the tiles and what ever else needed her attention, and sometimes this focus was helpful. Then when it was ready, she moved in.

The process of moving in brought her great relief because, though she was grateful, she was also very tired of living in the round of temporary locations. She said that at times she ‘had been desperate for a place of her own’. Once she was alone and in her own new place, however, she realised that this replica was not a replica at all; as she gazed about her she realised that ‘there was no soul’. The fourth and fifth points on the spiral, settling and becoming at home, took a long time and she had to find the energy to do the work that was needed to turn this space into her at-home place, a place of at-easeness and warmth where she could find solace and begin her reparative process. Part of the work was physical, including buying furniture, arranging rooms and beginning to establish a garden again. Much of this work of settling and becoming at-home had to be done alone, or with the help of those few she could admit to her space at first — her family and a few intimate friends. Another part of the work, however, was inner work and Elizabeth needed to locate guidance for this work. This, from the way she spoke, was the more important work; she was managing multiple losses and was experiencing deep grief. Her local doctor was able to help her with temporary medication to get her past the urge to simply stop the fight, to ‘drive her car over the cliff’, and then, quite quickly, she located the group with whom she did intensive self-growth work over the ensuing years, to the point where she could eventually say that she was ‘living with loneliness in a way that left her powerful’. The at-homeness that she had been building in her physical space she was now locating within herself and this altered the at-homeness of her physical space also; the two blended, so that she now loves her home and could not imagine being anywhere else.

Part of her learning to dwell, in the existential sense, was through the assistance from outside sources once she had passed the settling phase. Points six and seven on the spiral, coming together and creating community, became possible once Elizabeth started this inner work. Reaching out meant reaching beyond her door, which at first was hard, but she was eventually able to reach beyond family and intimate friends, to the life education organisation that was so helpful and from there to others in the community. Elizabeth eventually recaptured the strong sense of being part of the community that she held deeply but unconsciously before. Once she reconnected with the community, the shared nature of their experiences strengthened her progress and many people spoke of her as a role model for their own recovery. Elizabeth eventually managed to create an existential insideness, a new sense of at-homeness in her new place. Now in her dwelling, she is happy, though she remembers the fire, the death of her husband and the loss of her home and possessions with deep sadness. She does not say that she has returned to her former self, nor does she feel that she is a different person, she just thinks she has learned to 'use whatever is me to be fulfilled'.

Although she did not use these words to describe her experience, there is nevertheless a sense in which Elizabeth came to recognise the changes that had occurred in her life as a part of the patterning that was the unfoldment of her own humanness. Examining the loss and recovery of dwelling, in its existential sense, in the light of this spiral, shows how important it was that people worked with Elizabeth's wholeness rather than dealing with any individual step along the way as an end in itself. The doctor gave her the relief she needed, not in the sense that she would then be 'fixed' but to relocate her strength to continue, knowing that she was on a journey. Others who came to her aid knew that part of the journey was within herself, rather than located in the physical things that she was working to re-establish, and these people pointed her in the direction that proved right for this inner journey. Elizabeth's wholeness was not reducible to any of its parts and to focus on a part would never have revealed the pattern of the whole. Her wholeness was not restored by integration of the parts, by putting the bits together again, rather, the wholeness was always there and anything that appeared in any moment to be an emergent part was always a presencing of the whole. The whole was not in the dwelling any more than it was in any step of the spiral. The implicate order, or consciousness, is the whole which unfolds in a pattern whose uniqueness indicates it to be a particular entity. Elizabeth found that part of her life process was to meet the occasion of the fire and to lose much that was dear to her. Her journey was to move beyond the loss to the solace of what is really real. In every step of her journey the wholeness was present, and so each step of the journey was important in so far as it created a window of opportunity to revision the whole. Her journey was an intuitive one, and the choices she made from the infinite range that were available to her seem to her now to have been guided in so far as they took her to the people and places where help was available.

Some who made the decision to stay and rebuild, could not recapture the spirit of the place they had lost nor were they able to 'grow' a spirit for the new one. These people left after a time and re-established their lives elsewhere. Some of these, others report, have, after all these years, still not established a place to which they feel a deep attachment and perhaps they never will; perhaps rebuilding the sense of attachment is a really difficult task, for which people need a great deal of strength to manage. Some who did stay and rebuild have found their place again; it has a different sense to that of the first home, but again, like Elizabeth, they report it to be a warm and deep connection. Others quite like it, but in their refusal to ever collect again as a reaction to the fire, they will not collect a new home in that same deep sense ever again. Some of these people have rebuilt their connections in terms of the natural environment and strengthened the old connections to their friends and social supports, and in this way they find their at-homeness. For all of those who stayed and struggled with recapturing their sense of dwelling, the natural environment, which after all was their reason for being in this place, fed their souls and *every* resident in the study spoke of owing much of their healing to their connections with nature.

In respect of nature, the notions of appropriation and territoriality caused a rift in the community subsequent to the fire. The belief that, having appropriated a place, an individual will protect that place, meant in the eyes of some, particularly those who fought the fire and their loved ones, that individuals should make their place safe for human dwelling. For others, however, it meant protecting the place from those who would destroy nature for mere human protection. There is, for the latter group, a sense in which humans are privileged to live in this place and they must fit in with nature rather than attempt to mould nature to their own whims. The very notion that a place can be protected infers power and control and in this situation it became very clear quite quickly that this fire was not controllable and all that could be done was to move people away from its path and let it wear itself out. There was almost a sense of understanding that humans, rather than being powerful masters of all that they survey, are but a part of the whole, and a fairly small and insignificant part at that, compared to the might of nature.

Skolimowski seems sympathetic to the notion of humans coming to live with nature whilst letting it be. In his latest book he suggests that we develop a sense of the world as a sanctuary, because this immediately alters the role of anyone who dwells there to that of guardian or in his words ‘a shepherd, a responsible priest who maintains the sanctuary’ (1993: 6). In addition, it creates a sense that the world is then a caring and spiritual place, and if this is deeply felt then the only possible way to act in the world is with reverence. Skolimowski goes further, suggesting that the universe will become whatever the guardians determine. He argues:

> Treat it like a machine and it becomes a machine. Treat it like a divine place and it becomes a divine place. Treat it indifferently and ruthlessly and it becomes an indifferent ruthless place. Treat it with love and care and it becomes a loving and caring place (1993: 6).

This argument clearly indicates that living in 'right relations' in the universe is to live in reverence, or as Skolimowski (1993:7) writes ‘empathy fused with reverence’. Living with reverence on the earth is to watch, notice and live in heightened contact. Clearly a turning point came with the regreening of the bush and the return of birds and animals. When this occurred, people in the community started to believe that reconstruction was really possible. It is a suggestion of this work that the heightened contact that occurred once people noticed the changing environment, was intrinsic to the repatterning that enabled people to begin to locate spirit in the new place.

This study did not only examine the lifespace from the perspective of the residents, but included the experiences of those who worked in disaster relief. Where these workers were locals, they too experienced disruption to the lifespace; sometimes to their own place, sometimes to their working environment that burned, and for all of them to the natural environment that was also a reason why they lived and worked in this area. Others who came in from outside experienced a disruption to the places and ways in which they normally worked, and whilst in some cases this was stimulating, all felt the grief of those for whom they were caring. They felt deeply affected by the devastation to the natural environment, and they too watched and noticed the regreening and felt connected enough to use heightened contact experiences with the recovering bushland in their own coping.

Nursing in the Disrupted Lifespace

The local nurses found working with fire victims a mixed experience. One the one hand, it was difficult to work at the same time as feeling personal devastation and witnessing the distress of the community. On the other hand, it felt good to be able to be of service to the people of their own community in their distress. For the outsiders, the hardest part was not feeling accepted, so that they were not able to immerse themselves in the community without the constant awareness of alienation. In addition, they felt keenly that they were able to go home at the end of the day, to a place that was untouched by the devastation of their day-time location and in that respect they could never really share uprootedness, the loss of at-homeness of those for whom they were caring. In effect, these workers experienced a double alienation. People were grateful for whatever was done to help them; the overwhelming feeling was, however, that they would rather these people just went home and left them to get on with reconstructing their lives.

It seems that the community health nurses and those who work in general practitioner surgeries are seen and accepted by residents as part of their lived space. These people belong in the realm of unconscious familiarity and it is a contention of this thesis that this explains the apparent taken-for-grantedness of the work of health professionals. In a very real sense nurses are given unusual access to the lifespace and unless they violate the insideness in some way, they simply merge with it. This is a very different view from that which sees nurses as invisible and powerless because they are asked to care in a society that devalues care (Colliere 1986). This may well be the case for the power brokers in bureaucratic institutions, but it is not the case for individual people in need of care. Indeed it is the very opposite: nurses occupy a privileged inside position in the lifespace of clients, and this puts them in a unique position to influence health and healing. There is a caution that this may mean general as opposed to mental health nurses, however, since mental health nurses in this study and in the literature broadly, seem to experience a stronger sense of outside-ness than other health professionals — not unexpected when one takes into consideration societal stereotypes about mental health. In the main, those who came in to the town recognised the insideness of local nurses and went to them for referrals, realising that the key to success in their own work lay in working with those whom the community saw as 'family'. For the same reason, many set themselves up in the general practitioner clinic rather than in an isolated caravan, which, it became evident in some places, people would simply not attend.

In terms of their own working contexts, all of the relief workers interviewed put in extraordinarily long hours and dealt with high-level trauma. This, coupled with the sense of alienation and the inadequate debriefing services from their parent organisations left them deeply stressed. Their roles had them managing the entropy levels of those around them, lending their own energies without means of replenishment. Their entropy levels escalated to the point where several experienced some sort of breakdown when the relief work eventually came to a conclusion. Somehow, though, there was a balancing that came about through awareness of their skill, the contribution they had made and the ways in which their confidence increased as a result of knowing that they had risen to the occasion. The very fact that, years after the event, they could look back with tears, but still claim that they would do it again, indicates that their sense of cohesion was strengthened through the experience — so somehow it was not as entropic as they had originally thought.

Some of the workers were able to recognise their need for nurturance, and in many instances they recognised that such nurturance and personal healing could come from the unscarred parts of this beautiful environment. They spoke of going into the bushland and drinking in the peace and beauty for a short while and then feeling able to continue with their work. One interesting comment came from the woman speaking of an inland fire who went to the mountain top, completely burned out and still smoking. Completely silent with the absence of birds and no leaves rustling — there were no leaves left, and in the beauty of even this scarred place she found peace and healing. There are lessons in this which will be further explored later in this chapter. The sense that the relief workers enjoyed doing something that was so different from that which they normally did seemed to be saying something about their normal professional lifespace, and indeed nurses do speak and write about their working environments as highly stressful and producing burnout (Benner & Wrubel 1989).

Nursing Lifespaces: Places of Care and Healing

The nurses in this study were not engaged in any physical care. Mental health nurses engaged in therapies aimed at mind care, and most other nurses seemed, on the face of it to be concerned with mind–body interactions. From their words, however, it is possible to discern a concern for the cosmos, for human–environment relationships, for healing of themselves and others through spirit. That there was nothing evident in their actions that would betray this may be due to the fact that people in this study did not attend nurses for care. It may also be that they act in their own lives from a cosmological perspective, but have not found ways to incorporate this into the ways in which they formally care for others. It is the intention in their words rather than action that has given direction in this work to how nurses think about, and could operate from, a more cosmic perspective.

As clinicians, nurses work in many environments. Within hospitals they work across many clinical specialty areas, and in a variety of roles. In the main, nurses' work is directed by allopathic medicine, as hospitals are divided according to medical specialities. The world of scientific medicine is one of technology and images of big and busy hospitals are usually those of white walls, strange equipment, lights and beeps, masked and gowned figures and efficiency; a 'world within our world' is Cassell's description (1978: 23). Hospitals can be harsh environments that generate fear and pain, where a person may easily feel alone, alienated and objectified. Far from being in a healing environment, an experience of hospitalisation may well intensify stress. Nurses inhabit this world, and technology is a vital aspect of the work that they do. Technology is often associated with frightening images, pain and intensified suffering: consider suction apparatus, intravenous infusions with multiple lines and pumps that beep, heart monitors, radiotherapy machinery, hyperbaric equipment ... the list is endless.

Larry Dossey describes allopathic medicine as the first of three 'eras' of medicine and healing. The first era, he writes (Dossey 1993), is about modern scientific medicine with its views of the body as a machine to be kept in working order, repaired, fine tuned until it becomes outdated or beyond repair. In era two are the mind–body approaches, which mainly focus on neuronal pathways and physical connections between mind and body, and in era three the work is with energy fields and consciousness. When the assumptions which underpin these three eras are understood, it is easily seen how a proponent of a particular view would structure the environment. Those with an era one ideology would provide an environment which would maximise technology, and such an environment would look like that described above. If one worked from an era two perspective, however, there would be evidence of the understanding that what affects the mind will have a concomitant effect on the body. Technology is still important but takes a lower profile. Perhaps walls may be painted a softer hue, perhaps paintings may adorn the walls and floors may be carpeted. One may even hear ambient music and smell the burning of aromatic oils.

Working from an era three position may not alter the environment at all from that which an era two approach might influence. What is different between eras two and three, is the cosmological perspective and the consciousness that underpins what is practised there. In an era two environment, the emphasis is on lessening fear, settling mood and creating the possibility of rest, whilst the intent of an era three environment is to create a place where individuals can connect with their wholeness, with beauty in art and nature, with rhythm and synchronicity in vibrations from music and quietness and from the energies of healing intention from those who work there. Borysenko & Borysenko (1994: xviii) write of a children's hospital where what they call a 'remarkable healing mural' was painted on the 'otherwise frightening and austere radiation therapy room': all around the perimeter of the ceiling were kites in flight, each one containing a healing message from a different culture.

The images that we see in our environment affect us deeply. Children, in particular, imagine all sorts of dreadful terrors, and the creation of healing images, particularly where the images are ones of hope and comfort allows children's imaginations a more gentle focus that may at the least be reassuring from an era two perspective, but from an era three: healing, where messages are sent with healing energy.

Godkin's (1980: 80) previously discussed notion of rootedness allows people involved in healing work to understand how ideas about place can form a basis for therapeutic work, especially where that place is one to which they are unlikely ever to return. Such work is about helping people to recall nuances of place that have been significant in their lives, examining how that place contributed to their sense of coherence. If the place that has been lost was an anchor point to their self-identity, for example, examining the aspects that were so important helps a person who has a sense of fragmentation and uprootedness, to 'rethread his or her own identity' incorporating that which was rooted in the old place into the self, so that it can be taken to the new place. Godkin also writes that there seems to be a powerful affect response accompanying discussions of places and it is his belief that defence mechanisms that inhibit the expression of negative feelings are circumvented when one focuses on place rather than on people. This would have been a useful awareness to have at the outset of this study. It may have been evident to the reader that there is very little in this work on people's feelings about those who died in the fire, except to say that there was grief from the relatives and some anger expressed by others, yet in every narrative there are lengthy descriptions about loss of place (home) and space (environment). Had there been some awareness of place as 'safer' to speak of, other issues in the community that are not evident here at all, but that may have impacted greatly on recovery and subsequent relationships, may have been uncovered.

Godkin was reflecting on the effect of space in palliative care units, considering that just as alleviation of pain and discomfort are important, so are the emotional and spiritual needs of individuals, both those receiving care in the unit and their families. His focus became to 'create a home like environment reflecting the care and attention paid to the well-being of patients' (1980: 82). From the awareness that traditional care facilities exacerbate the feelings of fear and isolation that many dying patients experience, he further assumed that such facilities exacerbate the feeling that dying is the antithesis of living and is a totally stressful experience which must be isolated from all that life has until now contained. His concern was to establish a sense that dying, whilst certainly difficult, is 'an inescapable stage of life's progression', and that anything that can be done to reduce the sense of isolation and fear and to enhance wellbeing, should be pursued. Part of this process could and should include, in his opinion, structuring the environment so that it establishes a sense of continuity with that person's life.

Godkin describes in some detail the way he redesigned the palliative care unit, and his work seems based on simple and obvious assumptions, which probably resonate for everyone, and yet environments that should be places of care and healing are so frequently places of pain and procedure. He suggests that there are important messages to be learned from studying what constitutes stressful psychological experiences, how people react to therapeutic intervention techniques which are built around place–image chronologies and on the design of human environments which support a sense of wellbeing.

Contexts of care in terms of environments include those people who are part of the client environment, and for the purposes of this study, this is the nurse. Of equal importance then are considerations of the nurse as one who works with another in healing: who he or she is; what it is that he or she brings to caring moments. There is a contention in this work that nurses who practise from a blend of Dossey's three eras, combining compassionate care where a technological environment can help, with the understanding of multilevelled interactionism and its unique perspective on mind–body work, a knowledge of process and implicate order theory, and oneness with Silent Intelligence as an energetic participant in the cosmos, work in quantum healing. In order to examine this aspect, the remainder of the chapter is divided into an exploration of caring for one's self in order to be a negentropic resource for others then to caring for others from such a perspective.

Reaching out From a Quiet Place

At the 13th International Caring Conference in 1991, the Rev. John Karl gave a paper titled 'Being There: Who Do You Bring To Practice?' In this paper he acknowledged how difficult it is sometimes to really 'be there well' for someone, and he focussed on what it would mean to care for the wellbeing of practitioners so that they in turn may reach out to others. Karl began by recounting the myth of the jewelled net of Indra, a somewhat different account from that described earlier in this work. He used the net as a metaphor, suggesting that the strands connect things and when the connections are not nurtured they become damaged and tear. The holes that appear are where '[l]ife falls through' (1992: 2) and suggests that the holes need highlighting and the strands need nurturing to keep them supple and strong and need to be rewoven where they tear.

Karl rested the discussion in his paper on the fundamental assumption that 'the more the practitioner is rooted in sources that animate the practitioner's being, the greater the capacity to be there' (1992: 5), and the less likely they are to fall through the holes in the net; he categorised sources as being balanced, being held, and being sustained. These three categories resonate with the words of the relief workers in the fire narratives and seem to echo some of what they expressed as their deep need.

Being balanced is about caring for the body, mind, spirit and relationships on the understanding that the more balanced one is, the more one can reach out. The relief staff worked long hours, had many sleepless nights, often ate on the run, worked with people's deep trauma and emotional reactions, experienced rejection or at least a sense of alienation, and themselves felt the trauma of devastated nature. Often they found their families, friends and neighbours had no idea what they were doing and could not empathise with their experience. On the other hand, some did feel appreciated; most felt they had something important to offer and most felt that they rose to the unusual occasion well. There was some sort of balancing that happened through their own sense of coherence, but most needed to do more to manage the balance. Some did not attend to this and experienced a level of collapse later. Others did, and sustained themselves mainly through nature. The fire experience was a relatively short-lived and different event. In the real working lives of nurses the balance is just as important, since in any setting nurses experience difficult situations.

Being held is next, and Karl illuminates this with a picture of a mother holding her son, discussing how the mother holds and the child is held. He makes the point that there is 'never just an infant, child, adult, or practitioner' (1992: 7), but a series of what he calls 'holding environments', places and situations where those things occur which are emotionally and physically nourishing. Starting with the family, these extend throughout society and culture. As children we are held, as adults we hold, but even as adults we also need to be held and awareness of the need to create holding environments for each other in clinical partnerships creates a very different space from that where each practitioner works in isolation without regard for the other. There was a very real sense of this being-held-ness from the woman who opened up the caravan and brought hot water for the outreach workers. She was metaphorically holding them in her care. On the other hand, there was a sense of not being held by those who felt adrift from their parent organisations, where there seemed to be no understanding of their need for help in coping. They seemed to be expressing a need for the creation of a holding environment by such organisations since they were unable to find much of it in their working context.

Being sustained is about the individual's subjective experience of being held. Karl used an example from a scene in a novel where the presence of his mother transformed the world for a little boy. He sat on the rug, clearly seeing the rug only in relation to her foot which rested on it. When she was there, he played in a world rich in fantasy, when she was absent, the world lost its aliveness. He writes '[t]he mother's presence, her thereness, makes the child's imaginative transformation possible. When she is there, the marbles become kings and queens. When she is absent, the marbles are just marbles' (1992: 9). For adults, the experiences may reside in relationships with others, but they may just as well include other things such as work activities, fine art or music. In likening the experiences of practitioners to the child in the painting, he asks:

> [w]ho has sat or still sits on the edge of your rug, when you are most functional, imaginative, creative, courageous? Special books reveal new worlds. Music evokes memories. Some patients and teachers so impact on our hearts that they change the shape of our practice forever. Some dwell in the sustaining presence of a personal God through prayer and worship (Karl 1992: 9).

He makes the point that, with special people or within some special space, humans reorder their beings. In the fire narratives the regreening of nature offered the main reordering space, but people were also sustained by either being able to leave and go home to those things that normally sustain them, or by being inside the community, working for the recovery of their own and being held as existential insiders for it.

Sister Simone Roach responded to the Rev. Karl's paper by making the point that to be able to be a holder or a sustainer for others is indeed a sacred trust. Roach paraphrases Taylor Caldwell, who considers that the most urgent need that exists in society today is not for medical advancement, new cures, new ways of living, new anything — the real need is for someone to listen 'as a human soul' (Caldwell 1960 in Roach 1992). Having someone to talk to about the things that are really real, the confusions, the chaos, the bewilderments of life, is to have someone to help the balancing, the holding and the sustaining. Francelyn Reeder also responded to Karl's paper, and she returned to the net of Indra, but where Karl saw holes through which life could fall, she reconceptualised them as spaces:

> a breathing space of hospitality, where all creatures could come and go, or just spend time, by themselves, to refresh and gather the fragments of their lives in the safe, restful, comfort of quiet places of beauty and care (1992: 19).

The quiet burnt-out mountain top swathed in mist, where the Red Cross manager went to reflect, could be seen as one such space. Reeder makes another point that is crucial to the work of healing from the ecological postmodern perspective: she reminds her readers that one does not need to be physically present with clients to 'be there well'; that practice needs to be broadly defined. She is actually referring to administrators and those planning services, in respect of how they carry understandings in their hearts which lead them to set up Karl's 'holding environments' for staff; their caring occurs in what they establish as much as from how they are with members of their staff. She urges a cosmic view that would encompass environments as much as people, so that care commences with creation of holding space, the hospitable place. Reeder's reminder that one does not need to be physically present with clients is also a reminder, though it is not part of her stated concern here, that everything is causally affected by everything else that is, and so it is possible, through this ecological postmodern perspective, to help balance, hold and sustain someone from afar. Reeder ends her paper by suggesting that rather than seeing balance as a goal, it could be seen as 'the fruit of a cosmic view', and being held is both experienced and sustained in the net when we are open to receiving as well as giving to others. It is from this perspective that her words given at the commencement of this chapter are meaningful.

It seems that when one is suffering in ways that need other than, or more than, physical intervention, mind–body or energetic practices are called for. In such instances, what a nurse does to help someone to balance, or to hold or sustain a person who is a client is no different from what that nurse needs to manage personal entropy. Whether one does a ritual for ones self, asks for it from others, or offers it to others, the intention and the outcome are the same. Practices in Dossey's second and third eras belong to humans in their ordinary lives as much as to humans suffering illness.

Nursing Practices: Working in Quantum Healing

Consider again Dossey's three eras of medicine, this time from a practice rather than an environmental perspective.

Era One: Allopathic Medicine/Nursing

Modern medicine has as its intent the understanding and elimination of disease for the reduction of suffering and the prolongation of life — goals to which most people experiencing an illness would ascribe. This physical medicine is characterised by therapies such as surgery, pharmaceuticals and irradiation and by an attitude to mind as being of secondary importance if indeed it is considered at all. Technology is the touchstone of era one medicine. There is no suggestion in this work that technology is in itself harmful and must be done away with. The focus is on modern consciousness and the appropriate focus, if the negative image is to be countered, needs to be on the user whose task is to learn how to *be* with technology — that is to remain compassionate rather than merely efficient, manipulating and controlling. In addition, if there is an era one nursing, it has nothing to do with where nurses work, it is about the consciousness that drives how they work which, from the perspective of this era, has to do with giving care to the body-as-machine: the care may be perfunctory or it may be technically excellent, in either case the focus is on cure or maintenance. Consider era one in some simple examples from nursing practice: rituals of body care for hygiene, nutrition for supplying resources for healing physical wounds or damaged tissue, movement for maintenance of body alignment and joint suppleness, and so on. Whilst technical care of physical entities is an important part of what nurses do, it is not what nursing is, and many nurses would reject this as an appropriate image, whilst acknowledging that there are people who suffer increasing alienation precisely because some nurses do practice from this consciousness.

Era Two: Mind–Body Interaction

In the second era are the mind–body approaches. Here Dossey (1993) points out that, whilst modern scientific medicine has been so important, there is no doubt that it also creates great suffering, and is far from successful a great deal of the time. In addition, there are many conditions that do not require the interventions of science but are no less difficult to live with. Included in this category are stress-related problems which may go on to cause illness, but which cannot themselves be controlled by modern medicine. In era two medicine, the power of the mind to heal is well accepted. Mind–body interactive medicine has been seriously studied and practiced in Western medicine since around the 1940s when scientific studies indicated what many Eastern practitioners had always known: that 'perceptions, emotions, attitudes, thoughts, and perceived meanings affect the body' (Dossey 1991: 189) and sometimes the effects constitute major, life threatening events.

Knowledge for era two mind–body interactions arises from neurophysiology and also from a relatively new field, psychoneuroimmunology. Current understandings of neurophysiology seem to indicate that nervous tissue and nerve pathways function in continual change, and synapses are reconfigured all of the time. Learning and memory are processes that, far from being directed by synaptic activity, actually create and recreate neuronal pathways. Habitual use of particular neuronal pathways gives a particular mindstate and to reinforce that pathway by constant repetition of the negative reaction is to accept the static positioning in negativity, and is itself a choice that we might not have known existed until now. Science is telling us now that we can establish new patterns over time, and that it becomes easier with repetition. In addition to mind–body health through a 'training' of neuronal pathways, exciting work is being done at present in psychoneuroimmunology. It has been discovered that certain cells in the limbic system release neuropeptides that cross the blood/brain barrier to the bloodstream. The fit between these and chemical receptor sites stimulates or stops certain genetic functions affecting protein synthesis. According to which proteins are activated or deactivated, system function is correspondingly altered.

Therapies born of mind–body interactive understandings include biofeedback, meditation and relaxation therapies, including those which use imagery. These are not usually employed alone, but in conjunction with era one medicine with which it exists in harmony, the added component from era two being the causal potential of the mind. The use of guided imagery during meditation is a common and effective way of establishing neural patterns. In addition, one could meditate upon a joyful experience and, with practice, expect that a lighter, more peaceful and healthy state would result. Thoughts of fear, anxiety or depression may be translated into neuropeptide pathways which result in stress and ill health. The suggestion that moods affect physical bodies is not foreign to most people, but what is probably not as well known is the myriad ways in which the mind and body 'speak' to each other continuously, how cells communicate with each other, affecting emotions and driving choices. There is the suggestion then, that meditating on pictures of great beauty, or serenity, or of something that gives joy such as a photograph of a dearly loved one, or of adding guided imagery to meditative practice may also enhance immune function, keeping it functioning optimally, assisting our reduction of illness outcomes from a meeting with a stressor.

Charlene Spretnak believes that the study of Wisdom Traditions is of great help to individuals as they struggle with the stressors in their lives. Buddha, she writes, discovered through deep meditation the Four Noble Truths: that suffering is intrinsic to being human; that suffering is caused by desire; that the only path away from suffering is to let go of desire; and that the way to achieve this is through the Middle Way, the path of 'morality (right speech, right action, right livelihood), meditation (right concentration, right mindfulness, right effort), and wisdom (right understanding, right thought), each of which strengthens the growth of the others' (1991: 41). Spretnak herself practices Vipassana meditation, and comments after a ten day intensive silent meditation retreat that one is taken aback by emerging into the 'real' world again. She writes:

> Waves of gratitude arise at unexpected moments for all that is wholesome and beautiful in one's life: the richness of parental love, the blessing of a child, the pleasure of good friends, the bounty of the erotic ... how precisely one can see — the vibrancy of flowers, and the hundred shades of green ... One exists in communion with all life ... [there is] a radiant sense of subjectivity. One is no longer a victim of emotionally charged mindstates that seem to take over (1991: 44).

If there is an era two nursing, again, it has nothing to do with contexts, but rather the how of practice, driven by a consciousness one has of people and the world. Many nurses are aware of mind–body interactions and speak of caring for the whole person as the role of nursing. There is an awareness that the immediate environment affects mental state and a realisation that this may manifest somehow physically. Some clinicians engage in rituals that connect mind and body in a less stressed state — relaxed visiting policies for example, or afternoon rest periods where people return to bed in a darkened environment. Many nurses these days incorporate meditative modalities into their care practices, sometimes adding aromatic oils, ambient music and guided imagery for the effects that they know these have on mental and associated physical health and wellbeing.

Era Three: Energetic Healing

In era three medicine, Dossey moves to an area that is more difficult to conceptualise, unless one approaches it from a mindset such as that described in this work. Era three medicine is not bound by space and time. Dossey calls it non-local or transpersonal medicine, where the mind, because it is unbounded, infinite in space and time and eternal, can be involved in healing not only the individual in whom the mind manifests as pattern, but others. Any therapy that has to do with bridging a gap between persons using consciousness, he would place in this era three category: that would include spiritual healing and the power of prayer, shamanic healing, non contact therapeutic touch, deep and extended meditation and distant imagery and any other forms of distance diagnosis or healing. Teleosomatic events he also puts into this category; these are when mental events in one person trigger some physical sensation in another. He cites many examples, such as someone feeling physical pain in the exact spot and at the exact time that a loved one experienced an injury, or seeing a physical image of a loved one who is far away at the exact time when that person died (1993: 41). Borysenko & Borysenko, after reading Dossey's work, make a comment about being 'struck by the way that we bear one another's pain, how we suffer together' (Borysenko & Borysenko 1994: 55), and Dossey writes that there seems to be an empathy, what he calls a 'heart connection', that is necessary for era three medicine

Something that nurses come to discover, but perhaps not always to accept, is that cure does not always occur when they think it should, that young women with small babies may die of cancer, that small children may be fatally ill, never having experienced what it is to live, that people can become ill and die after a lifetime of hardship and abuse, never having experienced joy in their lives. It seems that when nurses work in an allopathic era one system and accompany that with a trust in hard science and a cosmology of individualism, separation and the ultimate finality of death, nothing is in place to prevent stress and burnout. It is a difficult lesson to learn that whilst we strive, as we ought, to help a person to stay well and to be involved in the cure of illness, cure and recovery is not necessarily his or her destiny; sometimes the hard fact is that this person's moment in the lifeworld is simply over. Because it is often so difficult to accept, it is not trite to say that this is the inevitable destiny of everyone. Restoration of health is not always possible, indeed it is eventually impossible for everyone. It remains possible, though, to be healed even whilst dying.

To be rid of the illusion that this lifetime will last forever is to stop the struggle; a window of opportunity opens and the possibilities can present themselves for selection. The choices are those that have the potential to change lives and to fill lives with joy and love, removing the sense of separateness or loneliness and replacing these with a sense of belonging and of somehow being more fully alive, being fully present in the moment. Borysenko & Borysenko (1994: xv) describe such moments of wholeness as healing moments, doorways into unlimited possibilities. They suggest that these doorways are places where '*chronos* — linear clock time, meets *kairos* — eternal timelessness' and that these are places 'where two worlds touch' and where curing can occur, sometimes, as they suggest, through physical pathways or through grace which transcends the physical. They tell the story of an elderly woman, one of more than 60, whose 'cures' have been documented at Lourdes. This particular woman, blind from birth with a shrivelled optic nerve, was suddenly able to see. Medical science currently considers repair of a shrivelled optic nerve to be impossible and yet this event occurred. 'Perhaps in the future' they write 'we will discover physical pathways for such instantaneous healings. For now I [Joan Borysenko] attribute them to the power of faith that brings us into a healing moment where two worlds touch' (1994: xvi).

There is evidence that some nurses are deeply aware of human /environment energy field interactions and of persons as connected to and a part of all that there is. Rogers (1979, 1990), Newman (1986), Sarter (1988), and Watson (1988) are examples of nurses whose writings give clear evidence of this. As for the previous eras, it is not the context, but the consciousness that determines how such nurses practice, and whilst the majority of modern Western health institutions are not particularly sympathetic nor encouraging, some nurses are able to practice differently, using non-traditional energy-based therapies as part of their repertoire (Martin 1995; Smyth 1995). Evidence from advertising literature also indicates that increasing numbers of doctors are adding energetic therapies to their work, shifting their focus from cure to healing. In the main, these doctors are in private practice in communities. Some are outside Western medical traditions altogether, practising mainly Eastern healing methods with others and incorporating much from the wisdom traditions, Eastern and indigenous, in their own lives.

Era three nursing is illustrated well by a nurse who is Unit Manager in a busy metropolitan hospital and who spoke at a recent conference (Gawler 1996) about how she has established a ritual, in her ward, of dimming lights, burning oils and playing soft music and taking patients who want to participate through a meditation/guided imagery session. This could well have appeared like an era two, mind–body therapy, there is nothing in the outward appearance to indicate that it was anything else. Her stated intention, however, was to help these people connect with their wholeness, their energetic interrelatedness, their participation in universal consciousness, and to help them to travel on their journey with a sense of participation in the universe. These sessions are held daily and are popular with patients, many of whom are wheeled to the room in their beds to participate.

There is a sense in which nurses who find ways to bring their era three cosmology to their practice in any setting do so because their cosmology is necessarily one of love. Borysenko & Borysenko (1994: xiv) cite Aldous Huxley who, when asked what, if he had his time over again, he would do differently, replied that 'I would have been a little kinder', and they consider this to be 'a splendid confirmation of heart-knowledge' — that scientific studies consider love to be a healing force. In receipt of compassion and love, the heart, the immune system, the hormones all respond positively, just as they do when there is awareness of a true connectedness with another. Rituals are a way of enhancing the experience of grace in the cosmological sense. There are many activities that one can engage in to bring about the consciousness awareness of the unbroken wholeness and awe from which grace emanates. Many people experience such states deep in wilderness areas, some in simple silence. Some who practice spiritual rituals designed to expand consciousness of the universe are able to sustain this state of grace for extended periods, and there are those who devote their day in a ceremonial way to 'right living' who may be aware of a 'certain sense of graced consciousness' all of the time (Spretnak 1991: 26). Nurses who devote their day to right living, and who take care to create space for graced consciousness in their lives, create in themselves a quiet place from which they are able to reach out in ways that assist not just the cure, but the healing of others.

In this chapter the focus has been on the contexts of suffering and healing, both in terms of environmental spaces and places, and the people who are intrinsic to them: in this instance, the client and the nurse. The chapter commenced by viewing the ways in which humans are deeply connected to their dwelling place, to the deep existential outsideness that occurs when that place is lost, and makes the point that if one is to develop a sense of connectedness with a new place, there is work to be done, and that work is about becoming aware of the pattern that makes the new dwelling place home.

In many instances, however, the place that is lost will never be regained. Sometimes people need to relocate to places of care that will become their home for some time, perhaps for all the time that is left. The ways in which environments of care are seen and can be influenced are explored. The dwelling place of the nurse has also been explored in this chapter, and suggestions are made that environments impact on the nurse in entropic ways also, and that there needs to be some attention given to how nurses balance their own lives, find holding environments and people or things that sustain them in their often difficult work. There is an argument mounted here that cosmology and consciousness determine what a caring environment will look like, how it is managed and what occurs there. Dossey's outline of the three eras of medicine have been used by way of illustration, and the argument is mounted that nurses, in some instances, work with technology and physical care as a necessary part of their skill repertoire, but that operating from an ecological consciousness, this would never be sufficient. There has been continued iteration in this work that healing is spiritual work and that living in awareness of the spirit, or of grace in the soul of all things, is to live daily in care and compassion. Participating in the development of the universe as a loving and caring place is to participate in creating healing space (Skolimowski 1993). Nurses who work with a cosmology that includes notions of interconnected energy fields and a universe evolving to care and compassion are co-creators of that universe; creators of sacred healing spaces, and like all else, are emergent parts which are a presencing of the whole, and imbued with grace. To work with a conscious awareness of this is to work in a very different way than would be the case if one's cosmology were about individualism, disconnection, illness as an enemy and death as final.

CHAPTER 10

THE WHOLE, THE PARTS AND THE THESIS: REFLEXIVITY AND NURSING AS ECOPRAXIS

The postmodern challenge is our challenge: the issue is whether we will take advantage of the fact of change, chaos, and ambiguity, deconstruction, and so on, and participate in reconstructing, cocreating a novel and moral direction for knowledge and practice, leading us forward, to an ever evolving humanity of possibilities or, will "we go on acting as though nothing has happened?" (Toulmin, 1990, p.208)

J. Watson, Postmodernism and knowledge development in nursing.

This final chapter of the thesis is reflexive, turning the thesis back on itself to examine all of its component parts. Following a short account of reflexivity and the researcher the chapter then turns to a summary of the entire work, where the reader is taken on a journey through the project from its inception to its completion, recalling the purpose, the design and processes and the constructions–reconstructions that were attempted. The focus then shifts to examine the work as a piece of research. Commencing with constructionism, selected as the paradigm view guiding inquiry, there is a description of how, unexpectedly, it was reconstructed as an affirmative, in this case specifically ecological, postmodernism. In other words, the explorations in reconstructing the fire narratives in terms of cosmology led to the reconstruction of the research paradigm itself and how this occurred is explored here. Finally, the reconstructions themselves are examined, firstly in terms of ecological postmodern cosmology as a derivative of earlier notions of cosmology from the fire narratives, and then in respect of the ways that this has been used to inform nursing. There is a thesis that concludes the work; it is that nursing, practiced from an ecological postmodern cosmology, is nursing as ecopraxis.

Recognising the limited power of individuals to affect change, and the political nature of the social world, it may be argued that the reconstruction in terms of nursing presents a perspective that is unhelpful in the day-to-day practice of nurses. I would respond, however, by arguing that this is a paradigm view for practice into the new millennium, and that it is already gaining momentum in the Western world. There has not been any particular intention to develop a new model or conceptual framework for nursing in this work, although this may well be a conclusion that a reader draws. If this were truly intended to be a postmodern text, it would need to be considered as a readerly one (Rosenau 1992) so that whatever constructions a reader might make would be legitimate, and the intention of the writer would not be of particular relevance. However, whilst I have claimed a postmodern interest, doing research for purposes of academic accreditation within a traditional university setting and researching and writing in traditionally accepted ways, combine to make this an inevitably modernist exercise. In addition, since an aim of the exercise was to reconstruct my own constructions of the fire experience, and to find out how people made sense of a terrible experience, to what factors they attribute their recovery, and whether anything within their experience may inform nursing's healing work, the writerly intent (Rosenau 1992) cannot be discounted.

Reflexivity and the Researcher

The research that I have undertaken explores a socially constructed world, and itself socially constructs a world. I am embedded in both of those worlds, having been in the former and having come to know the latter through my own processes as the work unfolded. The work has built on what I initially held as constructions, altering these according to new information that made sense in my world, that resonated for me as I listened to others, and that I accepted as 'expert versions' from people who experienced the fire and from those whose texts I pursued subsequently. Of course, things resonate for me because of the self that I am. For example, science appeals to me because I am situated as a modern being in a modern world that reifies science; I cut my nursing teeth on physiology. Philosophy appeals to me because I now dwell in a university and am striving to locate my academic self and my professional nursing world in my construction of universities. Theology and spirituality appeal to me because of a lifetime immersion in a world constructed through Catholicism. Small wonder then that my reconstructions have taken the direction they have, and that I was so 'in tune' with those elements of the fire narratives as to single them out for attention in this work.

The entire research process and its outcomes may be as much a story about me as the researcher, as Steier (1991) suggests, as it is about the bushfire or the role of healing in nursing.

Summarising the Study

The study was an inquiry into how people in a particular area were able to recover from a significant event which devastated the community and move forward with their lives in a connected way. As the researcher, I live in this area, I know many of the people here and have, for years, heard stories of the fire and how various people have created meaning about it. I have, over time, built my own constructions of the fire and I was keen to know firstly, how my constructions would be altered by listening deeply to a variety of other first-hand constructions, and secondly, what people found to be important in their healing that might be useful for nurses to know. I selected constructionism as the research paradigm because it provided the best 'fit' for my own ways of looking at the world, and seemed appropriate to a study which aimed at uncovering the sense people made of the fire experience and their struggle to heal. I settled on ethnographic-type processes as appropriate to my situation, which may be viewed as resident-as-participant-observer and in this role I explored my own constructions of the fire story. Some of my constructions are woven through the text, some are in the form of poetry. No doubt my own constructions shaped the questions I asked and the direction in which I steered conversations. Through a variety of means I gathered forty participants, twenty-six of whom were residents and fourteen disaster relief workers. All of these people were interviewed individually in a place of their choosing, and I tried diligently throughout the interview not to influence the direction of the story in any way, merely letting it unfold as it was ordered in the mind of the narrator. After their story was told I asked some questions, some of which had to do with injecting my constructions into their version, others of which had to do with inviting comment on constructions of other residents or workers, where they were not a part of the narrator's version but may inform it in some way. This is consistent with the dialectical processes of constructionism, where various constructions are juxtaposed so that initial meaning making may become more informed and may alter.

A Construction of the Constructions

The individual interviews were taped, transcribed and returned to the owner for comment or alteration. The transcripts, called fire narratives, were examined throughout the course of interviewing so that constructions of those already interviewed could be shared with others, then all were examined at the end of the narrative gathering stage to explore constructions of the experience. Those in the resident group told their stories in two segments: what happened at the time of the fire in terms of warnings, evacuation, waiting out the fire and returning to view the aftermath; and the sequelae of the fire in terms of what helped them to recover from their experience. The relief worker group also told their stories in two parts: how they saw the suffering and healing of the townsfolk, and how they experienced the difficulties and rewards in their own roles. The earliest completely unsophisticated examination of the transcripts revealed a clear construction that, not unexpectedly, had to do with stress and recovery. Further exploration revealed that people identified how they made sense of the experience, what people or things helped them in their recovery and what gave them the strength to carry on. The task then became a new level of juxtaposing constructions with information from texts. Some of this occurred during the interviews and so was brought into conversations as a part of the informing constructions process, but much more occurred after the interviews were over and I had 'withdrawn' as a researcher, from the community. Rather than informing resident or worker constructions then, I was now moving into the stage of meaning making for myself so that I could elicit something that might be useful for nursing. Notions of stress and recovery gave rise to a search that culminated in information about open systems, thermodynamics and entropy. From this the first level of construction was built. Notions of making sense, finding assistance and being motivated to work to both personal and community recovery led to the discovery of Antonovsky's work on salutogenesis, a second layer to the construction. Antonovsky also uses notions of entropy and negative entropy and so collectively these texts provided a framework for presenting the narratives in the thesis. This was the construction of the constructions.

Locating a Dominant Theme

The work did not end there: what had been achieved so far was still a fairly unsophisticated exploration that served well as a way of presenting the work in text form in the thesis. There was so much more about meaning making, however, that was discovered each time the narratives were explored. Initially the entropic experiences were left to one side since this work was deliberately aimed at healing, and the entropic construction was seen more as setting the scene for understanding just what it was that people needed to recover from. It became obvious as exploration continued, however, that a deep thread of meaning commenced in the entropic constructions and continued, penetrating the entire work. This was about the relationship that many people have in this area with the natural environment: the bushland; the ocean; the flora and fauna. It took some time for me to realise that this thread was strong in early interviews. Once I realised this I determined to bring it into later interviews if it had not arisen, as part of the constructionist task. I seldom needed to raise the subject at all, it was naturally strong in most people's fire constructions. It was very evident that it was a dominant theme.

There were many other constructions embedded in the narratives, and some, like role constructions and notions of place, space and dwelling are explored theoretically in the work. The human/environment relationship was the major theme pursued, however, and I considered that within this relationship lay what I could call a cosmology. I set out to locate texts about cosmology so that I could explore how the constructions that the people in this study appeared to have, might relate to constructions of cosmology in the intellectual community. It can be seen from this description that this is not a pathway that could have been predicted: it came completely from the narratives, and yet, knowing this area and many of these people as I do, it should have been no surprise to me that this would emerge as the dominant theme, or that I would choose to pursue it, since I too have chosen to live, with risk, in this beautiful place.

Exploring Cosmology

From locating the theme, the work turned to exploring the notion of cosmology, defined here as seeking to understand the origins and structure of the universe and the place of humans within it. From the narratives I had gathered a sense of a world where humans related intimately with the non-human environment, not in instrumental ways but in ways where neither are dominant and both affect and are affected by each other. In a very real sense, the two are inseparable — what hurts one hurts the other. What restores one, restores the other. This gives the impression of a world where everything is related.

This is, of course, the lesson of cosmology and has been from time immemorial. The thesis explores ancient myth where the entire universe and all that it contains came from the cosmic egg, from some primeval chaos which evolved into order. The origins of philosophy, in the 6th century BC, revolve around the same question answered by Thales as the many related by the One in terms of substance, and by Heraclitus not as substance but as process. Both Plato and Aristotle considered the world to be an ordered whole and neoplatonists at the edge of classical philosophy argued for a world in which every thing is ultimately an emanation from God, the Universal Intelligence. Throughout the twists and turns that constitute development in the Western world, the struggle amongst philosophers, theologians and eventually scientists, presented different constructions of cosmology until, in modernity cosmology is dismissed as an irrelevance and that what rises to prominence is the view of humans as 'masters' with reason and rationality setting them apart from lower orders of beings, having no need of a God, and replacing God with science — the path to real knowledge of the 'truth' of things. The advent of the postmodern turn has, however, restored interest in cosmology, and for many, in God, however named or described. Theoretical physicists have intensified the search for the origins of the universe, exploring a variety of theories from the pulsating universe to the big bang. Biologists are exploring the evolutionary connections between living species; neurophysiologists and immunologists are exploring the connections between human neural and immunological pathways and in some instances, energy fields; and theologians are pursuing connections between new constructions in science, particularly quantum science, and God as both an immanent and transcendent force. Much of this work is brought together in process thinking, underpinned by Alfred North Whitehead and further developed by a wide variety of scholars in the many disciplines explored in this work. Juxtaposing ideas from their texts with the cosmology in the fire narratives, the ecological postmodern cosmological reconstruction is born.

Informing Nursing

Having constructed this ecological postmodern cosmology, the thesis then turned to exploring how such a cosmology might inform nursing. The questions asked were about what nursing's philosophy might look like viewed through such a lens, and how such a cosmological leitmotif might alter contexts and practices of nursing. The thesis identifies the four pillars of nursing's philosophy: person; environment; health; and nursing, and reconstructs them around ecological postmodern cosmology. Person is constructed as an entity that has unfolded from the implicate order under the guidance of some higher force. Each individual is considered as an open system in constant interaction with the environment, constantly exposed to stressors that create entropy, but with the ability to use resources to restore energy levels and prevent disharmony. In terms of patterning, each is unique yet each remains connected to everything that is and that has ever been, through origins in the implicate order, through energy field connections and through the constant recycling of all particles of which the physical structure of the entity is comprised. Each person is made of many levels of actualities that experience, that is, they have a self-determining aspect and an aspect that is experienced at another level. An atom, for example, is made of sub-atomic elements that experience and that are experienced by the atom. The atom itself experiences and is experienced both by the molecule in which it is situated and by the sub-atomic elements that comprise it. In addition, atoms affect and are affected by other atoms just as the person affects and is affected by other people across space. This interactivity is going on at all levels at all times and this interactivity pervades all of nature. This impacts tremendously on how illness, disease and healing practices may be viewed.

The environment is also viewed as both the implicate order and whatever has unfolded from it. The environment, from the perspective of someone who is in need of nursing care, is everything surrounding the person, including consciousness, the implicate order and everything and anything that has unfolded apart from that person. Nurses are therefore part of the environment of that person. Everything of and in the environment exists in relation to everything else so that the universe is one vast web of relations. Entities in the environment also prehend, that is, they experience and are experienced. Anything that occurs and affects one part of the environment affects it all. Health is seen as a patterning in an unfoldment. It is not an opposite of illness, nor is it the absence of disease or a state toward which we should strive. Wellness and illness are occasions that become and perish and that in their becoming impact in some way. Humans experience the occasion, whose pattern is manifest in some sort of sign, a feeling of wellbeing, bright eyes, or in a pain or some other symptom.

Common to the experience of all humans is a patterning that results in suffering. Suffering is seen as an inevitable part of what it is to be human and part of the task of the human journey is to embrace suffering and to seek wisdom in and for healing. Nurses are concerned to alleviate suffering where possible, but work with regard for both suffering and mortality as inevitable in the human entity's 'moment'.

The work of the thesis concludes with an examination of nursing contexts and practices. The fire narratives are examined briefly to look at context in terms of space and place, leading to an examination of the usual lifespace of the practising nurse. These are posited as being either places of pain and procedure or places of care and healing, and it is suggested in this work that it is the cosmology that underpins professional practice that makes the difference. The cosmology drives how places will be structured, what occurs there and the intention with which professionals practise. Larry Dossey's three eras of medicine are used to illustrate this point (Dossey 1993). Finally there is a recognition that viewing humans as unfolded entities and open systems subject to stressors leads to the view that nurses are as subject to stressors as anyone else. Karl's (1992) question about who it is that one brings to practice frames the suggestion that nurses need to practise from a quiet place, that they need to attend to their own wellbeing if they are to reach out effectively in caring for others. There is a belief expressed in this work that the universe is continuing to evolve toward care and compassion. Nursing is defined in this work as concerned with the human–environment energy field, with a remit to care and compassion in healing moments. Any caring act or intention contributes to ongoing evolution so it is posited here that nurses can, in any moment of any day in their professional as well as their personal lives, contribute to the evolving universe in deeply meaningful ways. The caring moments perish and return to the enfoldment and within the enfoldment they contribute to every subsequent moment. This thesis suggests that nurses who bring Dossey's era three notion of energetic healing into their practice work with particular understandings and intentions; they have a cosmological perspective of the human environment interconnectedness that was suggested in the fire narratives.

Constructionism to Ecological Postmodernism: An Evolving Paradigm

In accordance with accepted procedure, I made a commitment to a paradigm as part of the exercise of academic thesis writing. The paradigm chosen was constructivism or as it is called in this work constructionism, selected for reasons explained in the body of the thesis. In a variety of chapters, books and papers which deal with human inquiry, educationalists Egon Guba and Yvonna Lincoln have contrasted what they label the conventional or traditional positivist paradigm, with their preferred paradigmatic stance of constructivism. All paradigms of knowledge construction, they argue, are based on the three foundational questions: the first having to do with the nature of reality and what can be known about it — the ontological question; the second dealing with the relationship of the knower to what can be known — the epistemological question; and finally, the ways in which an inquirer can go about finding out what he or she believes to be knowable — the methodological question (Guba & Lincoln, 1989).

The traditional paradigm is described as asserting that a reality exists which is separate to the inquirer, which operates according to natural laws, and which can be known about through a distanced and value-free inquirer stance. Those arguing for a qualitative approach to knowledge generation argue that the positivist paradigm is badly flawed and must be replaced. Some flaws have to do with the inappropriateness of separating the object of study from its context, or from the meanings and understandings that underpin behaviours; the inappropriateness of generalising findings to individual situations; and the irrelevance of much etic theory to local, contextual knowledges (Guba & Lincoln 1994). More serious, however, are the concerns about the interdependence of theories and facts, values and facts, and the inability to derive by induction any single, irrefutable, independent truth. Guba & Lincoln (1994:107) describe this, writing: 'facts are determined by the theory window through which one looks for them' and 'different theory windows might be equally well supported by the same set of "facts".' And in addition, facts are as determined by values windows as they are by theory windows, so that there is no possibility of value-free research. Finally, extrapolations from Heisenberg's uncertainty principle and Bohr's complementarity principle (Prigogine & Stengers 1985) have rendered notions of objectivity and a researcher who in no way influences the study, obsolete. Guba & Lincoln's constructivist preference is for a paradigm view of ontological relativism, a monistic, subjectivist epistemology and a hermeneutic, dialectic methodology (Guba & Lincoln 1989).

Constructionism

Relativism is the view that there is no possibility of objective knowledge about reality separate to the knower. For some constructionists this is because there *is* no separate reality (Guba & Lincoln 1994). Radical constructivists such as von Glasersfeld, however, do not deny the existence of a 'real' world, but deny that humans have the capacity to stand apart from that within which they are embedded to ever know of it; all that it is possible to know, is that which is enabled through experience and through the interaction with others who also experience, who make and share constructions of that experience which may or may not inform and shift the constructions of others (von Glasersfeld 1990). Relativism in the sociology of knowledge, then, is about multiple mentally constructed realities that are local and contextual, are socially and experientially based and are variably informed and sophisticated, often conflicting, and alterable according to new information (Guba & Lincoln 1994). The constructions are apprehendable. Constructivists argue that since knowledge of anything is socially constructed, one's position is always merely a version and, as such, is never 'correct'. Positivism, for example, is no more nor less correct than anything else, but merely another version, though some constructivists are not as tolerant about positivism as others.

Epistemology is about the nature of knowledge and from the constructionist perspective it is about the social construction of knowledge through experience, mental process and shared shaping and building of knowledge through language. In social inquiry, respondents are interactively linked with the inquirer in so far as they work together in the construction of knowledge, meaning that in terms of creating knowledge the inquirer and the inquired into become a single entity and since they are engaged in the creation of something that is to become reality for that time, there is also a fusion of ontology and epistemology; they cannot be seen as distinct.

Social constructions are uncovered through interaction between the inquirer and the respondents. Constructions are elicited and refined through hermeneutic processes, and are compared and contrasted to constructions of others, including the inquirer, and through this dialectical process new, more informed constructions emerge (Guba & Lincoln 1994). Unlike positivist inquiry, constructionism has no intention of understanding a real world in order to predict and control it, nor like critical researchers, to transform it. The aim is to '*reconstruct* the 'world' at the only point where it exists: in the minds of constructors' (Guba 1990).

The chosen research paradigm did not remain static throughout the study, however, and it became clear that, as the affirmative postmodern aspect grew, not only was it informing the fire constructions, but it was altering the ways in which I understood the research paradigm itself. This should not have been surprising since the paradigm was selected for its functional fit not only to the question but to my own interests, and the development of new constructions is instrinsic to the research process. Inevitably, then, my own understandings — at least of the fire — will increase in sophistication and the process will influence my constructions in a wide variety of other areas of my life. Uncovered in the process was the dialectic of postmodernism as a social construction and constructionism as an evolvement to postmodernism.

Constructing Postmodernism

Explaining postmodernism is problematic, since there is little agreement between writers and across disciplines regarding just what it is, or if there is even an 'it'. Explanation is difficult also because postmodernism rejects the kind of systematisation of knowledge that makes definitions possible. Best & Kellner write that 'one is struck by the diversities between theories often lumped together as "postmodern" and the plurality, often conflictual, of postmodern positions' (Best & Kellner 1991: 2). Postmodernism is, to use Docker's words, 'as varied, heterogeneous, contradictory, as was, is, modernism' (1994: xviii). The term 'post' in postmodernism, is given one interpretation by Best & Kellner (1991:29) as a symbol of the continuity with that which precedes it, which is why some argue that postmodernism is merely an intense period within the modern, a postmodern development within modernity. The position is that postmodernism is a natural moving-on rather than a radical severance. Habermas, for example, considers that what he calls the unrealised potential of the

Enlightenment still has power to heal, that modernism has not yet run its course in terms of the positive contributions that are possible. There is no need to reject modernity, rather, there should be a redirection of interest to those aspects of the Enlightenment that were truly emancipatory in intent (Habermas 1983).

Falk (1988:92) argues, however, that the process of moving to a postmodern sensibility is not one of linear time, that is, moving from premodern, through modern and on to postmodern later: it is rather the implication of both the past and the future within the present, a mixing where premodern, modern and postmodern forms 'coexist and interpenetrate within our lives and consciousness for the indefinite future'. For others, such as Baudrillard and Derrida, postmodernism signals the end of a belief in absolutes, seeing the search for truth 'as endless and self defeating' (Holmes 1995:359). In this sense, postmodernism can be seen as anti-modern and a rupture from what has gone before. Interpreted negatively, this is seen as regrettable, a loss, a move to uncertainty and a surrender of those aspects of modernity which, as Habermas (1983) argues, retain value.

Stephen Toulmin also considers the modern to be a thing of the past. He comments that the new world, the postmodern world, has not yet learnt how to define itself at least in the sense of what it is: it can only describe 'what it has just ceased to be' (1982:254). Identifying an end or a radical rupture need not provide a negative postmodernism, however. It is possible to view it positively as liberating and as affirming the new. However it is interpreted, the majority of postmodernists seem to see the movements as giving a sense of ending or a new beginning, postmodernism as *Fin de siècle*. Docker presents an argument that, because we are coming not only to the end of a century, but to the end of a millennium, we are entering a particularly important *Fin de siècle* period. *Fin de siècle* periods are 'liminal, jumping out from between centuries, looking back on the old and forward to the new, placing past, present and future in unexpected, unforseen, suddenly different relationships'. *Fin de siècle* periods lead us to think that our moment in time is special: they usually abound with prophecies and glimpses into a futuristic world, and with new and unpredicted discoveries. They are also times of macabre and mysterious forebodings, sinister omens forecasting disaster, and 'history as relentless drift into living death' (Docker 1994:103). Postmodernism may be seen as a *Fin de siècle* genre, as apocalyptic, and as such, postmodernism creates a new historical period — postmodernity, a period of the postindustrial, an age of knowledge and information production, mass media, computers, information and communication (Docker 1994; Lyotard 1984). For Baudrillard (1988) the emerging *Fin de siècle* is 'lunar cold ... a desolate dystopia' (in Docker 1994:105). Others however see a more optimistic future.

From the plurality of postmodern positions, the perspective that emerged from this study and which guides the ways in which it is presented is that called affirmative, also known as constructive or revisionary postmodernism. It is the particular stance of those who write from the process perspective described throughout this thesis. In chapter six, the argument was put that affirmative postmodernism is a way of moving on from deconstructionism. The latter has been important in so far as it has raised consciousness, particularly in respect of the failure of the Enlightenment project. Affirmative postmodernism recognises this failure, but rejects the premise that the world is doomed and that all that can be predicted for the future of humanity is a cold desolate dystopia. Affirmative postmodernism takes a far more optimistic view. The book *On Purpose* by Charles Birch contains a paragraph which captures the essence of affirmative postmodernism, which, he writes:

> witnesses to a growing dissatisfaction with modernity ... Postmodernism challenges modernism which can be said to have begun with seventeenth century mechanism, petrified with eighteenth century rationalism, nineteenth century positivism and twentieth century nihilism. As contrasted with the modern worldview which is sustained more by habit than by conviction and which has promoted ecological despoliation, militarism, anti-feminism and disciplinary fragmentation, the postmodern worldview is postmechanistic and ecological in its view of nature, postreductionist in its view of science, postanthropocentric in its view of ethics and economics, postdiscipline in relation to knowledge and postpatriarchal and postsexist in relation to society. Postmodernism is not a call back to the premodern but a creative synthesis of the modern, premodern and new concepts in the forefront of holistic thinking (1990:xvi).

This is exactly the position that has been woven here. David Griffin (1988a) has described affirmative postmodernism as *postmodern* simply because it moves to a view beyond the modern. In recognising its various titles, he calls it *affirmative* because it does envisage a positive and hopeful future; *revisionary*, because it revises constructions of the world; and *constructive* because it is concerned with constructing a way of being that supports and is supported by the new world view. Postmodernism is a social construction, but as well as that, an argument is now put, that as a perspective that reconstructs modern views of the world, affirmative postmodernism is an evolvement of the constructionism that was the paradigm view at the outset of this work. I have renamed it ecological because of the emphasis on the interconnectedness of all things, arguing that relationship is paramount. There is a relativist ontology to this ecological postmodernism that explores what I have called postmodern myth; the postmodern constructions of the universe and of the origins and relationships of everything within it. Within ecological postmodernism, there is an acceptance that these constructions are also temporary and will be replaced as various views are examined in dialectical relation and become more informed as experimentation and insight provide ideas that better 'fit' an evolving construction in any area.

Bohm (1980) is adamant that there is no possibility of true and certain knowledge, merely a continual unfoldment of insight. These insights are neither true nor false, but explain certain things at certain times. Insights inform for a while until new questions emerge which those insights can no longer satisfy, leading to the quest for new and different explanations and insights. This is exactly what has happened with the radical insights of Copernicus and Galileo, or with the challenges that Einstein posed to the Newtonian world view. There is no reason to expect that an ultimate insight corresponding to absolute truth will ever emerge or is even possible. A theory is just that: a theory, one among many possible explanations, a possible interpretation for some phenomenon. If one believes this notion of ever changing insights, it is not possible to operate from a fixed perspective about reality. To have a fixed perspective requires a belief in the possibility of absolute truth. At the same time, however, there is, in much of the work explored in this thesis, more than a hint of belief in an ultimate truth. The notion of an ordering force, a Silent Intelligence is one example; the implicate order is another, although there is an apparent contradiction where Bohm rejects the possibility of ultimate truth but has spent his lifetime in theoretical physics searching for explanation, the continually evolving insight. Whilst it is accepted that these are human constructions, and the notion of an ultimate reality, an ontological truth, is inconsistent with the relativistic constructivist perspective of those such as Guba & Lincoln (1994), it is not inconsistent with the social constructionism of Gergen (1985) or the radical constructivism of von Glasersfeld (1990), where there is no denial of an ontological reality, but rather, an argument that knowledge of such a world is not available to humans since they cannot stand back to develop awareness of that within which they are embedded.

Spretnak (1991) is concerned about those who describe everything as culturally constituted discourse, who would see any attempt at aligning consciousness with the universe as new age rambling, groundless in so far as there is no possible way to locate any reality in universal consciousness other than that constructed by humans. In respect of these people, and of those postmodernists who reject any metadiscourse as totalising, Spretnak argues that they would do well to consider just how they are themselves constructed as a part of the metadiscourse of the universe. They can, she writes 'ignore the larger reality or engage in it, but it does not exist without them'. It is true, she agrees, that each world view creates its own internal logic, but it is also true that any such systems 'exist within the grand cosmologic', even though our knowledge of this cosmologic is miniscule (Spretnak 1991:81) .

An argument of this work now is that there is a real world that existed long before the evolutionary emergence of humans and that whilst humans may not have knowledge of that reality of the universe and its evolvement to some purpose, and they do socially construct understandings, many appear to glimpse something beyond what is currently accepted as knowledge of the universe. Much of our understanding of the world comes from objective, scientific knowledge tempered with intuition and imagination. As actual entities that have unfolded from the implicate order, each ecological person has, as well as the knowledge from the brain, the whole universe of knowledge stored in every particle. This is not merely biological life-process knowledge, but knowledge of all actual occasions which came into being and then perished, every act, every emotion, every process. In addition, in our evolutionary unfolding we are co-creators of the ongoing universe. Every aspect of our being is alive with intelligence. We have access at present to the most miniscule amount of the knowledge that is available to us. It is almost as though a thin veil separates the human mind, perhaps the 80% of the brain not utilised, from this reality; sensed, hinted at, but never quite explicit. There are many, whose work is explored in this thesis, who argue that this is simply a matter of the currently unsophisticated state of human evolution which will be remedied with time, but some also suggest that humans do have the capacity to see and have to learn how to access the quantum consciousness that surrounds them. Some thinkers, such as Reanney (1994) and Dossey (1993), suggest that humans, even now, may reach for understanding through preparedness to explore realms of altered consciousness. This is, of course, yet another construction, but it is one which anticipates a time when construction will be swept aside.

Perhaps one could argue that this evolving paradigm, returning as it might to the belief in an ultimate reality which operates according to some guidance, is a return to positivism. On the contrary, however, if a goal of positivism is prediction and control and knowledge derived through distancing and objectivism, this ecological postmodern paradigm could not consider control as a goal, since everything is in compassionate relationship with no single entity dominant. Similarly, distancing and objectivism are impossible in such a relational stance.

If one were to indulge in a flight of fancy enough to take this evolving paradigm to its logical end point (and perhaps some might argue that constructionism is all about flights of fancy) one could envision a universe of consciousness available to and accessed by all so that reality and purpose are known to all people, who become knowing participants in the evolvement. In such a high state of evolvement, one could surmise that there would be no further need for inquiry. However ... flights of fancy are but constructions, and though one may speculate unendingly, apart from the few who seem to glimpse a world beyond, what we know at present is all that we can know ... at present.

Examining the Reconstructions

The Polish ecophilosopher Henryk Skolimowski (1992: 112) writes:

> Woven out of the threads of the Greek dream of the power of the human mind; shrunken and twisted by the medieval matrix of the human subjected to religion; half liberated in the period of the Renaissance; locked up into a new harness of slavery called the Industrial Revolution; intoxicated and blinded by the materialist utopia in the first part of the twentieth century; at the end of it emerges a new being — the ecological person.

The ecological person is how the postmodern person is described in this work. Remembering that the ecological person is a child of the stars, that person is part of everything in and of the universe. Furthermore, the ecological person is a part of human evolution, as John Seed would say, that part of evolution which has recently emerged into thinking. As Skolimowski adds, this person is a vessel within whom 'evolution has stored and cultivated some of its more precious assets' (1992: 118), a stance I would normally consider unacceptably anthropocentric were it not for the sense that what has evolved in humans is self-consciousness and through the slow and careful development of consciousness, even in its current rudimentary form in comparison to what may well be possible, the ecological person becomes the means through which the universe continues evolving toward care and compassion, and this is a vital part of the ecological postmodern perspective of this work. In a very real sense humans have become the custodians; although powerful, evolutionary processes will transcend the human we know at present.

Skolimowski (1992: 231) writes that the ecological person who is healthy and complete is a micro-universe which is holistic and qualitative. One who is on a journey moving beyond acquisition to meaning is on a spiritual path. One who recognises the awesome history of evolution and who clearly sees the universe as a web of relations cannot help but be reverential toward all of creation. Skolimowski equates living a life of reverence as living in grace, and to live in grace is 'to walk in beauty', aware of being alive and being enchanted by the cosmos. The reverence for life, which results from the awareness of the mystery of the evolving universe, and of the interconnectedness of all things in a vast web of life, gives rise to ecoethics and the awareness of the values which guide the ways in which humans will live. Ecopraxis is the term that Skolimowski gives to action that is taken when guided by the eco-cosmological view that is brought to life through the values embedded in ecophilosophy. Ecopraxis is what we are all doing in respect of our evolving consciousness. The actions we take reveal our personal cosmology and show whether and how we care for our universe. Ecopraxis describes the actions of those who worked so hard to help in the healing processes after the Ash Wednesday bushfire.

Researching in Nursing

This work has an aim of informing nursing in some way. Nursing is generally held to be a discipline, and Donaldson and Crowley (1978) have described a discipline as characterised by having a particular perspective which sets the boundaries of what it is. Jean Watson has argued that metaphysics as a branch of philosophy is important to nursing's consideration of itself as a discipline. She suggests that nursing remains fragmented in its thinking about its scholarly foundations, writing '[n]ursing still has a long way to go in adopting a meaningful philosophical foundation for its theories and its science that is consistent with past and present visions, images, and ideals of nursing leaders' (1985: 78). Sarter agrees, considering that much of the foundational work of nursing as a discipline is yet to be done. The profession, she argues, 'has neglected the development and articulation of a philosophy of nursing' (1988: 2), and by this she means a unified perspective rather than the diverse and contradictory offerings that exist at present. The plethora of models that have been developed by various nursing scholars over the past 30 years leave an impression that there is not much agreement in nursing on what the unique perspective that makes nursing a discipline might be.

The contemporary nursing literature makes frequent mention of nursing's metaparadigm which, Sarter (1988) writes, should flow from the philosophical assumptions that the discipline has adopted. What seem to have become known as the four pillars of nursing: person, health, environment and nursing, evident in scholarly writing about nursing since Nightingale, make up nursing's metaparadigm. On closer scrutiny, however, it becomes apparent that agreement exists only in terms of these as concepts, not in terms of any substance in respect of what they might mean. Sarter gives the example of the notion of person as a unitary, four-dimensional energy field, being so very different from the notion of person as a set of behavioural subsystems, yet both views inform contemporary nursing.

Sarter (1988) believes that there is growing recognition that a firm philosophical foundation for nursing is needed that will inform theory development, research endeavour and practice initiatives. She suggests that the most important question that nursing should answer in pursuit of its metaparadigm is about the nature of human beings. Answering this will, she posits, determine 'how we view human health and illness, human/environment interaction, and the nurse/patient relationship' (Sarter 1988: 4). Thus she presents her argument for pursuing the teleological and ontological branches of metaphysics.

A deconstructive postmodern perspective would require a rejection of much of the theoretical work of nurses where it is grounded in totalising metanarrative. Holmes has identified some of these metanarratives as 'systems theory, positivism, holism, evolutionism, panpsychism, humanism, existentialism and phenomenology' (1995:366). In this thesis, such work is valued for the ways in which it offers insights that are in any way considered helpful to thinking about practice.

Holmes (1993:5) writes that, in postmodernism, theoretical statements are 'judged according to their ability to generate new insights, rather than to the extent that they correspond to some notion of rationality, truth or falsity. Truth claims are minimal'. In addition, postmodern knowledge construction avoids dualisms. In this respect, Holmes sees health and illness as 'outmoded categories that do not adequately represent people's experiences'. Illness is what it is: it is not necessarily negative, since as Newman (1986) argues, what one is, is right for that person at that time. Margaret Newman perceives health and illness not as categories, but in the affirmative postmodern genre, as aspects of being. The discursive rules are dispensable, Holmes believes, and when this is recognised it opens up space for researchers to view events with 'an even more rich descriptive understanding' (1993:5). Clinicians have long argued that the work of nurse theorists may well be of historical interest in the development of nursing, but it is outmoded and unhelpful in respect of nursing practice. The world of clinical nursing has never been predictable, never seems to manage a neat fit with what Holmes calls prepackaged theory, but rather seems a messy, chaotic and unpredictable place, full of problems and contradictions (Cox & Moss 1989; Holmes 1993, 1995). For nursing, as Avant (1991) argues, the value judgements made about research in nursing have to do with whether or not it can address disciplinary problems or adequately interpret the realities of the experiencing client and of the nurse in ways that are helpful in practice.

The business of nursing research in a postmodern world then, would be to look at small local stories that have meaning for particular communities, where no attempt is made to generalise that meaning beyond that community, though perhaps to invite transfer where it is deemed appropriate. This appears to be occurring more and more in the nursing literature, frequently attached to some methodological theory such as phenomenology. In addition, the multivoiced stance would value the perspectives of patients, clinicians, families and others as well as the voice of the researcher, with no one voice being in author-ity.

The Thesis: Nursing as Ecopraxis

The final thesis that has emerged from this work, is the notion of nursing as ecopraxis. Praxis is about action, and this thesis proposes that nurses who live and practice from an ecological postmodern cosmology act in the world in ways that are sensitive to environments, to vibrational energy fields, and see themselves as in compassionate relation to everything else. They carry a particular intention into practice and they influence contexts of care in particular ways.

According to Skolimowski, the ecological person is comprised of sensitivities, amongst which are logic, intuition, morality, aesthetics and a sense of the sacred, and he considers humans to be a living laboratory for the increasing the scope of these sensitivities. Being co-creators, humans are capable of moving to a higher order in their lives, guided by moral codes, personal and legislated and by an inner moral sensibility which is a part of their being. Moral values in particular are but explicated forms of sensitivity and Skolimowski believes that those concerned with loyalty, altruism, reverence, love and compassion in particular are the most refined sensitivities that we have (1992: 121). The philosophy that Skolimowski develops from his own cosmological perspective is the antithesis of contemporary philosophy which he labels diseased and which he considers produces diseased consequences. He depicts and compares the characteristics of modernist philosophy with ecophilosophy. Contemporary philosophy he describes as language-orientated, and about the pursuit of information that will better the lot of humanity. There is a commitment to objectivity, detachment and facts. Humans are separate from and transcend all things and the universe is spiritually dead, consisting only of what is perceived. Present philosophy is silent on the issue of ecology, thus participating in a conspiracy of indifference. Questions of economics are aimed at material growth, often at the expense of particular groups and the wellbeing of the planet. Ecophilosophy, on the other hand, depicts a view that is life-orientated, and about the interconnectedness of all things, compassionately united with the flow of life in the universe. It is about living in awe and reverence, seeing the universe as spiritually alive, and with all in it, including ourselves, endowed with grace. There is a concern for the acquisition of wisdom, particularly in terms of right knowledge about how to live in relation to everything else. Questions of economics are, in this view, turned to the wellbeing of all of society and not at the expense of the wellbeing of the planet. There is an awareness that all actions are political and in ecophilosophy there is a sense that politics has to do with the way we live rather than the things we say or the way we vote. This is the view of ecological postmodern cosmology which guides action as ecopraxis.

The maṇdala of ecophilosophy:

Comprehensive
Spiritually alive
Pursuing wisdom
Committed
Environmentally & ecologically conscious
Life orientated
ECOPHILOSOPHY
Related to economics of quality of life
Mindful of health
Politically aware
Tolerant to transphysical phenomena
Socially concerned
Vocal about individual responsibility

(Skolimowski 1992: 40).

A premise of this work is that resurfacing understandings about connections, and doing work to reconnect with the environment, the earth and the universe, is the key to self-understanding and healing. Healing is the main focus of this work. Recovery from bushfire has been the means by which the phenomenon was raised and some beginning examination could commence, but the notion is far broader than healing in this single instance. Healing is the remit of nursing, and to connect the bushfire data to this healing role and to incorporate notions of ecology, it is necessary first to see healing not only as caring for the damaged unfolded physical body which is an important part of nursing's work, but as caring for the whole person who is part of and connected to everything else.

Nursing as ecopraxis then, is about living and working with intention from an ecological postmodern cosmological perspective — feeling connections at a deep level; feeling compassion and enacting that in care in moments of human struggle. Ecopraxis is about being in and of the environment of another — constructing caring environments; holding, balancing and sustaining both self and the other. It is about sacred healing work in caring moments.

and finally...

Consider that this work commenced with the struggles of a particular community, whose beliefs in their connections with nature sent the inquiry out to the universe. From there, the inquiry progressed to the earth and the place of humans, and then to the suffering of humans and the role of nurses as agents of care and compassion. From a constructionist perspective, it has indeed been the pursuit of a hermeneutic circle: from the part to the whole, back to the parts and on to new wholes and so on ... Nursing is positioned at the level of service to humans. Nurses are actual entities, the moment of care an actual occasion. Entities and occasions become and perish. In their becoming, what they offer could address the mindstate and the soul; in their perishing, they could add to the evolution of world compassion. Who knows what moments have occurred in the lives of those who approach nurses for care? Who knows how they have struggled with their demons and how battered they are by their experiences? They present to nurses as another individual, another stranger whose needs we may see as that which is of the current moment, treat that and send them away, or we may acknowledge that person in relationship to ourselves in the web, and reach out with compassion. There is such an opportunity to influence the future in moments of care, and nurses have this opportunity on a daily basis.

Life is a process of transitions, and if there were an understanding of this, significant events would not be viewed as novel, but as a natural unfoldment in the process. Such a view would encourage people to recognise past events as catalysts for transitions and to recognise patterns in the ways in which they managed the entropy which may be brought into play again. Winstead-Fry (1990:235) argues that significant to any transition is the experience of loss, and also, because of the principle of reciprocity, the experience of gain. Many losses have been described in the sequelae to the Ash Wednesday fire, and the people in this study would recognise that transitions have occurred for them, in that they have recovered, many have gained, and all are managing their lives, remaining connected to the environment. Whilst some may argue that the environment caused their losses and even some of their gains, that is not so for many in this study. For these people, cause is not an issue; events simply occur and what happens, happens. It is part of the struggle of being human to experience such events and part of the journey to make the best of them, individually and collectively.

Some day, after we have mastered the winds, the waves, the tides and gravity, we shall harness ... the energies of love. Then, for the second time in the history of the world, man will have discovered fire.

Teilhard De Chardin

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